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Turkey Poverty and Coping After Crises

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Turkey: Poverty and Coping After Crises

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Weights and Measures

Metric System

Abbreviations and Acronyms

BK	Bag-Kur
CPI	Consumer Price Index
DIE	State Institute of Statistics
ES	Emekli Sandığı
FAO	(UN) Food and Agricultural Organization
HCIS	Household Consumption and Income Survey
HIES	Household Income and Expenditure Survey
LSA	Living Standards Assessment
PPP	Purchasing Power Parity
SRMP	Social Risk Mitigation Project
SSK	Sosyal Sigortalar Kurumu
SHÇEK	Social Services and Child Protection Organization
SYDTF	Social Solidarity Fund
SYDV(s)	Social Solidarity Foundation(s)

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Preface and Acknowledgements

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The research on which this report is based was not undertaken by any Turkish Government agency, and thus the Government does not confirm the findings of this report, although the Government has agreed to the publication of the report.

Government agencies have commented on this report, expressing concerns about the validity of the findings, particularly for rural areas, and concerns about the sample and especially the method used to reduce the sample (see Annex 1 to the main report).

The World Bank will publish the questionnaire, data document including description of created variables, and the data on its webpage:

<http://www.worldbank.org/lsm/lsmshome.html>

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Abbreviations and Accronyms

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Executive Summary

Turkey experienced severe losses of life and infrastructure in 1999 caused by the August earthquake. The earthquake was followed by a period of economic and financial crisis, culminating in a major currency devaluation in February 2001. What has been the social impact of these crises? In order to answer that question, the World Bank and the Government of Japan co-financed a household survey during the summer of 2001, which consisted of surveying 4200 households on their consumption and income, and interviewing 120 respondents in depth for case studies. There are more than the usual problems of comparing data taken from two very different surveys in 1994 and 2001.

This study seeks to answer three main questions: how many are poor in Turkey in 2001; who are the poor and why are they poor?; and how do the poor cope with risk and poverty?. The main findings are:

- Extreme poverty (\$1 per person per day) is basically unchanged since 1994 and remains quite low by international standards.
- Urban poverty (food consumption standard) increased since 1994.
- Inequality was unchanged, remaining at high levels by international standards.
- Coping mechanisms of the poor, especially relying on relatives and neighbors for in-kind and cash assistance, came under stress and the poor reported a decrease in assistance from these traditional channels.
- Informal employment, an important mainstay of the poor, was reduced as a consequence of the crises.
- In spite of their reluctance, some of the poor were forced to either pull their children from school or have them attend less, for lack of resources to cover out-of-pocket expenditures and informal earnings from child labor.
- Idiosyncratic shocks such as major illnesses, were the least prepared for and most difficult for the poor to handle, after the daily task of feeding the family was met.
- People in general felt that they were worse off in 2001.

The major effect of the crises has been an increase in poverty in urban areas of Turkey from 1994 to 2001. Extreme poverty in all of Turkey has not changed, and remains at low levels, but inequality is also unchanged at quite high levels. A relatively large share (nearly one-fifth) of the urban population has consumption below a food standard, and qualitative evidence indicates that poverty has worsened in rural areas as well.

There are two main definitions of poverty used in this report. Extreme poverty is defined for the portion of the population with per capita consumption underneath the World Bank's extreme purchasing power parity poverty line of US\$ 1 per person per day. Urban food poverty is defined as those in urban areas with equivalent consumption below the cost of a food basket.

The poor have been particularly impacted by a reduction in seasonal and informal employment opportunities in the urbanized areas, and some men are returning to their rural villages because they can not earn enough in the cities to cover their costs. The

primary coping strategy of the poor has been to reduce consumption, particularly consumption of food and quality of food consumed, but there are also indications that the poor may have to cut back on education expenses and withdraw children from school. The poor rely strongly on networks of extended family, friends, neighbors, and *hemşeri* (people of same place of origin), but these networks are strained to the limit by the covariate macroeconomic shocks experienced in 1999 (earthquake) and 2000-2001 (financial crisis).

Other important coping strategies of the poor have also come under stress as a result of the crises. Multiple job holding has been curtailed by the reduction in seasonal and informal employment. The poor have been much less able to invest in physical assets or in their own human capital. Social capital, which is an extremely important aspect of traditional Turkish society, has come under strain as the poor can no longer afford to attend traditional reciprocity events such as weddings. The poor are not positioned to sell their assets--nor is there much demand for them. Borrowing from neighbors is a strategy used across the income spectrum—50 percent of urban households and nearly 60 percent of rural households reported that they had borrowed in the previous nine months. Religious charity helps some of the poor, but it is episodic and does not cover needs sufficiently. As a last resort, the poor have sent their children out to work.

Although the Government does finance ad hoc social assistance for the poor, this assistance is too partial to meet the needs and is not that well-targeted to the poorest. In recognition of the impact of the crises, in August 2001, the Turkish government transferred substantial resources to the Social Solidarity Fund (SYDTF) to finance back-to-school packs for 1.05 million poor children (TL 50 million per child). Additionally, the SYDTF expanded its food and fuel assistance for the winter. These measures, while important, were limited to a single payment. Recognizing that the poor needed more systematic assistance, the Government decided to adopt a new social assistance benefit—conditional cash transfers (CCT) which would be paid on a regular basis.

The Government is also seeking to expand the traditional activities of the SYDTF in terms of micro-projects and adult literacy efforts as it recognizes that demand for these activities exceeded supply. Finally, the Government intends to monitor poverty with more frequently household surveys, recognizing that one-off efforts such as the household consumption and income survey (HCIS) analyzed herein are not adequate to provide policy makers with the data needed to understand and therefore improve social protection and other sectoral efforts.

In view of this substantial effort to reform the safety net in Turkey and to attack poverty, the World Bank has been able to respond by supporting the reform process with financial resources. The major vehicle of Bank support is the Turkey Social Risk Mitigation Project/Loan (SRMP). The SRMP is designed to support Turkey's ongoing efforts to reform, improve, and expand the social protection system and to address some of the negative coping strategies that the poor have been forced to adopt in response to the impact of the earthquake and financial crises.

The report concludes with the following policy recommendations:

- Macroeconomic management to resume broad-based growth, which should reverse the poverty trend since the vast majority of the newly poor are not extremely poor
- Counter negative coping strategies of the poor by providing conditional cash transfers
- Expand job opportunities for the newly poor through micro-projects and community development
- Improve targeting and coverage of the extreme poor and outreach to them through institutional strengthening
- Institute regular poverty monitoring through household surveys and the development of a poverty map.

1. Data and Methodology

Turkey does not yet have a well-developed system of annual household surveys that can be used to track poverty and social protection program utilization, and this lacuna is especially noticeable when questions about trends in poverty are raised. An important part of the institutional development component of the Turkey: Social Risk Mitigation Project (SRMP), a US \$500 million loan from the World Bank, seeks to rectify this gap by providing technical assistance and co-financing to an annual program of household surveys and for producing a poverty map. However, the SRMP will co-finance surveys beginning in 2003. For retrospective analysis, other surveys must be utilized.

Turkey did conduct major (and very large sample) household surveys in 1987 and 1994. These two household income and expenditure surveys (HIES) were analyzed by the World Bank in its Turkey: Living Standards Assessment (2000). The 1994 HIES surveyed more than 24,000 households using a diary and collecting detailed data on expenditures by individual type and on unit value prices. The HIES were designed primarily to provide weights for the consumer price index, not for poverty monitoring, although the HIES did provide data on household consumption and income that could be compared to various poverty lines. Turkey does not have an official poverty line.

The Living Standards Assessment (LSA 2000) compared household consumption and income to a wide variety of poverty lines (more than a dozen) for the 1994 HIES. The three main poverty lines used were: (a) the World Bank's US \$1 per person per day line; (b) a food consumption standard, based on minimum caloric intake and the FAO equivalence scale for urban areas; and (c) a vulnerability line equal to twice the food line. The LSA found for 1994 that the rate of extreme poverty was quite low (2.5 percent), that food poverty was 7.3 percent, and vulnerability was 36.3 percent.

The natural question is then raised, how did poverty change from 1994 through 2001, after Turkey had experienced the twin blows of the 1999 earthquake and the prolonged financial crisis of 2000-2001. This report can answer this question to a certain extent, but there are important caveats about the 2001 survey that must be taken into account.

First, the 2001 household consumption and income survey (HCIS) was not fielded by Turkey's State Institute of Statistics (DIE), for practical and logistical considerations. The HCIS had to be undertaken rapidly to provide the Turkish government with sufficient data for developing a targeting mechanism to be used in the conditional cash transfer and local initiatives components of the SRMP. Due to the press of its regular reporting operations and methodological concerns, DIE was not able to field a HIES in 2001. As a matter of fact, DIE began an HIES in 2001 but stopped collecting data after the first three months, out of concerns that the data taken in the immediate aftermath of the February 2001 devaluation of the Turkish lira would not be reliable enough for constructing new weights for the consumer price index (CPI). As a result of these decisions, the World Bank (with partial financing from the Government of Japan) moved

forward to conduct a survey using independent consultants. So it is immediately evident that comparisons between the 1994 survey, conducted by DIE with its methodology, and a survey conducted by independent consultants, are likely to vary significantly in terms of scope, sample, and methodology, which was indeed the case for the 1994 HIES and the 2001 HCIS.

The goal of the 1994 HIES was to provide weights for the CPI. The goal of the 2001 HCIS was to obtain data on consumption to be used to create a scoring formula for targeting the SRMP. The surveys were of considerably different scope, with the 1994 HIES being much larger (25,000 households) than the 2001 HCIS (4,200 households).

Next, the sample for the 2001 HCIS was completely different than the sample for the 1994 HIES. The 1994 HIES sample was drawn from the 1990 census sampling frame. The 2001 HCIS sample was drawn from a sample provided to the consultants by SIS. Unfortunately, the 2001 HCIS sample varies somewhat from the 2000 census results in one critical aspect. According to the preliminary figures for the 2000 census, the population in Turkey is 35 percent rural and 65 percent urban (where rural is defined as those living in villages) whereas the HCIS sample has a much lower share of rural (21 percent) in it than does the population (Table 1.2).¹

Although the consultants maintain that the 2001 HCIS sample was representative for both rural and urban areas since rural areas are much more homogeneous and thus can be under-sampled without loss of representativity, the discrepancy between the HCIS sample and the census is worrisome. It is of course possible to re-weight the HCIS sample using population weights, but if the HCIS sample is not representative, re-weighting on its own will not provide a solution.

During consultations, questions were raised about how the 2001 HCIS sample was reduced from the original sample of 7,000 provided by the State Institute of Statistics. A short appendix was prepared by the consultants in response to this concern and the appendix also includes the technical objections raised by State Institute of Statistics and by State Planning Organization during the consultations.

It is very important to understand this caveat. If the 2001 HCIS sample is not representative for whatever reason, then the findings in this report would not be accurate. Certainly, more than the usual degree of caution is necessary and these findings should not be taken to be definitive of levels or trends, but rather indicative only.

This is a problem specific to the circumstances surrounding the 2001 HCIS and should not be an issue in the future, since the State Institute of Statistics is undertaking a

¹ In this table and throughout the study, when HCIS data are presented, they are on population basis. This means that household-level variables such as location are weighted by household size to generate population basis figures. Individual-level variables of course are not weighted. Since responses vary by question and since not all individuals in households with more than 10 members were interviewed, there are slight discrepancies between parameter estimates from the two sources, household and individual data.

HIES for 2002 that will be used in cooperation between the Government and the Bank to generate poverty estimates that will be comparable to the 1994 data.

On methodology, it is important to understand the financial and other constraints faced by the 2001 HCIS. To keep within a reasonable budget for the HCIS, some difficult decisions had to be taken. For example, it was too prohibitive in cost to plan to visit each household more than once. The 1994 HIES enumerators visited households each month, and collected the consumption and income information from written diaries kept by the households. For the 2001 HCIS, the recall method was used and households were visited only once. The recall method in comparison to written record-keeping can lead to “telescoping” whereby respondents forget older expenditures, and can lead to under-estimation of consumption and income (Deaton 1997). However, telescoping does not appear to have been that much of a problem for the 2001 HCIS—a comparison was undertaken for the 1987 and 1994 HIES and the 2001 HCIS consumption and income aggregates as compared to data from the national accounts (Table 1.3). Here the 2001 HCIS accounts for less than the share of the national accounts aggregates than did the 1994 HIES, but not catastrophically so.²

A second serious area of methodological difference between the 1994 HIES and the 2001 HCIS is that the latter survey lacks the unit value prices that were calculated for the former in setting most of the poverty lines for the LSA analysis. Unit value prices are calculated from consumption surveys whereby the amount spent on an item (very narrowly defined) is divided by the quantity reported as purchased. These unit value prices are not typically 100 percent of the level of prices collected in the CPI survey. In particular, survey unit value prices reflect more advantageous prices offered to households by their local grocer or small-scale distributor as well as bulk discounts and buying on credit. As a result, survey unit value prices are typically somewhat lower than prices collected in large stores and urban markets for the CPI. Importantly, unit value prices for rural areas are much below those for urban areas, while the CPI prices are not collected in rural areas. As a result, poverty will be measured as lower when consumption or income is compared to the lower survey unit value prices than when compared to (urban) CPI prices and conversely, using urban CPI prices even for only urban areas is likely to exaggerate somewhat the true extent of urban poverty.

Again, owing to the constraints, it was not possible to field a full-blown HIES in 2001, and so the HCIS used a truncated consumption module that did not collect data on unit value prices for individual items. As a result, when consumption is compared to the food basket (even for urban areas only), the HCIS is likely to show somewhat higher poverty than if survey unit values could have been used. Thus, the findings in this report about food consumption poverty in urban areas of Turkey probably represent the outer range for poverty and actual food poverty may have been somewhat less than estimated herein. At the same time, survey unit values and urban CPI prices move together and are closely related, so this caveat should not be interpreted to mean a sign change or

² Additionally, the average share of food expenditures in total consumption in the HCIS was 34.4 percent, which compares well to the 1994 data of 36.3 percent, or the share of food expenditure in GDP of 35 percent in 2000 (data for 1994 and GDP share from the SYDTF).

significant change in magnitude, but rather should be understood as to suggest that the exact figure is more in the nature of a bound for the true underlying poverty it seeks to measure.

Table 1.1 shows the food quantities and the regional CPI prices for the 7 regions of Turkey that were used to price out the urban food poverty line.

Finally, the consumption estimates used herein did include the imputed value of food consumed from own-production for those households (both urban and rural) which reported such consumption.³ HCIS broad category unit values (e.g. bread and bread products not by specific types of bread as in the HIES) were used to impute food consumption. Since there were few observations, no attempt was made to differentiate this imputation by region. As a result, consumption may be overstated in less expensive areas such as the Southeast and understated in major metropolitan areas like Istanbul.⁴

Another technical limitation of the 2001 HCIS is that space was made available to collect individual information for 10 family members, but a small number of households reported larger family sizes. In these few cases (1.8 percent), individual information was not available for every household member, but only for the first 10 recorded. Additionally, in some cases, individual data on age (14.5 percent of individuals) and gender (1.7 percent) were missing for some household members. The consultants are working on collecting this information retrospectively and this should be corrected in the final version of the database. In the interim, when age and gender data were needed for the food poverty line (which used the same UN Food and Agriculture Organization (FAO) equivalence scale as LSA 2000⁵), the missing data were imputed based on the sample average.

Finally, the report draws on three sources of qualitative information: (i) Ayata and Ayata (2002, a background paper in Volume Two) summarized the finding of the 120 case studies undertaken in conjunction with the quantitative HCIS; (ii) field visits and informal focus groups conducted by SRMP team members during the preparation and initial supervision of the SRMP (cited as SRMP Field Notes); and (iii) an interim beneficiary assessment on the rapid response component of the SRMP.

³ Consumption is a much better indicator of household welfare than money income—it includes the imputed value of food consumed from own production and avoids the under-reporting of informal earnings so prevalent in most countries (Deaton and Zaidi 2002, World Bank 2001, World Bank 2000, World Bank 1993, World Bank 1990, Deaton 1997, Hentschel and Lanjouw 1999). Poverty line methodology from Ravallion 1992, 2000).

⁴ Consequently, underlying poverty rates for the Southeast might be higher than shown below and lower for Marmara region.

⁵ The FAO equivalence scale was the same one used in LSA 2000, namely:

children under 5	0.64
children 5-11	1.00
male adolescent 12-17	1.00
female adolescent 12-17	0.84
prime age male 18-39	1.00
prime age female 18-39	0.84
older male 40+	0.88
older female 40+	0.76 .



2. Macroeconomic analysis

Introduction

This chapter seeks to assess the cumulative macroeconomic impact on the Turkish people of the series of internal and external shocks that have hit the country since 1999. When the Marmara earthquake hit in August 1999, Turkey was already suffering from an economic slowdown caused by the Russian crisis and political turmoil which had led to early elections in mid year. Following a short lived consumption boom under the crawling peg based disinflation program in early 2000, Turkey experienced financial turmoil in November 2000, and then a full blown currency crisis in February 2001. Just as the strengthened economic program put in place in response to the February crisis began to show some promising results, the attack on the World Trade Center on September 11, 2001 shook Turkey with another external shock with a loss of tourism and export revenue, and concerns by investors about the possibility of broader conflict in the Middle East. The economic crisis of 2001 was exacerbated by a serious drought as well. The new macroeconomic framework and renewed program of structural reforms pursued by the Government since December 2001, backed with exceptional support from the international financial institutions, has achieved financial stability and there are encouraging signs of recovery in 2002. However, the economic and social cost of the crises has been significant in terms of lost growth and high unemployment.

The impact of the Marmara earthquake⁶

The 1999 earthquake struck at Turkey's densely populated industrial heartland along the coastline of the Marmara sea south of Istanbul. The damage was severe and the economic consequences were felt throughout Turkey. The affected area contributes

⁶ This section draws upon and updates the assessment presented in "Turkey: Marmara Earthquake Assessment", World Bank, 1999.

about 7 percent of Turkey's GDP. The outlying suburbs of Istanbul, which accounts for about a quarter of national output, were also affected. The World Bank assessment team estimated that output as a whole would be negatively impacted in 1999, but then reconstruction expenses in 2000 would lead to a pickup in growth. As can be seen from Table 1.1, this is what happened, although the impact of the earthquake on 1999 output appears to have been more severe than expected. Output recovered strongly in 2000, as the positive impact of reconstruction expenditures was multiplied by a consumption boom driven by the fall in interest rates under the disinflation program introduced in December 1999. The recovery was industry led, but the other sectors were recording positive growth by the second quarter of 2000.

Table 1.1: Quarterly Real GNP Growth Rates 1999-2000

	1999				2000	
	I	II	III	IV	I	II
GNP growth (% over same quarter of previous year)	-7.9	-3.7	-7.6	-4.9	4.2	5.4
Agriculture	5.5	-8.3	-2.0	-4.5	1.4	1.8
Industry	-9.8	0.8	-8.3	-2.6	2.9	5.2
Construction	-10.5	-11.4	-12.9	-15.2	-1.3	4.3

Source: State Institute of Statistics (SIS)



Impact on employment The 1999 earthquake had a marked impact on employment. Employment fell by 10.5 percent between October 1999 and April 2000 (Table 1.2). The decline was particularly marked in agriculture and construction, sectors where the poor are concentrated. Only services employment rose during this period. Employment then

quickly recovered in the second quarter of 2000, rising to levels seen prior to the earthquake, led by strong recovery in agriculture and construction.

Table 1.2: Quarterly Employment 1998-2000

	1998		1999		2000	
	I	III	I	III	I	II
Employment (in thousands)	20,351	21,393	21,590	21,236	19,006	21,312
Employment in agriculture	8,145	8,777	9,148	8,595	6,284	7,627
Employment in industry	3,661	3,614	3,495	3,664	3,449	3,814
Employment in manufacturing	3,482	3,436	3,337	3,543	3,295	3,645
Employment in construction	1,225	1,355	1,242	1,346	970	1,503
Employment in services	7,319	7,647	7,705	7,631	8,304	8,367
Unemployment rate	6.94	6.70	7.93	7.37	8.30	6.23

Source: State Institute of Statistics (SIS)

Financial Turmoil and Crisis

With the task of providing immediate relief to the earthquake victims well underway, in December 1999, the Government launched an ambitious exchange rate based disinflation program with support from the IMF, together with a series of structural reforms backed by the World Bank. The program got off to a fast start with a sharp fall in interest rates fueling a strong recovery during the first three quarters of 2000. However, the economy began to overheat and was hit by severe financial turmoil in November 2000 when a medium sized private bank ran into a liquidity crunch. The Government responded quickly and the immediate turmoil subsided. However, confidence in the crawling peg exchange rate had been undermined. A public airing of political tensions in February 2001 sparked a full fledged currency crisis which forced the Government to abandon the disinflation program and float the Lira. A severe crisis ensued and the economy fell into a deep recession with high interest rates making it difficult to borrow, a volatile exchange rate and renewed surge in inflation making it difficult for firms to plan. In the meanwhile, overshadowed by financial market developments, Turkey was facing a drought that is likely to have particularly affected the poor. The macroeconomic consequences of these events is assessed below.

Impact on Growth The impact of the crisis was most immediately felt in the construction sector as interest rates spiked to levels over 100 percent (Table 1.3). However, the malaise soon hit industry with bank credit drying up and the exchange rate becoming very volatile. Normally, the agriculture sector would not be expected to be highly correlated with a banking-led crisis, but 2001 was also a drought year, and after the first quarter, agriculture was in increasing decline relative to the same quarter of the previous year. The economy had entered into a serious recession which resulted in a record decline in GNP of 9.4 percent for 2001 as a whole.

Table 1.3: Quarterly Real GNP Growth Rates 2000-2001

	2000				2001			
	I	II	III	IV	I	II	III	IV
GNP growth (% of same quarter of previous year)	4.2	5.4	7.2	7.8	-3.1	-12.1	-9.0	-12.3
Agriculture	1.4	1.8	1.6	12.2	8.5	-2.9	-5.6	-13.6
Industry	2.9	5.2	10.1	5.5	0.8	-10.1	-8.9	-10.7
Construction	-1.3	4.3	11.1	6.7	-5.2	-5.8	-8.3	-3.6

Source: SIS

Impact on employment By mid 2000, unemployment had started to decline as the economy was heating up. However, after the February crisis hit, the unemployment rate increased once again. The severity of the recession was reflected in large job losses. By the third quarter of 2001, the unemployment rates had begun to climb dramatically, as employment started falling, notably in agriculture and construction. Construction was hit particularly hard, with over ½ million jobs lost from the third quarter of 2000 to the first quarter of 2002. By the first quarter of 2002, the unemployment rate had doubled since the lows recorded right before the November 2000 financial turmoil. Only employment in services remained buoyant. The unemployment picture would have been significantly worse if the service sector had not been able to pick up some of the slack. More generally, it is important to note that the employment impact of the crisis on the poor is likely to have been disproportionately large as the poor depend more heavily on informal employment which is unlikely to be fully captured by the official statistics. Informal employment was probably hit especially hard by the crisis as indicated by the heavy impact on agriculture and construction where much of the informal employment is concentrated. As in most countries, informal workers in Turkey do not benefit from unemployment insurance and other similar social insurance mechanisms.

Table 1.4: Quarterly Employment 2000-2002

	2000		2001				2002
	III	IV	I	II	III	IV	I
Employment (in thousands)	21,727	20,182	19,222	21,127	21,875	19,742	18,467
Employment in agriculture	8,163	6,628	6,268	8,222	8,676	6,432	5,624
Employment in industry	3,851	3,811	3,628	3,584	3,764	3,843	3,658
Employment in manufacturing	3,699	3,637	3,465	3,405	3,563	3,659	3,444
Employment in construction	1,437	1,402	1,029	1,183	1,138	955	771
Employment in services	8,277	8,341	8,298	8,138	8,298	8,511	8,414
Unemployment rate	5.63	6.33	8.60	6.90	8.02	10.58	11.76

Source: State Institute of Statistics (SIS)

The macro picture of the severe impact of the 2001 crisis and accompanying shocks on growth and employment is confirmed by micro data collected by chambers of commerce and industry in Turkey at various times during 2001 to assess corporate distress.⁷ The Ankara Chamber of Industry (ASO) survey in the fourth quarter of 2001

⁷ These data are from the "The Republic of Turkey: Corporate Sector Impact Assessment", World Bank, draft, May 2002.

estimated the average decline in the workforce in Ankara was 5.6 percent in the third quarter, a very sizeable reduction for one quarter. The more representative Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey (TOBB) survey asked a question about workforce size over three intervals. Table 1.5 shows that, in each quarter, 55-60 percent of the firms reduced their workforce relative to the previous quarter of 2001. The surveys also found that small firms were especially affected which is to be expected as they typically have less capacity to weather crises than large companies. In particular, smaller firms showed limited ability to avoid lay-offs. Firms of all sizes typically resort to lay offs as the last measure to cut costs and, in general, large firms are more able to cope with resort to other, less drastic cost cutting measures. The TOBB survey found that 62 percent of small firms surveyed decreased their workforce in the last quarter of 2001 as opposed to 46 percent of large firms.

Table 1.5: Responses to TOBB Question on Workforce Size

Responses (in percent)	1st Survey	2nd Survey	3rd Survey
	Jan.-Mar 2001	Apr.-Sept. 2001	Oct.-Dec. 2001
A- Increased	2.47	5.02	4.51
B- No difference	41.10	35.07	38.52
C- Decreased	56.43	59.91	56.97
Total	100.00	100.00	100.00

Source: Draft Corporate Sector Impact Assessment, World Bank, May 2002

Cumulative Social Impact

The period under discussion was a difficult one for Turkey. Table 1.6 suggests that per capita GNP in constant terms fell by 13 percent between 1998 and 2001. The economy contracted sharply in 1999. While output recovered strongly in 2000, growing macro imbalances under the crawling peg set the stage for crisis in 2001. Hit by financial crisis and shocks from the drought and fall-out from September 11, Turkey recorded its worst economic performance in 2001 since independence. The unemployment rate decreased in 2000, although the total number of people employed fell as well. Unemployment rose sharply in 2001 and this trend continued in early 2002. Over the period, agriculture and construction, the sectors most likely to employ the poor, shed large numbers of jobs. Inflation remained persistently high with high within-year fluctuations. To the extent that the increases in inflation during the period were unanticipated, they may have had an adverse impact on poverty.⁸ Unfortunately, wage data are not available for the sectors where the poor are likely to be concentrated: construction, some services and agriculture. Manufacturing wages remained relatively constant in real terms through 2000 as nominal wage increases kept pace with inflation, but then declined sharply through 2001. Real wages in manufacturing

⁸ See "Turkey: Economic Reforms, Living Standards, and Social Welfare Study", World Bank, January 2000.

declined 5.4 percent in the first quarter of 2001 compared to the same period in the previous year, but the decline then accelerated, and in the fourth quarter real wages fell by 20.2 percent. Real wages were still falling in the first quarter of 2002, by 17 percent relative to 2001.

Table 1.6: Economic Indicators 1998-2001

	1998	1999	2000	2001
GNP per capita (constant 1987 TL)	1,836,704	1,694,912	1,766,124	1,572,820
GNP growth (%)	3.9	-6.1	6.3	-9.4
Agriculture	8.4	-5.0	3.9	-6.1
Industry	2.0	-5.0	6.0	-7.5
Construction	-0.3	-12.7	4.4	-5.9
Unemployment rate	7.0	7.7	6.6	8.5
Employment, total (in thousands)	21,236	21,413	20,578	20,367
Employment in agriculture	8,595	8,872	7,187	7,217
Employment in industry	3,664	3,580	3,733	3,734
Employment in manufacturing	3,476	3,386	3,570	3,523
Employment in construction	1,346	1,294	1,329	1,073
Employment in services	7,631	7,668	8,330	8,343
Inflation, consumer prices (annual %)	84.6	64.9	54.9	54.4

Source: SIS, team calculations

It is difficult to quantify the cumulative social impact of the crisis and shocks. For the 15,000 people killed in the earthquake and their friends and families, the cost is limitless. Even simply calculating the economic impact is difficult because the counterfactual is unknown--what would have happened if the crisis had not happened? Nevertheless a rough indicator of the wealth loss can be obtained by comparing projections made before the earthquake with actual outcomes. In Table 1.7, actual GNP per capita is compared with potential GDP per capita computed by applying the growth rates projected prior to the crisis to the 1998 actual values. These projections were of course themselves subject to considerable uncertainty. They assumed no major macroeconomic crises, and incorporated assumptions about the impact of expected reforms on growth as well as assumptions about the direction of the world economy. With these caveats in mind, the indicative results suggest that GNP per capita would be about 23 percent higher had the economy progressed consistent with the December 1998 projections. In US dollar terms, GNP per capita in 2001 would have been higher by \$703 using the Bank's Atlas method.

Table 1.7: Actual and Projected GNP per capita 1998-2001

	1998	1999	2000	2001
Actual GNP (per capita constant TL)	1,909,918	1,766,837	1,859,910	1,659,199
1998 Projections GNP (per capita constant TL)	1,909,918	1,909,918	1,967,215	2,038,035
Actual GNP per capita (US\$, Atlas method)	3,170	2,880	3,080	2,680
1998 projections (US\$, Atlas method)	3,170	3,170	3,265	3,383

Source: SIS, World Bank; Projected growth rates from December 1998 Unified Survey

3. Extreme poverty.

As was found to be the case for the 1994 data, in 2001, very few Turkish households were found to be below the World Bank's absolute poverty line of US \$1 per person per day.⁹ In 2001, less than 2 percent of the population had per capita consumption under US \$1 per day, and only 3 percent had per capita income under US \$1 per day. These results are basically unchanged from 1994, where 2.5 percent consumed under US \$1 per person per day. There is a decline in measured consumption-based extreme poverty (from 2.5 percent in 1994 to 1.8 in 2001) but these numbers are so small, this difference is well within the standard error of the samples. If census population weights are used, the extreme poverty rate moves from 1.8 to 1.9 percent.

It is difficult to meaningfully characterize such a small share of the sample population. Four dimensions are highlighted here: number of children, location, assets, and education. However, since only 2 percent of the sample is being studied, these findings should be understood as indicative of trends only, and not definitive.

As to be expected when using a per capita standard, larger families are poorer (Lanjouw and Ravallion 1995, Lanjouw, Milanovic and Paternostro 1998). The average household size is 3.9 members, but the average household size of the poor (consumption under \$1 per person per day) is 6.3 members (for income, 6.5 members). Most of these extra dependents are children, and the poverty rate generally increases with additional children (Table 3.1), although there is a discontinuity between four and five or more children.

Absolute poverty in Turkey is concentrated in the South-East Anatolia region (Table 3.2). Overall, 1.8 percent were poor when per capita household consumption was compared to the World Bank poverty line, but in Southeast Anatolia, the rate of extreme poverty was nearly 5 times the national average. Of the less than 2 percent extremely poor, nearly half (46 percent) of them lived in Southeast Anatolia.

Extreme poverty is basically the same in rural and urban areas—only about 2 percent of the population is extremely poor (1.8 percent for urban areas and 2.1 percent for rural areas, difference not significant).

Education (or lack thereof) is correlated with extreme poverty. Overall, about 6 percent of the household heads surveyed reported that they could not read or write. The poverty rate (as a percent of the population) of such households was 4.4 percent (as opposed to the average poverty rate of 1.8 percent). The poverty rate of households with primary-only education was 3.0 percent, while the poverty rate of households with tertiary education was 0.5 percent.

To summarize these results, a multivariate probit regression was run to measure the impact of these extreme poverty correlates on the probability of being extremely poor. Not many variables were found to be estimated reliably, this obviously related to the very

⁹ PPP line discussed in World Bank 2001, World Bank 2000, World Bank 1993, and World Bank 1990.

small number of observations. However, there were four variables found to be significant at the five percent level:

- location in the Southeast which increased the probability of being extremely poor by 3 percent
- location in Black Sea which reduced the probability of being poor infinitesimally
- children of both genders, also increasing the probability of being extremely poor infinitesimally.



4. Urban food poverty

It is not possible to exactly replicate the LSA findings for food-based poverty as explained in the data and methodology section, so the findings here about urban food poverty should be understood as an outer bound on what poverty in Turkey “really was” in 2001. Even with this caveat, it is clear that such poverty in urban areas in Turkey in 2001 was much higher than in 1994. In 1994, for the country as a whole (urban and rural), 7.3 percent of the population had per equivalent expenditures below the imputed value of a food basket (LSA 2000) while the poverty rate was 6.2 percent in urban areas only. In 2001, 17.2 percent of the urban population had per equivalent expenditures below the imputed value of a food basket. Even taking this 17.2 percent as an upper bound on poverty in Turkey, it is clear that the combined effects of the earthquake and financial crises caused urban poverty to widen in 2001.

In 1994, rural and urban food poverty rates were quite close (8.5 and 6.2 percent respectively) and the process of rural to urban migration noted in the LSA 2000 has continued, although there is qualitative evidence of some reverse migration in 2001. It is difficult to argue a priori what the effect of the crises has had on rural poverty—on one hand, income inequality has not declined while real income has, so rural food poverty may be expected to increase, but not necessarily more than urban food poverty has, since consumption of self-produced food is likely to be relatively unaffected by the crises and forms the bulwark of rural consumption expenditure on food (and therefore on consumption as a whole). Furthermore, more than four-fifths of the sample was drawn from urban areas, so the weight of rural poverty in total poverty for the HCIS is relatively low.

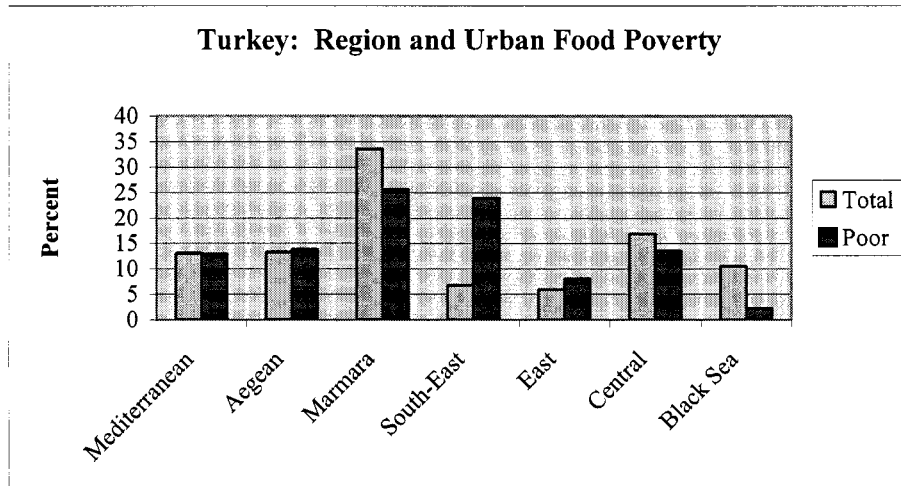
This section presents a profile of the food poor in urban areas in Turkey in 2001. Food poverty is analyzed along many dimensions of poverty, but the most striking correlate of urban food poverty is region, paralleling the findings for \$1 per person per day poverty, but showing an even more extreme effect of regional location. Household size is also strongly correlated with urban food poverty, even though an equivalence scale was used (which should reduce the effect of the per capita scale used for extreme poverty). Aside from subjective indicators, few correlates of urban food poverty produce such striking effects on poverty rates as location and household demographics, other than important variables such as education of household head or unemployment.

Location

The most obvious correlate of urban food poverty in Turkey is regional location (Table 4.1). To some extent this could be an artifact of the sample, which was not designed to be representative for the seven regions of Turkey. However, these findings are so striking that they are included herein, albeit with a very strong caveat. The Southeast accounted for less than 7 percent of the population but for just over one-quarter of the urban food poor (Figure 4.1). The Southeast is a predominately rural area and there is little local industry, so it is not surprising that the region would account for such a large share of urban poverty. As discussed in section 8, the Southeast has been the major

source for rural to urban migration in Turkey, but the migrants tend to leave the Southeast entirely for the Marmara area, which has the greatest number of job opportunities.¹⁰

Figure 4.1



¹⁰ There is some migration to the larger cities of the Southeast such as Diyarbakir (which has a street children problem) and Gaziantep, but this is dwarfed by migration to Istanbul and Marmara regions.

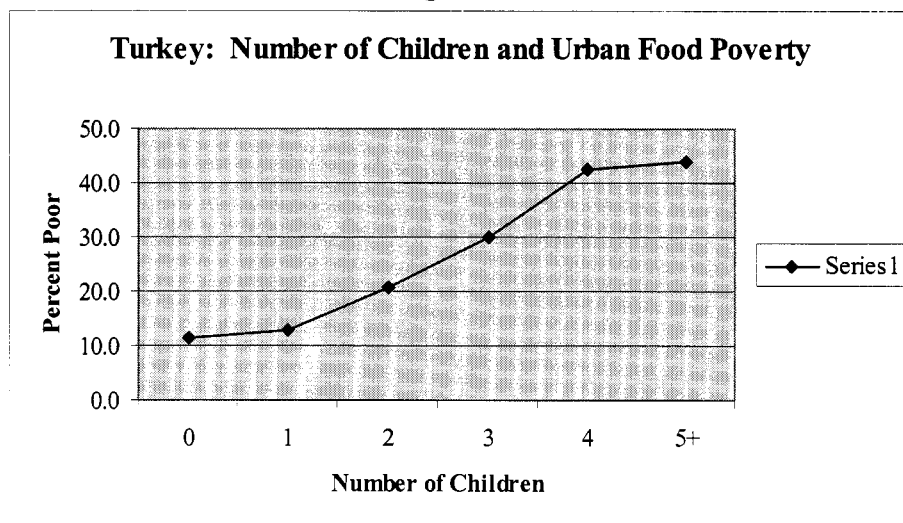
Demographic Variables

As was the case with extreme poverty, urban food poverty is clearly associated with having a larger household (Table 4.2),¹¹ but there is a difference in the type of dependents. Having children increases the risk of food poverty in the urban population much more than having an elderly household member, and the elderly (aged 60 and older) have a much lower rate of poverty than do children (Tables 4.3 and 4.4). There is no major effect of gender.

Urban households with four or fewer members are less likely to be poor than average, and single person households are virtually never poor (Table 4.2). This latter point relates to the social fabric of Turkey—only 1 percent of the urban population lives in a single person household, and living this sort of lifestyle is clearly a choice enabled by income, not a necessity.

Larger urban households are poorer than smaller households, and it can be demonstrated that the type of dependent matters—children are poorer than the elderly, and contribute more to urban food poverty. For household size, the break-point where the average is exceeded is four members, but for children, this effect happens after the first child (Table 4.3). There are two points of discontinuity in this correlation (more children, higher poverty): the poverty rates for zero children and only one child are practically the same, as is the case for four or five or more children (Figure 4.2).

Figure 4.2



However, there is essentially no difference in poverty rates between urban households with elderly members or without (Table 4.4), nor between having one or more elderly members. Thus having an elderly dependent does not put an urban household at any higher risk for poverty, but having more than one child clearly does.

¹¹ This was the case even though the FAO equivalence scale was used, which should reduce the effect of the per capita scale used for extreme poverty.



Another way to look at the relative contribution to poverty of children and the elderly is to look at the poverty rates by age group (Table 4.5). There is a correlation between age and urban food poverty that speaks to the elderly's relative insulation from poverty—the poverty rate of individuals aged more than 60 is less than half the rate for children aged 0-9. There is a negligible gender differential, meaning that there was no effect of gender on the risk of food poverty in the urban population (18 percent of urban men were poor versus 17 percent of urban women). Further, there are too few single elderly females (only 0.5 percent of the urban population) to reliably generalize, but it is quite indicative that only 1 of the 56 single female elderly surveyed was poor. Other female-headed urban households (adult females with at least one child who did not report an adult male member) do not seem at risk for poverty, their poverty rate was only 20 percent as compared to the average of 17.2 percent, and there are few such households—only 1.9 percent of the urban population. Many of these households are still likely to be supported by males—nearly half of them were married (the husband probably guestworking elsewhere), and the other half were widowed.

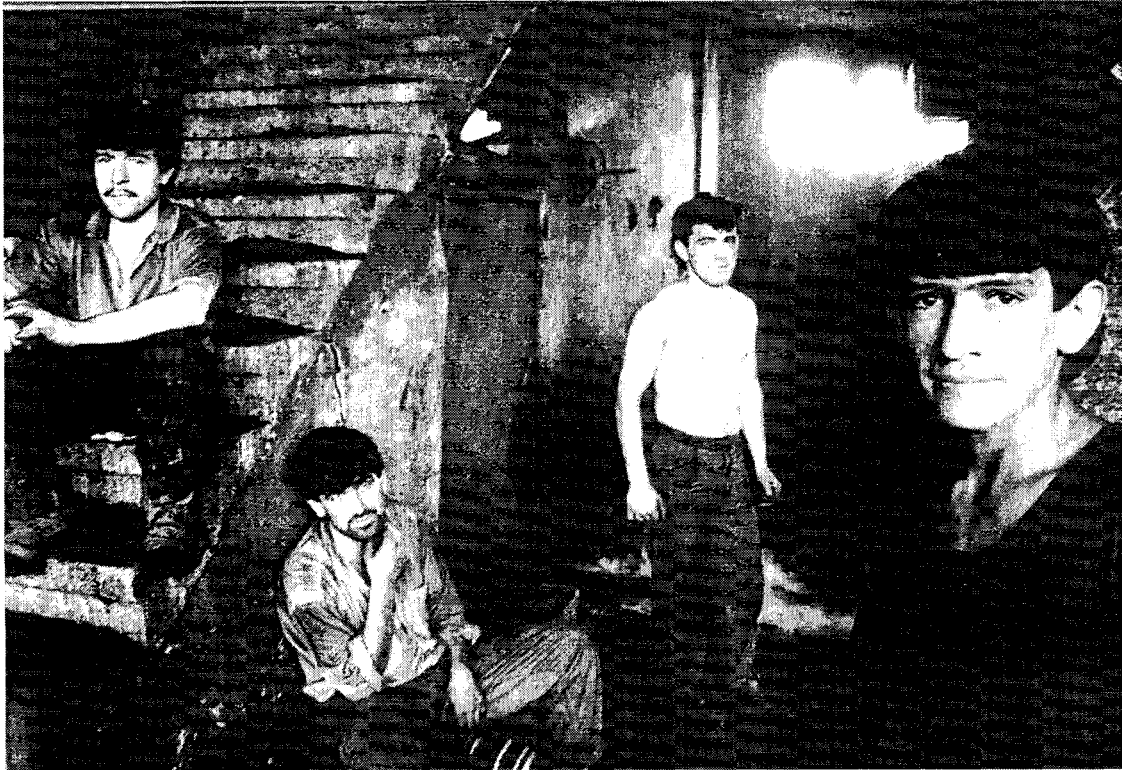
Education

As is true in virtually every country, education in Turkey is closely correlated with welfare. Those few lucky enough to receive a university education in Turkey (about 11 percent of the urban population) are not very likely to be poor—their food poverty rates are all below 8 percent (Table 4.6). Interestingly enough, neither primary education nor lack of literacy has a huge impact on poverty rates. Of course household heads with primary education are poorer than average (Table 4.6), and those limited to primary school graduate have a urban food poverty rate nearly 60 percent higher than total. For all urban individuals reporting literacy in the sample (includes children), the poverty rate was 16 percent poor while it was only 26 percent for those who were illiterate. This is not as sharp a distinction as the poverty rates between families without children and those with four children, for example.

Unemployment and Employment

Unemployment is of course associated in Turkey with poverty, but as in the case of education, not as strongly as one might expect. The poverty rate for urban households with employed heads was 16.2 percent (as opposed to the average of 17.2 percent, essentially the same) while the poverty rate for households who reported that their head was unemployed was 30.6 percent. This is of course a noticeable difference—the poverty rate is almost twice as high for unemployed heads, but it is not as sharp a poverty premium as observed from having many children where the relative poverty risk of 5 or more children is nearly 4 times that of not having any children.

The finding on unemployment is likely to be somewhat understated for several reasons: (i) it is shameful to admit unemployment—only 7 percent of the urban population reported that the head was unemployed; (ii) given the fluid nature of casual and temporary employment in the informal sector in Turkey many respondents would consider themselves to be employed even if they were not earning income at the particular moment of the interview; and (iii) in urban areas near agricultural areas, respondents would report that they are employed if they were working on their land plot.



In terms of employment or “main activity” as queried in the HCIS, predictably enough heads who worked as merchants or wage workers had poverty rates substantially below those of farmers, stockbreeders, or interestingly enough, in the only aspect which shows any noticeable gender differentiation—housewives (Table 4.7). It is important to note the large share of the urban population with retired heads—as discussed under risk mitigation, Turkey has a generous retirement system for the formally employed and civil servants so it is possible for many to retire early. Also, as noted above, urban poverty is correlated with youth, and well-being with age as reflected in the poverty rate for retired heads.

Housing and Housing Attributes

Home ownership in urban areas of Turkey is associated with a lower rate of poverty (but not that significantly, a full 15 percent of owners were poor versus 21 percent of tenants, Table 4.8). Predictably enough, living in a *gecekondu* (slum or shantytown area) has a relative risk of urban food poverty three times higher than that of apartment dwellers (Table 4.9).

The presence of amenities such as private tap or sewage hook-up is associated with a lower poverty rate than the absence of the amenity. Against the general background of some effect on poverty rates but not large effects, a few observations from the annex are noteworthy. Most urban households were living in dwellings that were constructed of concrete, but the 10 percent in wood, earth brick, or stone houses were poorer (Table 4.10). Urban households with latrines were poorer than households with flush toilets (Table 4.11). Less than 2 percent of the urban households lacked an indoor

tap (Table 4.12), and only 0.4 percent had no electricity (Table 4.13). Respondents indicated more than one source of fuel for both cooking and heating, there is consequently little difference in poverty rates by source (Tables 16 and 4.15). Only 5 percent of urban households lack garbage collection (Table 4.16) and only 8 percent lack public sewerage (Table 4.17).



Consumer Durables and Assets

The urban Turkish population is relatively affluent—31 percent of urban households have a dishwasher, 20 percent have a VCR, 26 percent have a car, and 11 percent have a computer (Table 4.18). For these four durables, the poverty rate for those in possession of each was 5-8 percent—which means that interestingly enough, a few urban poor have been able to obtain these items as well. Four other durables are possessed by 80-96 percent or more of urban households, including radio, tape recorder, refrigerator, and carpet. The poverty rates of those who do not possess these are above the rates for those who do, but again, on the range of 10-15 percentage points which is not a huge difference.

The most significant asset for the urban population is a summer house (Table 4.19)—nearly 3 out of 5 urban households have a summer house, and these are not the poor (their poverty rate is only 11 percent). The other assets are possessed by 10 percent or less of the urban population, and the strongest predictor of wealth is owning a foreign

currency account—only 2 percent of foreign currency holders are poor, but only 6 percent of urban households are lucky enough to possess one.



Community Infrastructure

The urban areas of Turkey seem to be relatively well supplied with infrastructure—99 percent have a retail shop in their community, 76 percent a health clinic, 88 percent a primary school and the same percent have telephone access, and 94 percent have both garbage service and an asphalt road (Table 4.20). However, there seems to be inequality in the distribution of these amenities—in every case, the food poverty rate is lower for those urban households with the infrastructure than for those who lacked the infrastructure.



Summary

To summarize these results, a multivariate probit regression was run to measure the impact of these poverty correlates on the probability of being poor for the urban population (Table 4.21). Many variables in the specification were significant at the 5 percent level, including all the regional dummies, several of the assets discussed above, and the household demographic variables.

The single greatest impact on the probability of the urban household's being poor was location in the Southeast, which increased the probability of being poor by 34 percent. This is a huge margin, much larger than those observed for poverty attributes of some transition countries (Braithwaite, Grootaert and Milanovic 1999). Three other factors increased the probability of being poor by 10-15 percent, including location in the East, *gecekondü* house, or living in room in a shared house. Household demographic variables (basically the number and kind of dependents) increased the probability of being poor only slightly—2 to 4 percent. Assets such as dishwashers, cars, and computers also had a small correlation with lack of poverty, reducing the probability of being poor by 2-7 percent.

Perceptions of Poverty

Most of the information sources for perceptions of poverty are qualitative in nature; however, the HCIS did include several questions on subjective evaluations of poverty and changes in living conditions and the results of these questions for the urban population can be broken down by poverty status.

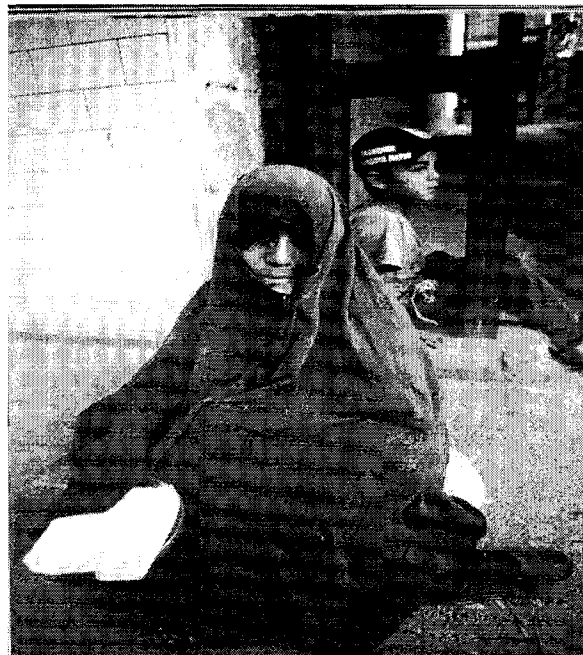
The urban food poor are more likely to identify themselves as “poor” or “below average” but many non-poor also assessed themselves as “poor” or “below average” (Table 4.22). About one-quarter of the urban population evaluated themselves as “poor”

and the same share for “below average”. The poverty rate of those who assessed themselves as poor was 29.6 percent, about 75 percent higher than the average poverty rate, but still leaving a sizeable chunk of people whose self-evaluations are not matched by their revealed spending and food consumption from own production as captured in their household consumption levels. Nearly half the respondents considered themselves average and only 10 percent of these were poor. There was greater congruence between those who assessed themselves as “above average” or “rich” – no one who was poor assessed themselves as rich, but 5 percent of the few who deemed themselves above average were objective poor by the urban food poverty criteria.

The perceived impact of the crises can also be examined from HCIS data (Table 4.23). A small share of the urban population felt that they were better off in 2001 than in the previous year, but 80 percent said they were “worse off” or “much worse off.” Interestingly enough, although only 3 percent said they were “much better off” more than two-fifths of these were poor. Perhaps these lucky few were the recipient of positive idiosyncratic shocks such as finding a job or reduced dependency burden because children have grown.

A significant share of the urban population reported that they “often” or “always” experienced difficulties satisfying their household food needs, and of these, more were poor than the average poverty rate (Table 4.24). About 15 percent “never” experienced problems, only 4 percent of those who never had problems were poor.

The poor appear to be slightly more pessimistic about their community than their own self-evaluation—an even higher share of the urban population felt their community was “much worse” off or a “little worse” off than in the preceding year, but there was little variation between the poverty rate of those who answered negatively and the average poverty rate (perhaps because most people responded negatively (Table 4.25).



5. Vulnerability

In studies of panel data, vulnerability is usually defined dynamically, relating to the probability of falling under the poverty line in the second or subsequent observations. In the LSA 2000, vulnerability was defined statically, as households which had per equivalent expenditure under a “vulnerability” line, which was set equal to twice the food poverty line. Lacking panel data, the LSA 2000 definition of vulnerability was replicated for the urban population of Turkey in the HCIS 2001. Using this definition, vulnerability increased from 36.3 percent of the population in 1994 to 56.1 percent of the urban population in 2001. It should be noted that while vulnerability did noticeably increase from 1994 to 2001, its rate of increase was markedly less than that for urban food poverty. At the same time, the absolute numbers of those who were vulnerable in 2001 were much more than in 1994.

As was the case for food poverty, vulnerability is sharply higher in one region of Turkey—the Southeast, where 93 percent of the urban population had per equivalent consumption below the vulnerability line (Table 5.1). At the same time, a plurality of the vulnerable live in the most populated region, Marmara. Vulnerability was also elevated in the East, but was about average for every other region except the Black Sea which was the least vulnerable (this last finding was also markedly the case for food poverty).

Vulnerability is also associated strongly with household size (as was the case for food poverty) and the least vulnerable households were those of only one member (Table 5.2). As noted above, it is such an unusual occurrence in Turkey for a single person to live alone (single person households account for only 1.3 percent of the population and slightly less than half of these are elderly women—presumably wealthy widows) that the few cases in the HCIS sample are most likely living alone out of choice and not necessity.

There is basically a monotonic relationship¹² between vulnerability and household size for the urban population--adding additional dependents means that the household is more likely to have per equivalent consumption under the vulnerability line¹³ (Figure 5.1). Households with 4 or less members are less likely to be vulnerable, indicating in Turkey that the first two dependents do not seriously impact on the household’s dependency burden, but having more dependents than two does present a clear burden to the household.

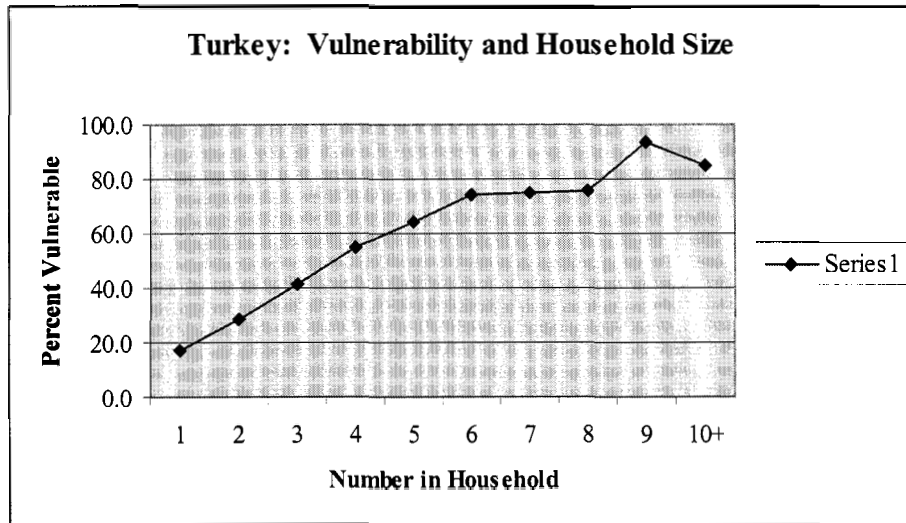
There is also a difference between the kind of dependent (elderly vs. children) and vulnerability. Children are more likely to be associated with urban vulnerability—the vulnerability rate is below the average for no children or one child, but at two children,

¹² The discontinuity at more than 10 members reflects the low percentage of these kinds of households—in the urban population there was only one household with 11 members and one with 13, both vulnerable.

¹³ An equivalence scale was used so this is not likely to be the “per capita” effect demonstrated in the literature (Lanjouw and Ravallion 1995) but this effect could be muted if stronger assumptions about scale effects were used (Lanjouw, Milanovic, and Paternostro 1998).

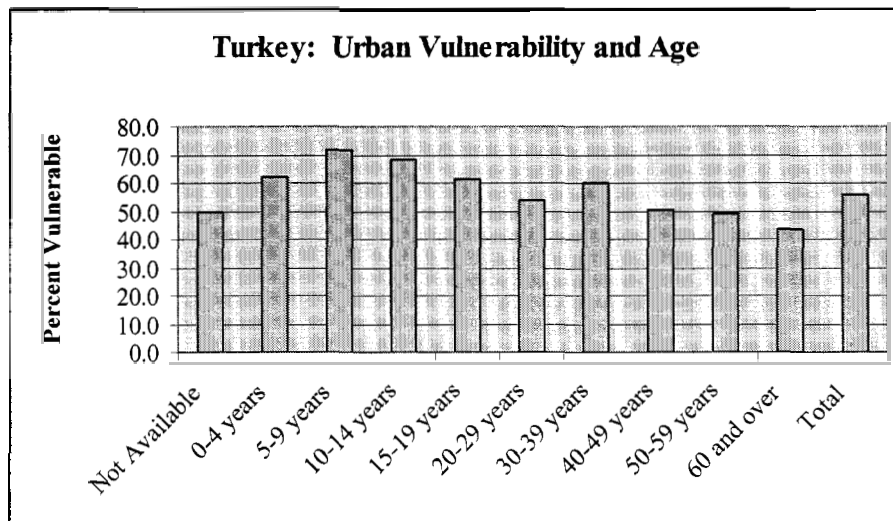
the vulnerability rate is above average and increases monotonically with additional children (Table 5.3).

Figure 5.1



Interestingly enough, the age of child appears to be associated with increased vulnerability (Figure 5.2), which probably reflects the impact of the number of children more than anything else. Households with children aged 5-14 are more vulnerable than families with children aged 0-4, but households with older children are more likely to have younger children as well. The age effect noted in urban food poverty is also a factor in urban vulnerability—individuals aged sixty and above had the lowest rates of vulnerability in the urban population (Figure 5.2).

Figure 5.2



Vulnerability is not as closely associated with education as was food poverty (this probably reflects the fact that most of those with inferior education are already poorer) and vulnerability rates for those with primary education are only about 20 percent higher than average (Table 5.4). Again as the case with food poverty, vulnerability was lowest for those with university education—those with advanced degrees were 84 percent less likely to be vulnerable than average.



Other factors that were important for food poverty such as main activity of the head and whether the head was unemployed or not were still important for vulnerability, but relatively less so. For example, the food poverty rate for households with self-reported unemployed heads was 77 percent higher than average, while the vulnerability rate for such households was only 32 percent higher than average. Heads employed in agricultural activities were more vulnerable than those in other activities (Table 5.5), but the margin for vulnerability was not as wide as observed for food poverty.

6. Inequality

Inequality as measured in the 1994 HIES and the 2001 HCIS is basically unchanged—it was quite high in 1994 and remained at the same level in 2001. Inequality was measured by calculating inequality measures on per capita consumption and per capita income, weighted by household size (Milanovic 1998). The Gini coefficient for income was 45 in 1994 and remained at 46 in 2001 while the Gini coefficient for consumption was 41 in 1994 and 40 in 2001 (Table 6.1).

Inequality was a major theme in the LSA (2001) and income inequality in 2001 is discussed in one of the background papers (Özcan 2002). Basically, little has changed in the distribution of income from 1994 to 2001. In 1994, urban-rural differentials disappeared when adjusted for price differences, in 2001, even without adjusting for price differences, there were no difference in Gini coefficients for urban and rural areas. What



mattered in 1994 is the same predominate factor in 2001—the very sharp regional differentials noted in 1994 are also characteristic for 2001.

7. Risk mitigation, risk coping, and risk reduction among the poor

Turkey's poor use a combination of tactics to deal with their poverty. Holtzman and Jorgensen (2000) have adopted a typology of methods that the poor use to handle their poverty—to manage their social risks as the authors term it. Their framework is presented below (Table 7.1), as adapted to Turkey and will serve to organize analysis of the qualitative data obtained from three sources: (i) Ayata and Ayata (2002, full text in Volume Two) summarized the finding of the 120 case studies undertaken in conjunction with the quantitative HCIS; (ii) field visits and informal focus groups conducted by SRMP team members during the preparation and initial supervision of the SRMP (cited as SRMP Field Notes); and (iii) an interim beneficiary assessment on the rapid response component of the SRMP. Most of the qualitative data speak to the informal sector tactics utilized by the poor, although some of the other topics in market-based and particularly public social risk management are also partially addressed here.

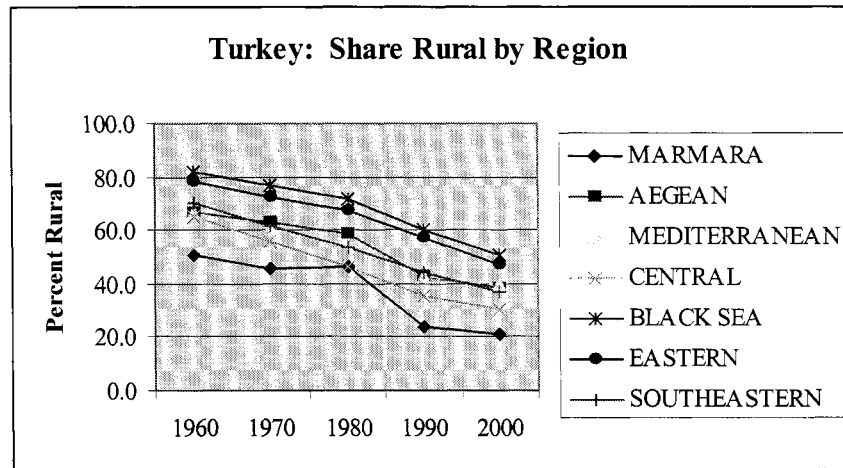
Risk Reduction

The most important aspects of risk reduction in Turkey are migration, macroeconomic policies, public health, and child labor statutes. Formal sector in-service training is not notably widespread in Turkey, most learning on the job occurs as “learning by doing.”

Migration

Of all the tactics, arguably one of the most visible is rural to urban migration, seen in the creation of shanty-towns and slums called *gecekondu* (“built overnight” in Turkish) and the sharp reduction of the share of the population that lives in rural areas of Turkey (Table 7.2). The major cities, particularly Istanbul, Ankara, and Izmir, have grown explosively, but other urban centers have also increased very rapidly. Urbanization increased steadily in Turkey’s regions, except for a sharp acceleration in urbanization in Marmara from 1980 to 1990 (Figure 7.1).

Figure 7.1



Recent migrants to urban areas tend to live in neighborhoods already settled by those from their native villages, and there is an extremely important set of informal connections among such neighbors (who are often at least distantly related to the newcomers) and friends, as well as members of village associations—*hemşeri*, discussed below.

Besides rural to urban domestic migration, there is international migration in terms of a very large group of expatriate Turks (particularly in Germany), many of whom help relatives in Turkey substantially. In the 2001 HCIS, 33 percent of the urban population reported at least one relative abroad, with a poverty rate half of that of those who had no relatives abroad (Table 7.3).

Public Health

In the Southeast and East, midwives are an important source of health and nutrition advice for informal risk reduction and attend a “majority” of births (Ayata and Ayata 2002), while the public health system is available throughout the majority of urban areas of the country—three-quarters of the urban population reported that there was a health clinic in their community (public risk reduction). However, rural areas are not so fortunate and most rural dwellers report significant travel time and cost to reach a clinic. The primary problem with public risk reduction in health is that the poor do not have equal access to the health system.

Only 2.5 percent of the urban population reported having a green card, which exempts the holder from payment for health services--but not medicine, the cost of which is sometimes covered by the local Social Solidarity Foundation (see below).¹⁴ Furthermore, only 30 percent of those in urban areas who reported a green card were food poor. Qualitative sources suggest that fraud, evasion, and favoritism may all play a role in the granting of green cards to the non-poor, while the poor find it quite difficult to access the process. The poor are less-informed, less likely to be literate, and often lack the resources of time and travel cost to get their documents in order.

Box 1. Green Cards in Turkey

“Getting green card seems to be more easily available in the rural areas. Not only the rural poor has less access to other social security mechanisms but also they can prove their poverty more easily and they can persuade the *muhtar* to give them papers of poverty. Urban *muhtars* are also elected but they will have less awareness of the conditions of people living in their neighborhood, and they may be less accessible. Besides, the rural poor may not only be poorer but they may have less access to health services. So green card may be their only solution.” Ayata and Ayata 2002.

“In Ankara, two women told us that when they applied for green cards they had to send a fax to their village to receive proof that they did not own anything even though they have been living in the *gecekond* for 10 years. The fax costs 3 million TL...The lack of information about public social assistance seems, however, more important in rural areas. In poor villages of east and south east Anatolia, only some people knew about the green cards. In several cases, even when people know about the existence of social programs, they have a very little understanding of the process of getting assistance, including the Green card which is more widely known than the other assistance. In Van, none of the three *gecekond* families interviewed had Green Cards, and the women in these families did not know how to get it. They thought it was difficult to get it. There was also a widespread belief among the poor that “some people are chosen, they are the lucky ones...” SRMP Field Notes.

Child Labor Statutes

In Turkey, schooling is mandatory for children for eight years, after which it is legal for children who are at least 14 to work full-time. However, informally, children (particularly boys) do work for low wages or in kind remuneration at much younger ages, particularly in the agricultural sector and on the streets of major cities (discussed below).

Even though schooling is mandatory for eight years, many children do not attend regularly and in essence drop out informally. Turkey does not have official figures for drop-out rates or attendance. Unfortunately owing to non-response, the HCIS can not shed much light on attendance rates, but there is a wealth of qualitative evidence (SRMP field notes, Ayata and Ayata 2000) that strongly indicates that:

- Poor children attend less frequently than better-off students
- Poor children drop out much more than better-off students
- Girls of traditional families (typically the Southeast and East areas but also experienced in urban *gecekond* areas populated by recent migrants) drop out after only a few years or are enrolled to comply with the law but never attend.
- Communications difficulties also affect attendance
- The poor have great difficulties in meeting the out-of-pocket expenditures for school and to forgo income from child labor.

¹⁴ Green cards are given by the Ministry of Health to those who meet an income criteria.

Box 2. Education and Gender in Turkey.

“Among traditional and uneducated families, the traditional separation of roles by gender is an additional factor that may prevent girls from attending school. Some evidence show that when school is no longer compulsory, gender emerges as an even more important issue. In some traditional families many girls do not continue in non-compulsory education, regardless of their economic situation. Girls would generally have to be trained for becoming housewives and mothers in these families see no needs for their daughters to continue their education. The situation is somewhat different for boys at this level, since for them the economic pressure is often the main factor for leaving secondary education.

In a small village in eastern Anatolia, a young women said she did not know whether her daughter will go to school. She said: “the husband will decide on this matter”. And she also added: “the village schools are not good to learn anything; my daughter knows how to read and write, but she is not graduated from the primary school”.

Traditional families are also very reluctant to send their daughters out of the village or the neighborhood. This is even more true when girls begin to get matured physically at age 13-14 and when a new sets of restrictive rules and norms begin to regulate their lives. At this age, girls from traditional families would generally not go anywhere without having a trustworthy company with them. This has obviously a strong negative impact on school attendance, in particular when schools are far away from residence.” SRMP Field Notes.

Box 3. Education and Related Costs

“The financial difficulties encountered in meeting the expenses the for school dress, shoes, books, stationery, school fees and school meals urge families to take their children from school. As most schools are in walking distance and as the government provides free transport for village children who go to town schools, transport costs do not appear as an important source of complaint. Families unanimously emphasize that worsening economic crises and the decline of regular sources of income in the family seriously threaten the education of their children. Finally, it should be emphasized that factors such as taking girls from school so that they would help their mothers at home in housework, the absence of schools in the vicinity as in the case of some Eastern Anatolian provinces and the recently established *gecekondu* areas and, the absence of children’s birth certificates also prevent the schooling of the children.

The poor families have great difficulty in providing proper wear, school bags books and stationery, meals, and school fees for their children. Hence, many have reported that they were unable to provide at least some of these items during the school year. For instance, for primary school children in advanced years books cost a minimum of twenty-thirty dollars and provided that there are two children in the family, the cost would double to become a major financial burden on the household. Thus, frequently, the parents would let their children go to school without books. Although what is often at stake is very little money, the extremely poor families cannot afford all the items of school expenses as they have very low and irregular incomes and as they suffer chronically from shortage of cash.” Ayata and Ayata (2002)



Risk Mitigation

Several risk mitigation strategies are well-represented by Turkey's poor. These include multiple jobs, investing in physical assets, investing in human capital, investing in social capital, marriage and extended family. Market-based tactics such as investing in multiple financial assets are not practiced by the poor, and disability insurance is almost non-existent in Turkey. On public risk mitigation, Turkey does have formal pension programs and the self-employed can enroll in the *Bag-Kur* program, although virtually no poor are able to afford the premiums. Unemployment insurance is a recent innovation in Turkey, it was only inaugurated in 2001 and was not operational during the HCIS fieldwork. Health insurance is provided through the three public pension programs. Private health insurance is available but only a small share of the total population has it (1.5 percent), and these are not the poor.

Multiple jobs

It is quite common to have multiple “jobs” in Turkey—a better characterization would be multiple economic activities. For example, many rural families both farm their own land and send extended family members to urban areas (or even abroad) to earn seasonal or informal income while urban families keep gardens and livestock in areas immediately surrounding their homes or back in the village from which they migrated to the city. In the HCIS, 13 percent of the total population reported having land outside of their own village or settlement area, and 68 percent of these were urban households. Urban households also produce some of their own food—14 percent of the population reported having a vegetable garden for their own consumption and half of these were urban (HCIS data).

Informal sector employment is both the mainstay of many poor and the proximate cause of their poverty. Working in a very low-paid informal job sustains poor families, but typically at such a low level that they can not escape poverty or invest in their children.



Box 4. Informal Sector in Turkey

“Casual workers change jobs frequently shifting from one employer to another even during very short periods of time. Thus, many report having worked for tens or even hundreds of employers and being engaged in numerous trades in the past. During the frequent periods of unemployment between changing employers and jobs the casual worker himself and often the whole family who depends on him lose an income. The casual poor typically wait for days in the coffee houses, bus stops or other identified spots to be picked by an employer on a daily basis. Even in the case of working for the seasonal trades such as the garment, brick making and construction industries that offer the highest pay, jobs are often temporary and workers are arbitrarily laid off. As the latest wave of migrants to the cities the majority of the extremely poor have a background in farming, agricultural wage work and animal husbandry. When they were still in the village as well as after coming to the city almost all casual laborers have worked for the building industry though many were not able to develop new skills there. Factory work however appears much less common as it was generally limited to the labor-intensive industries. Only four household heads in Istanbul have mentioned that they worked in the garment industry at one time in the past. In addition, the casual workers have almost all attempted doing various street occupations working as shoe-shiners, porters, food sellers etc. Finally, those most desperate for income work as garbage pickers (bottle collectors, scrap metal collectors, and paper sorting) and they wash dishes in the coffee houses and worst of all as sewer men. Incomes varied significantly in such casual trades; shoe-shining and garbage picking brings only one or two, street selling two and three, and working in the building industry four-five dollars per day. Almost all these jobs, except factory work, offers no social security for the work force and cases where workers were abused, for instance being refused to pay what was initially promised, were quite common.” Ayata and Ayata (2002).



Investment in Physical Assets

To the limited extent provided by their limited means, the poor in Turkey invest in physical capital—particularly housing and livestock. The majority of the urban population own their home (63 percent) and the poverty rates are only slightly different between urban owners and renters (Table 4.9). House ownership is basically similar in rural areas (69 percent of the rural population own their house) where families typically build their own dwelling or add rooms to an existing one (HCIS data).

Investment in Human Capital--Health

The poor in Turkey invest as much possible in their human capital, particularly in education for children. The poor are not as able to invest in health because of the prohibitive cost of health care and the scarcity of the green card. In the case studies, it was demonstrated that a serious illness was a major idiosyncratic shock to the affected poor household and strongly associated with poverty for the entire household (particularly when the adult male breadwinner was affected).

The poor in Turkey are *less* likely to report that they were ill in a reference period than the non-poor (HCIS data). This does not mean that the prevalence of illness is necessarily worse for the non-poor, but probably indicates that the poor have fewer options to pay for treatment, and thus are forced to ignore or minimize conditions that would result in a visit to the doctor by those who could afford it.

Investment in Human Capital--Education

Education is an important investment for many poor families, even though it can be quite difficult for families to pay for the out-of-pocket costs and to lose potential income from child labor. Some poor families are forced to keep their children home from secondary school or even to pull one or more children out, leaving the best student studying.

Box 5. Parental Commitment to Education

“Most families however, are highly enthusiastic about the education of their children. The education of the children is seen as investment into the future, the most important source of security not only for the children themselves but for the parents and indeed the whole family. Thus, many have mentioned their children’s school expenses among the most fundamental needs of the household. The parents’ willingness however primarily depends on the school performance of the child. Hence, even the most desperate families make great effort to keep their successful children at school. Some can achieve this until the end of the High School but for further stages they are almost totally helpless. Since parents cannot send them to good schools and to the expensive preparation courses the poor children’s chances of getting to the university is very low and those few who do, find it very difficult to meet the expenses of living in a different city. In such cases the parents would ask for support from relatives, neighbors, employers, charity associations and the government authorities.” Ayata and Ayata (2002).

Social capital.

Turks have a high degree of social solidarity (Ayata and Ayata 2002) and most invest as much as they can afford into reciprocity for important social capital building events, such as attending weddings and ritual circumcisions. Hospitality is particularly valued in Turkish culture, and extremely commonly interviewees (and SRMP team members) were served tea with sugar or ayran (a yoghurt drink) even by extremely poor families who would have been shamed not to offer honored guests some refreshment.

Box 6. Social Capital and Reciprocity in Turkey.

One important neighborly or kinship help with the expectation of reciprocity is during traditional ceremonies for significant life passages such as marriage and *sunnet* (circumcision). These ceremonies are the key for the reproduction of social relations. Therefore there is a rule of “reciprocity” at these ceremonies and they are a way to receive money or gold from the kin and neighbors.” SRMP Field Notes.

Turkish society has produced an important informal expression of social capital—the “village associations” of *hemşeri* (people of same place of origin). These *hemşeri* networks provide a very important resource of private, informal assistance to the poor, who utilize them as a risk coping device (discussed below).

Box 7. Social Capital and Networks in Turkey

“In the *gecekondus* where the entire population migrated at some point from different regions, *hemşeri* networks act as the basis of solidarity and patronage relationships. Aside from helping the poorest with some in kind assistance, these associations have an impact on the integration to their members into the city life by articulating local identities with the necessities of everyday city life. People from the same village or town have meetings through these associations, where they share their problems they face in their new environment such as their health problems, unemployment, political party affiliations and so on.” SRMP Field Notes.

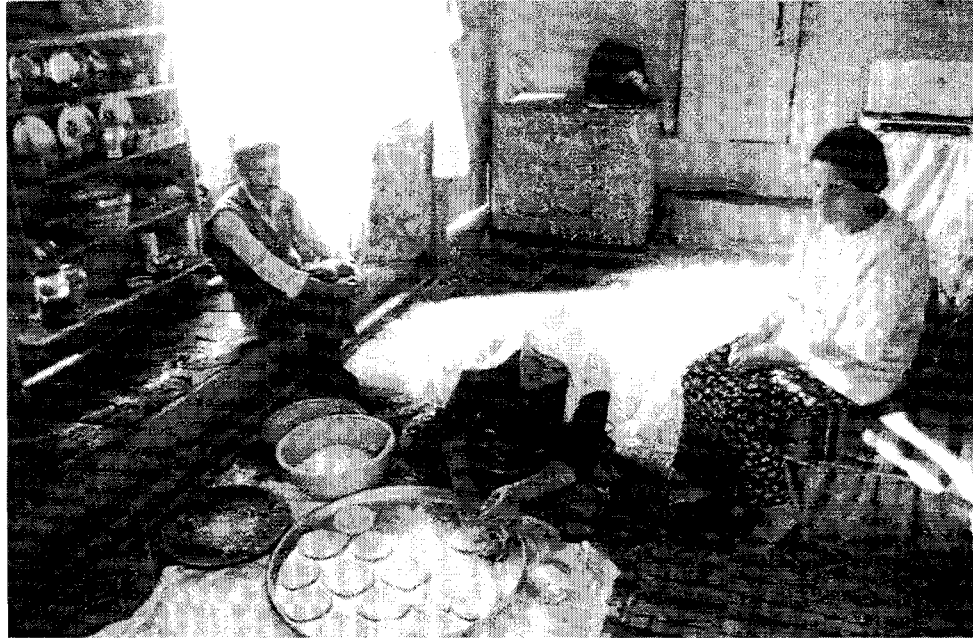
Marriage, Family, and Extended Family.

It is difficult to overstate the importance in Turkey of marriage, family and extended family ties.

Box 8. Marriage and Extended Family in Turkey

“As a respondent has expressed so well, “breaking with ones family is committing economic suicide”. Although the support networks are based primarily on patrilineal ties, solidarity among married sisters seem particularly strong while women also emphasize that they do get help frequently from their own fathers brothers. On the other hand, the widowed women report receiving considerable help from their husbands relatives too.

Disputes among members of the extended family are also common and many tend to cut off their relations with close kin almost completely. Sometimes support for needy relatives continue although the parties involved do not speak to each other. On other occasions, parents cross with some of their children would get support from others and in a similar vein relations with some close relatives would be smooth while others not. Mothers may continue to help children refused by their husbands. In summary, despite the growing tensions and conflict, total isolation from the extended family is a very rare occurrence.” Ayata and Ayata 2002.



Multiple Financial Assets

In the large cities/developed Marmara region, financial infrastructure is well developed (there are many banks offering a full range of financial services), but not in the rural areas and particularly not in Southeast Anatolia. Investment in these assets is a possibility only for the non-poor. For example, as noted previously, less than 6 percent of the urban population has a foreign currency account. Admittedly these lucky few are not poor (their poverty rate is less than 2 percent), but they are not typical for Turkey. Rather more of the urban population has a credit card (30 percent) and somewhat surprisingly, 7 percent of these are urban food poor (Table 7.4)

Formal Sector Pensions

Turkey's formal sector pensions are analyzed in the 2000 Country Economic Memorandum for Turkey (World Bank 2000 CEM). There are three public pension programs-- Sosyal Sigortalar Kurumu (SSK), Emekli Sandığı (ES), and Bağ-Kur (BK)—covering different areas of the labor market. SSK covers public and private sector workers excluding civil servants, while ES covers civil servants and BK covers the self-employed and farmers. Prior to the 1999 reforms, approximately 2.8 million people were beneficiaries of SSK, 1.1 million of ES, and nearly 0.9 million of BK (CEM 2001, Table 2.1).

In the HCIS, 21 percent of the total population reported receipt of a pension of any kind in the preceding month.¹⁵ Of these, more than four-fifths were urban households. Of the urban population reporting pension receipt, only 11 percent were poor. Thus, it seems that pensions are not an important weapon in the arsenal of the poor

¹⁵ Which program provided the pension was not captured in the HCIS.

to mitigate risk, since so few poor households rely on them because so few poor households receive them.

Health Insurance

Health insurance is provided by SSK, ES, and BK for their enrolled members. A scant few employers offer private health insurance. Turkey's health insurance is described in the Turkey Health Sector Review (forthcoming). As was the case for formal sector pensions, most households with health insurance are urban and few of the urban population are poor (Table 7.5). Less than 3 percent of the urban population have green cards.

Risk Coping

Market-based tactics such as selling of financial assets or borrowing from banks are not accessible to most of the population—only 5 percent of the total population reported having a hard currency bank account and the same amount (5 percent of total population) reported that they had succeeded in obtaining a bank loan. These tactics are not discussed further. Public risk coping interventions include disaster relief, Social Solidarity Fund ad hoc transfers, and Social Solidarity Fund income-generating activities and literacy efforts.

Selling of Assets

In the HCIS, almost one-fifth of the total population reported that they had sold household assets or valuables (there was no difference between the urban and rural population). Asset sales do not seem to be strongly associated with poverty—the poverty rate was only a little lower for those in the urban population who sold assets (20 percent) than those who did not (16 percent, Table 7.6). Qualitative information suggests that there is little market for the assets owned by the poor—if they have a TV, chances are excellent that it either does not work or is ancient, and nearly 100 percent of households already have a carpet and would not be interested in purchasing an old one from the poor.

Borrowing from neighbors, informal support networks and charity.

After migration, the next most important informal tactic for the poor is the strong sense of social solidarity and the high extent of informal assistance and help among relatives, friends, neighbors, and *hemşeri*. Of course it is not possible to quantify this factor in a formal international comparison, but there is a strong sense from the qualitative work and the HCIS that in Turkey there is much more direct assistance in cash and kind between households than in the neighboring countries of the former Soviet Union and Europe. For example, in the 2001 HCIS, one-fifth of the urban population reported that they assisted other households with cash or kind donations¹⁶ and the poverty rate of those who did assist was nearly 10 percentage points below average (Table 7.7).

¹⁶ The same percentage – 20—of rural households reported that they had assisted another household with cash or kind.

Nearly half of the urban population reported that they had borrowed from friends or relatives and the poverty rate of those who borrowed was 7 percentage points higher than those who did not borrow (Table 7.8). A slightly higher share of the rural population (57 percent) reported that they had borrowed.

There also seems to be a high level of religiously-motivated private charitable work, sometimes directly from a wealthy individual to the needy (such as poor interviewed in field visits in Sultanbeyli (a *gecekondu* area of Istanbul) who were living rent-free in somewhat dilapidated housing provided by a local business magnate, SRMP Field Notes) as well as intermediated through the *imam* (religious leader) and mosque such as the *fitre* and *zekat* (alms which are obligatory for the well-off) as well as the traditional gift of mutton to poor families during the *Bayram* holidays.

The culmination of these flows of private and informal assistance are extremely important for the poor.

Box 8. Importance of Informal Networks in Turkey.

The poor emphasize that they are able to send their children to school only with the help they receive from their associates; these would include relatives, neighbors and *hemşeri* as well as middle-class charity associations. Often, help is in kind, in the form of books, stationary, school bags, school dress, shoes and contributions to the registration fees. The family strategy is generally one of combining these sources. Close relatives such as brothers and sisters, parents and first cousins respond to children's various needs and sometimes this takes the form of giving second hand school materials to the needy children. Affluent relatives in Europe are particularly helpful. On the other hand, especially the teachers but also the headmen in the quarter mobilize and organize help for the poor students in order to keep them at school. Finally few families have mentioned that they send their children to relatives in other towns and cities in order to provide them better educational opportunities." Ayata and Ayata (2002).

Box 8. Kinship Networks in Turkey.

In Turgali village in Van a villager who worked as a construction worker in the past and earned 6 to 8 million TL a day, was unable to find work (in the past month 5 months he only worked 2 months). Right now his family of 12 lives on 25 million TL a month and have 300 million TL debt. He could not afford his electricity bill so it was cut off. The last time they had meat was in a marriage ceremony and they were not much helped by their family nor their neighbors, not because of the lack of will but because they were also poor and helped them as much as they could which was not much. But regardless of the level of poverty, especially in the traditional setting in eastern Anatolia, kinship relations played a major role in surviving strategies of the poor. In Hasbey village in Gevas, an extremely poor household of 12 (two brothers with their wives, children, step mother and a sister), lived in a house given to them free of rent by the villagers. They had no land and the two male adult members had not been able to find work in the past couple of months. Regardless, they received their widowed sister and her son from Istanbul just recently to live with them since her only son, a 17 year old, could not work anymore to support her due to a kidney illness. SRMP Field Notes.

However, such informal and private assistance is not infinite, and can be particularly difficult to sustain in the event of a large covariate shock such as the financial crisis. Indeed, some qualitative evidence points to reductions in the ability of people to assist each other since all in the community are suffering from the economic downturn.

Table 9. Limits of Informal Assistance in Turkey.

“A widowed woman who had lost her husband 4 years received 30 million TL from a *vakif* (foundation) in Istanbul for three years continuously. She lived with her only son who was working since age 7 and in recent years, at the age of 17, was earning 55million TL a month when their rent in Istanbul was 30 million. To supplement their income the *vakif* in their neighborhood paid her 30 million TL a month. But in recent month, she was told by the *vakif* that as a result of economic crisis, they had to stop paying her and since his child also was sick she had to return to her brothers in their village in the Gevas district.” SRMP Field Notes.



Child Labor

Child labor is relatively visible in Turkey, both in the informal sector in urban areas and in rural areas. For example, in the district of Durağan, Sinop Province, landless villagers reported that they “sold” their under-age boys for the summer to work for landowners in the valley, while the men worked in seasonal informal construction jobs in Istanbul, Ankara or other urban areas. There is also a small but distinct population of street children, particularly visible in Istanbul, Ankara and Diyarbikir (see below).

Children of school age are sent out to work, and if there are no family business or quasi-formal sector opportunities (working under the age of 14 is illegal) then the only alternative is informal employment, and in urban areas, this invariably means on the

street (in rural areas most child labor is family labor related to agriculture, or cottage industries such as carpet weaving). Such informal sector activities range from petty trading, vehicle guarding, portering, through to the illegal such as under-age prostitution, drug dealing and theft. Although providing family income, the costs are high for the child concerned in terms of foregone education, lack of development of marketable skills, and exposure to illegal activities. Street-working children (and child labor in general) is a problem confronted most by the poorest quartile of the population. There are significant seasonal variations - with an increased demand for child labor, or at least opportunities to gain income, and hence number of children working on the street in the summer months (especially in tourist areas).

Table 10. Child Labor in Turkey

“Families are in general willing to find jobs for their school aged children at least during the vacations but because of the scarcity of employment opportunities not all of them are able to do so. In the rural areas the children join their parents in agricultural work in case that there is a family farm but more frequently they work with their parents as agricultural laborers. In the urban areas they undertake various informal jobs or work as casual laborers.

Especially where the children have access to relatively stable and well-paid jobs work becomes a substitute for education, as needy families do not want to be deprived of an important income source by keeping children at school. In other words, poverty itself becomes the most serious obstacle to the education of children. Especially where children are not among the brightest in class, the threat of parents taking them from school becomes more immanent as income from work, however meager, becomes the priority of the family. The children themselves often want to leave the school in order to work. Sometimes the parents have to make a choice between two or more children as to educate only one of them and let the other work; in such cases their preferences for the school would first be the brighter ones and secondly the boys.”
Ayata and Ayata 2002.

Street Children

Children living on the street is more of a social problem, although there are severe economic and welfare consequences. Most such cases are as a result of family problems (with children running away from home) - lesser causes are children leaving institutions or fleeing the consequences of crime. These children are truly marginal and live right on the margins of the law - with 70% estimated to be male, and 30% female (SRMP Field Notes). They are extremely vulnerable, with no fixed abode, usually no identification, and exposed to every vice imaginable. Many cases can be resolved through effective social work, if they are caught in the early stages. It is often possible to work out some family reconciliation, resolve the problem, place the children back in school or at least in a more secure environment. With the passage of time, all of these actions become increasingly difficult and such children can become consolidated into the street culture with few, if any, employment opportunities, on the margins of society and the law. While there are no longitudinal studies on such children in Turkey, anecdotally it is clear that their situation is bleak and often they end up in crime, prison or in premature death.



Consumption Reduction

A major tactic widely used by the poor in response to the crisis has been the risk coping device of simply reducing their consumption, particularly on non-food items, but also the poor reported significant reduction in food consumption in the HCIS (Table 7.9) and in the qualitative interviews. For example, more than three-fifths of urban households reported that they cut down or “stopped” food consumption while predictably enough, the poverty rate of those who did not change their food consumption was significantly lower than average (Table 7.10). Nearly three-quarters of rural households reported that they had cut down or “stopped” food consumption.

Box 11. Food Consumption of the Poor in Turkey

“The basic food items that the poor consume most frequently as part of their staple diet include the following; flour and its derivatives (bread, *bulgur*-cracked wheat, macaroni), rice, cooking oil, salt, sugar, tomato paste, potatoes, eggs and tea. The benefit dependent poor, and especially those poorest among them, cannot always secure even a minimum supply of these items in their kitchen. The extremely poor families who try to survive on the edge of the starvation line would most frequently have tea with bread for breakfast and bread, whether home made or bought from outside, and either with ‘flour soup’ or one of *bulgur*, macaroni, rice or boiled potatoes for dinner. Tomato paste would almost always be used as an ingredient to cook these dishes. In the summer months the majority of the poor, including those who are better off, would have bread and uncooked vegetables i.e. tomatoes, green pepper and cucumber for breakfast and very frequently for lunch too. Even the most desperate in their most difficult times would maintain a minimum quantity of flour, cooking oil, sugar and tomato paste. Occasionally the poorest families may have difficulty in maintaining this bare minimum regularly but in such cases the possibility of receiving food from neighbors is particularly high. At times when the poor family really becomes desperate, the very close neighbors, however poor they themselves would be, will tend to offer help in the form of cooked dishes (a pot of *bulgur*, macaroni, soup, boiled potatoes). The destitute however have also reported cases of almost absolute hunger for a day or even two.

The very poor people generally suffer from frequent shortages of cash and credit in achieving this level of food consumption and for many of them conditions have become even worse during the economic crisis. In the majority of the interviews it was observed that the poor families who could regularly provide the standard meals described above, considered themselves as lucky. In the worst cases witnessed during the fieldwork, families who had no regular income were unable to maintain even the minimum food stock for cooking some of the dishes mentioned above. In such situations the family survived on having bread and cooking oil, bread and tomato paste, bread and potatoes and sometimes only bread. It was observed at least in two cases that the families were living on the edge of starvation as their children occasionally slept hungry. The unemployed father of seven children in a squatter settlement of Istanbul expressed his sorrow in the following words, ‘I do not go home, I find myself a place to hide in the darkness until the children sleep so that I avoid the tragic sight of my hungry children crying for food’”. Ayata and Ayata (2002).

In the HCIS, about the same share of urban households reported that they had cut down on non-food items (59 percent) and a significant portion (15 percent) reported that they had stopped altogether spending on non-food items (50 and 26 percent for rural households respectively, Table 7.11). Interestingly enough, the human capital investment items of education and health spending were less affected by reductions—35 percent of the urban population and 44 percent of the rural population reported spending less on both health and education (Tables 7.12 and 7.13). About two-thirds of the urban population reported cutting down on food quality (Table 7.14).

Malnutrition

Visible malnourishment of children can be observed in Turkey, but it is relatively infrequent. Only about 2 percent of children under 5 were wasted (low weight for age), which is usually an indicator of acute malnutrition (UNICEF 2000). Interviewers for the HCIS qualitative study and a very few times during SRMP (Field Notes) did report some acute malnourishment, but in most cases, the poorest households did get food assistance directly from neighbors, helping to alleviate this problem. Rather more children were stunted (low height for age) – about 20 percent in 1998 (UNICEF 2000). Stunting reflects chronic malnourishment and is much more difficult for a casual observer to note than acute malnourishment. “Stunting is more prevalent in rural areas, in the East, and among children of mothers with no education. Stunting occurs more frequently among children who are of higher birth order, and among those born after an interval of less than 24 months” (UNICEF 2000).

Public Risk Coping

There are two institutions for publicly-funded risk coping mechanisms in Turkey: the Social Solidarity Fund and SHÇEK, the Social Services and Child Protection Organization. These are three kinds of programs run by the Social Solidarity Fund and its affiliated Foundations which pertain to risk coping: disaster relief, ad hoc transfers, and micro-projects and literacy training. SHÇEK runs 381 social service provincial organizations such as community centers, special houses for women, elderly and disabled people, orphanages, family information centers and centers for street children and youth. SHÇEK is primarily responsible for institutionalized children and other vulnerable groups and does not provide cash transfers, that is the purview of the Social Solidarity Fund.



Box 12. SYDTF

The Social Assistance and Solidarity Encouragement Fund (Social Solidarity Fund, SYDTF) was established in 1986 as an umbrella organization and financing entity for 931 regional affiliate foundations (SYDVs). The purpose of the SYDTF and the SYDVs was defined as "To aid poor and destitute citizens in circumstances of need and, as necessary, those who have been accepted in Turkey or have travelled here by whatever means, to ensure the distribution of wealth in an equitable fashion by taking measures to improve social justice and to encourage social assistance and solidarity."

More than 4 million people benefit annually from the SYDTF and SYDV activities which are concentrated on various types of ad hoc assistance to needy individuals:

1. Hot food program: Provision of free meals (soup kitchens) to 64,000 poor people who are registered at the SYDV and can provide the registration card .
2. Lunch for school children from remote villages: Provision of free lunch to 540,000 students coming from villages with no primary schools and that have to be transferred to a central school by buses.
3. Education programs: (i) In-kind benefits conditional on school enrolment (textbooks, uniforms, waiver of dormitory fees) provided to 153,000 poor students; (ii) 345 student hostels provides accommodation to 53,000 students; (iii) scholarships for 202,549 poor students enrolled in universities conditional on high grades.
4. *Ramazan* and *Bayram* assistance. Food and clothing assistance provided to 1,000,000 poor people in the month of *Ramazan* and during *Bayram* holidays or episodically.
5. Winter (heating) assistance: Provision of coal and fuel for heating before winter to one million poor people.
6. Health assistance: covering out-patient treatment and medicine expenses of poor people with green card.
7. Assistance for the disabled. Support programs for 13,500 disabled.
8. Natural disasters. Cash or in-kind benefits (shelter, compensation to families for deaths of relatives; damage to SME businesses) received by 817,949 individual victims of natural disasters (floods, earthquakes).
9. Damage from terrorist activities. Cash or in-kind benefits received by 841 individual victims of terrorist activities.

The SYDVs also administer income-generation programs: (i) projects creating direct employment for 89,234 poor and unemployed citizens (trout production, beekeeping, carpentry rug weaving, cow raising, business, knitting, sheep raising, small handicraft, mushroom growing, greenhouses); and (ii) training for 186,312 poor and unemployed (vines, fruit-walnut-olive raising, vegetables, projects for the disabled, poultry, fodder, etc.) as well as literacy programs. SRMP Field Notes.

Earthquake Benefits

The SYDTF and SYDVs geared up for a major effort to provide cash benefits to earthquake victims with financing from the World Bank—the US\$ 250 million Emergency Earthquake Recovery Loan (EERL). Four types of benefits were provided: accommodation (or rental) allowance, repair allowance, and death and disability benefits. The Government was so satisfied with the rental allowance that they extended it for an additional three months (it had been intended to stop after one year of receipt) from their own financing. The SYDTF and SYDVs performed admirably, under very difficult conditions in the earthquake zone. Several very positive evaluations of the EERL were conducted, including an operational audit, a beneficiary assessment, extensive supervision, and a World Bank internal review.

Box 13. Earthquake and SYDTF

“The Adapazari center was staffed entirely by volunteers (both management and application processors) and was a showcase of organization and private-public partnerships. A local businessman was working himself as a data entry operator and general staff manager and had recruited the entire staff from the local community. There were 10 computers each with three staff—one person to talk with the client, one person to physically search through the file and read out loud the information to the third person, the data entry operator. The local business community had been mobilized, and the food for all the staff was donated by local business. Applicants were moved quickly through the application process and no queues that lasted longer than 20-30 minutes were observed.

The Adapazari center was set up in a basketball gymnasium. Clients picked up their application forms at the entrance and when they were filled out, were ushered into seats of the gymnasium and offered a juice or tea (donated by the local business community) while a staff member explained the intake procedure to them. The clients then proceeded to one of the 10 computers and were present while their information was entered into the computer, allowing the clients to verify their information directly.” EERL Field Notes.

By June 2000, 325,000 households were in regular receipt of the accommodation allowance and credited it with helping them reintegrate into society and productive employment after the earthquake.

Ad Hoc Social Assistance

The SYDTF provides financing to the 931 SYDVs to provide ad hoc social assistance to “needy” families. Formal criteria for determining eligibility are that applicants must produce documentation of their lack of property and social insurance (see box), but the actual selection of applicants is done by a local committee. Applicants are often recommended to the local SYDV by the *muhtar* (who is typically consulted regardless) and a local committee (of various government officials but also three representatives of civil society) decides on the applications individually. Resources are limited and many applicants receive nothing or only very limited assistance.

Box 14. Documentation Required by SYDV for social assistance applicants:

1. Directorate of Census, for confirmation of the family status.
2. *TAPU* (State Property Authority), to confirm lack of ownership of land and house.
3. Social security agencies (SSK, ES, BK), to confirm that the person is not covered by social insurance.
4. Ministry of Interior, for security clearance.
5. Ministry of Finance directorate, to assess the tax record.
6. Municipality, to assess the taxes paid on properties.

Having the form stamped by different government offices can be a difficult task for some of the respondents who usually have to take the application in person to have it stamped.

The SYDV also requires that an evaluation form be completed and sent to the SYDV Board recommending the person for assistance. Moreover, in many cases the SYDV assigns someone (often a policeman or a gendarme) to conduct a visit at the application's house to further investigate if the person really requires assistance. SRMP Field Notes

“Social Solidarity Fund (SYDTF and SYDVs) gives a food package generally consisting of staples such as cooking oil, macaroni, sugar, flour, tea and tomato paste. Food is distributed by the provincial government administration to the needy families periodically, for instance, once in every six months. The families who benefit from food aid report that the contents of the package meet their basic food requirements for almost one month, depending of course on the size of the family.” Ayata and Ayata (2002).

Less than two percent of the population (1 percent of the urban population and 0.5 percent of the rural population) reported that they received cash income from the SYDTF (HCIS data). Part of this could be terminology, in the qualitative interviews, it was clear that very few respondents could identify the source of the assistance that they reported—usually they said that the assistance was from the *muhtar* even when it was clearly from the SYDTF (SRMP Field Notes). An additional two percent of the total population reported receiving “other state allowances,” whatever this meant to the respondent is not clear (HCIS data).

These numbers are too small for any meaningful analysis, although it is indicative that 70 percent of this 1 percent of urban recipients reporting SYDV assistance were not food-poor (Table 7.15).

Micro-Projects and Literacy

A major focus of SYDV activity is the provision of financing for micro-projects and for employability training (particularly adult literacy programs). However, access to these programs is limited. Only 22 percent of urban households and 17 percent of rural households surveyed reported that there were micro-project or training programs in their residential area (HCIS data). Of the urban households which reported access, only 9 percent of them were food poor (Table 7.15), suggesting that in urban areas, these courses and programs are not offered in the poorest areas, or that the poor simply lack information about the programs, or that the associated costs (time, travel) are too high.

8. Conclusions and Recommendations

This report has documented an increase in poverty in urban areas of Turkey from 1994 to 2001, related to the impact of the 1999 earthquake and 2000-2001 financial crisis. Extreme poverty in all of Turkey has not changed, and remains at low levels, but inequality is also unchanged at quite high levels. A relatively large share (nearly one-fifth) of the urban population has consumption below a food standard, and qualitative evidence indicates that poverty has worsened in rural areas as well.

The poor have been particularly impacted by a reduction in seasonal and informal employment opportunities in the urbanized areas, and some men are returning to their rural villages because they can not earn enough in the cities to cover their costs. The primary coping strategy of the poor has been to reduce consumption, particularly consumption of food and quality of food consumed, but there are also indications that the poor may have to cut back on education expenses and withdraw children from school. The poor rely strongly on networks of extended family, friends, neighbors, and *hemşeri*, but these networks are strained to the limit by the covariate macroeconomic shocks experienced in 1999 (earthquake) and 2000-2001 (financial crisis).

Other important coping strategies of the poor have also come under stress as a result of the crises. Multiple job holding has been curtailed by the reduction in seasonal and informal employment. The poor have been much less able to invest in physical assets or in their own human capital. Social capital, which is an extremely important aspect of traditional Turkish society, has come under strain as the poor can no longer afford to attend traditional reciprocity events such as weddings. The poor are not positioned to sell their assets--nor is there much demand for them. Borrowing from neighbors is a strategy used across the income spectrum—50 percent of urban households and nearly 60 percent of rural households reported that they had borrowed in the previous nine months. Religious charity helps some of the poor, but it is episodic and does not cover needs sufficiently. As a last resort, the poor have sent their children out to work.

Although the Government does finance ad hoc social assistance for the poor through the system of the SYDTF and its 931 affiliated SYDVs, this assistance is too partial to meet the needs and is not that well-targeted to the poorest.

Additionally, Turkey's social indicators do not compare favorably with other middle income countries (Table 8.1). In particular, infant and maternal mortality in Turkey is quite high for a middle-income country and female literacy is noticeably lower than the comparator countries (except for Tunisia). Life expectancy at birth is equal to Tunisia and lower than the other countries. These facts point out the importance of interventions in health and education, especially education of women. The World Bank has been working in partnership with Turkey on the supply side of these interventions, with several projects in education (including basic education) and health. However, to date, there have been limited efforts on the demand side, mostly in the form of public information campaigns, which have not had much effect on these social indicators.

Against this background, the Turkish Government has taken decisive action to help mitigate the effects of these shocks on the poorest and to help insure against adverse coping strategies (removing children from school, underinvesting in health) and to break the vicious cycle of poverty perpetuated as children are withdrawn from school today only to become the poor of tomorrow.

In August 2001, the Turkish government transferred substantial resources to the Social Solidarity Fund (SYDTF) to finance back-to-school packs for 1.05 million poor children (TL 50 million per child). Additionally, the SYDTF expanded its food and fuel assistance for the winter. These measures, while important, were limited to a single payment. Recognizing that the poor needed more systematic assistance, the Government decided to adopt a new social assistance benefit—conditional cash transfers (CCT) which would be paid on a regular basis.

The CCT are a highly targeted social assistance transfer to families with children, requiring positive family behavioral change with respect to health and education. Through the SYDTF and the SYDVs, the Government envisions an expanded social safety net targeted to the poorest families linked to certain positive behavioral changes such as keeping children in school and ensuring children receive adequate immunization coverage in a timely manner, basic health care and nutrition. This would require the introduction of an improved and systematic targeting system using “points” for household characteristics linked to poverty. The CCT are modeled on highly successful programs in Latin America such as Mexico’s program Oportunidades (formerly Progresas).¹⁷

The Government is also seeking to expand the traditional activities of the SYDVs in terms of micro-projects and adult literacy efforts as it recognizes that demand for these activities exceeded supply. Finally, the Government intends to monitor poverty with more frequently household surveys, recognizing that one-off efforts such as the HCIS are not adequate to provide policy makers with the data needed to understand and therefore improve social protection and other sectoral efforts.

In view of this substantial effort to reform the safety net in Turkey and to attack poverty, the World Bank has been able to respond by supporting the reform process with financial resources. The major vehicle of Bank support is the Turkey Social Risk Mitigation Project/Loan (US\$ 500 million). The development objective of the SRMP is to mitigate the impact of the crises on poor households (social risk mitigation) and to improve their capacity to cope with similar risks in the future (social risk management). The SRMP will achieve these objectives through: (i) an *adjustment portion*, providing immediate support to the poorest affected by the crisis (social risk mitigation); and (ii) an *investment portion*, which consists of three components (a) building up the capacity of

¹⁷ Progresas/Oportunidades has been extensively reviewed by the International Food Policy Research Institute, and the papers are available at: http://www.ifpri.org/themes/progresas/progresas_report.htm The program is described in Spanish at <http://www.progresas.gob.mx/> It is an integrated program which provides educational, health, and nutritional support. Its major component is the payment of cash transfers to the mothers of poor children who attend school and health clinics regularly.

state institutions providing basic social services and social assistance to the poor (social risk management); (b) implementing a social assistance system (CCT) targeted to the poorest conditional on improved use of basic health and education services (social risk mitigation and prevention); and (c) increasing the income generating and employment opportunities of the poor (social risk prevention).

Thus, the SRMP is designed to support Turkey's ongoing efforts to reform, improve, and expand the social protection system and to address some of the negative coping strategies that the poor have adopted in response to the impact of the earthquake and financial crises.



Clearly, the most pressing task for Turkey to undertake for the goal of poverty reduction is to improve macroeconomic management along the lines already agreed in programs with the International Monetary Fund and the World Bank. During the drafting of this report, Turkey experienced two political crises (February 2001 and August 2002) and early elections are scheduled for November 2002. The February 2001 crisis had significant negative reverberations on the economy, which led to the sharp increase in poverty documented in this report.

Although poverty did sharply increase in 2001, most of the poverty was shallow—extreme poverty was unchanged. This means that with good macroeconomic

management, it should be possible to restart growth and roll back the food poverty increase registered in 2001.

Most of those who became poor in 2001 had a stock of assets and a level of human capital that would enable them to respond positively to the new opportunities that will come when broad-based labor intensive growth is resumed in Turkey. The poverty reduction strategy for Turkey must therefore focus on the renewal of growth driven by key structural reforms and strengthening of market institutions.

At the same time, it is important to ensure that the newly poor are not forced to adopt negative coping strategies such as pulling their children from school or under-investing in their health. Here, the Government's innovation of conditional cash transfers (CCT) with Bank support is key for ensuring that poverty in 2001 is not perpetuated in future generations.

Additionally, the Government's expansion of micro-projects in the Local Initiatives (LI) component of the SRMP will help poor individuals to create income-producing activities and will enable communities to create needed infrastructure and foster community development. This component also includes adult literacy and other training programs. These efforts are necessary to assist the poor to take advantage of already-existing opportunities as well as the new opportunities that will come with growth.

Even with growth, however, there is a small portion of the Turkish population (2 percent) who comprise a hard core group of the extreme poor, and growth will do little to ameliorate their situation. The evidence from the HCIS is that this core group of extreme poor is not always reached by the existing SYDTF and SYDV programs. Outreach needs to be improved, and the current system of allocating funds mechanically across SYDVs means that in poorer areas, there is less scope for the SYDV to provide adequate social assistance in kind or cash. Institutional development of the SYDTF and SYDVs as well as SHÇEK is needed to improve outreach and operating procedures, and the Government's efforts in this area are also being supported by the SRMP (in the institutional development component).

A new targeting mechanism, a scoring formula, is being developed for both CCT and LI. This formula could be used to identify the extreme poor, which would improve targeting. There were clear indications from the HCIS and qualitative sources that targeting is a problem under the current social assistance program.

The Government's capacity to monitor poverty also requires bolstering. The last household income and expenditure survey was in 1994, and the 2001 HCIS provides only a snapshot and can not fulfil the needs of the Government for a consumption survey that can generate weights for the consumer price index as well as monitor poverty. Under the institutional development component of the SRMP, the Bank will cofinance four annual HIES and will also assist in the development of a poverty map for Turkey.

Bibliography

- Braithwaite, Grootaert and Milanovic (1999). Braithwaite, Jeanine, Christiaan Grootaert and Branko Milanovic. *Poverty and Social Assistance in Transition Countries*. New York: St. Martin's Press, 1999.
- Deaton (1997). Deaton, Angus. The Analysis of Household Surveys: A Microeconomic Approach to Development Policy. Washington, DC: The World Bank and Johns Hopkins University Press, 1997.
- Deaton and Zaidi (2002). Deaton, Angus and Salman Zaidi. "Guidelines for Constructing Consumption Aggregates for Welfare Analysis." <http://poverty.worldbank.org/library/view/4336/>
- Lanjouw, Milanovic and Paternostro (1998). Lanjouw, Peter, Branko Milanovic, and Stefano Paternostro. "Poverty and the Economic Transition: How Do Changes in Economies of Scale Affect Poverty Rates for Different Households?" Policy Research Working Papers. No. 2009. Washington, DC: The World Bank, 1998.
- Lanjouw and Ravallion (1995). Lanjouw, Peter and Martin Ravallion. "Poverty and Household Size." The Economic Journal. Vol. 105. pp. 1415-1434.
- LSA (2000). World Bank. Turkey: Economic Reforms, Living Standards, and Social Welfare Study. Report No. 20029-TU. January 2000.
- Milanovic (1998). Milanovic, Branko. Income, Inequality, and Poverty during the Transition from Planned to Market Economy. Washington, DC: The World Bank, 1998.
- Ravallion (1992). Ravallion, Martin. "Poverty Comparisons: A Guide to Concepts and Methods." Living Standards Measurement Study Working Papers. No. 88. Washington, DC: The World Bank, 1992.
- Ravallion (2000). Ravallion, Martin. "Poverty Lines in Theory and Practice." Living Standards Measurement Study Working Papers. No. 133. Washington, DC: The World Bank, 2000.
- UNICEF (2000). UNICEF. The State of Children and Women in Turkey. June 2000.
- World Bank (2002). "A Sourcebook for Poverty Reduction Strategies." <http://www.worldbank.org/poverty/strategies/sourctoc.htm>
- World Bank (2001). *World Development Report 2000/2001: Attacking Poverty*. Washington, DC: The World Bank and Oxford University Press, 2001
- World Bank (1993). Poverty Reduction Handbook. Washington, DC: The World Bank, 1993.
- World Bank (1990). World Development Report 1990: Poverty. Washington, DC: The World Bank, 1990.

Annex 1. On the HCIS sample.

Questions Raised During Consultations:

The State Institute of Statistics and the State Planning Organization questioned the method used by the consultants to reduce the sample from 7,000 households as provided by SIS to 4,200. "Using random selection of the necessary number of blocs by tearing blocs from layers. If such a decreasing operation were to be done, it should have been within layers. Contrary implementation will damage both the regional and urban/rural distribution." Furthermore, both institutions noted that the original sample was not designed to be representative on the regional level for Turkey, although the report does present findings on the regional level, which caveats will be included.

Response to These Questions:

The original sample was drawn by State Institute of Statistics (SIS) and the sample size was 8000 households. Due to the limited resources available for the project, the sample size was decided to be set to 4000 and additional 300 households were selected to be on the safer side.

The original sample drawn represents Turkey. It is a multi-stage stratified cluster sample which allows comparisons by region and rural-urban places.

The original sampling design required stratifying the country into 7 regions at first stage. At the second stage, residential units in each region was divided into population strata such as places with 0-2000 population, 2001-5000, 5001-10000, 10001-20000, 20001-50000, 50001-100000, 100001-150000 and places with more than 150000 population. Clusters were formed by combining 30 households within each population strata. At final stage, clusters were selected within each population stratum independently by using random selection technique.

Given the budget of the research, the sample size reduced to 4000 by way of a technique which is akin to subsampling which was done the following way. For urban sample, households in each province are separated. Cluster identification is removed from each cluster and assigned random numbers. 50 percent of them were selected randomly with the help of computer. This is done proportionately for each province. Later, they were identified by combining with their respective stratum information. Considering the possible losses due to non-response and unusable questionnaires, additional 300 households were also selected proportionately which increased the sample size to 4300.

For rural population a similar technique was employed to identify the sample units. 50 percent of the households were selected randomly.

The employed technique resulted changes in the composition of clusters. However, there is evidence indicating that if the random selection technique in the identification of sample units within each subunits (provinces), y is an unbiased estimate of Y . For calculation

of variance for y and sample estimation of the variance for two-stage samples, refer to Cochran 1977: 277-278.

The resulting sample size did not reduce the number of provinces included in the sample. The reduced sample included 63 provinces as in the original sample. There were 7 provinces in Mediterranean, 8 in Aegean, 10 in Marmara, 7 in Southeast, 8 in East, 11 in Central and 12 in Blacksea.

Urban-rural division in the original sample was 17-83% which was considerably different than the division reported in SIS publication. As it became clear later that SIS oversampled in urban areas due to higher heterogeneity and undersampled in rural areas due to higher homogeneity which was not acknowledged and given in the form of weights. Another factor increasing the discrepancy between the population and the sample percentages is the desire of the researchers to define only villages as rural which was decided in the field. Interviewers were instructed to classify villages only as rural and other places which were not village as urban.

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Table 1.1 Food quantities and the regional CPI prices for the 7 regions of Turkey

Turkey: Constructing a Poverty Line in 2001		Prices per Kg														
		MARMARA REGION						AEGEAN REGION								
Grams purchased per day per equivalent adult		2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER
Bread	0	718536	722063	722063	737988	795213	558447	558006	646020	665470	671079	558447	558006	646020	665470	671079
Municipal br	350	403519	411728	411728	429066	526467	459352	487038	510387	526172	556721	459352	487038	510387	526172	556721
White flour	60	509023	518966	533827	542593	562903	1139737	1158301	1185179	1207433	1249575	1139737	1158301	1185179	1207433	1249575
Rice	60	1298329	1292327	1314370	1328426	1362508	4411343	4387593	4307178	4306171	4406006	4411343	4387593	4307178	4306171	4406006
Mutton	120	4460954	4476736	4468116	4470309	4485068	2320428	2409718	2472264	2515448	2586782	2320428	2409718	2472264	2515448	2586782
Feta Cheese	300	2786007	2831976	2869157	2905921	2969054	1102524	1144930	1157015	1160987	1191492	1102524	1144930	1157015	1160987	1191492
Yogurt	350	1294659	1315054	1339078	1324228	136424	1102524	1144930	1157015	1160987	1191492	1102524	1144930	1157015	1160987	1191492
Eggs	50	62081	65637	63874	68416	68545	57853	65215	62622	65369	65369	57853	65215	62622	65369	65369
Oil	30	1373792	1393263	1437109	1539699	1667285	1203239	1323061	1408294	1491448	1618072	1203239	1323061	1408294	1491448	1618072
Sugar	60	744026	744907	810894	908599	908572	2838735	3040278	3161236	3195933	3452840	2838735	3040278	3161236	3195933	3452840
Jam	30	2969558	3094036	3146301	3255326	3461062	2384128	2507032	2536603	2547660	2587939	2384128	2507032	2536603	2547660	2587939
Black olives	100	2856488	2910370	2927461	2963870	3015717	527024	555339	605104	690470	657050	527024	555339	605104	690470	657050
Apple	200	830302	879305	726420	770205	738280	262366	208249	111344	206995	206995	262366	208249	111344	206995	206995
Watermelon	200	363963	345900	345900	189978	258538	0	0	0	0	0	189978	258538	0	0	0
Carrots	100	633598	550710	419620	303556	442109	435270	338829	324006	213724	379842	435270	338829	324006	213724	379842
Tomatoes	150	1651173	1687091	1717557	1732988	1781808	1333628	1376701	1421374	1444893	1462509	1333628	1376701	1421374	1444893	1462509
Beans	50	354621	323398	304040	312959	303187	272336	267693	259598	266668	271148	272336	267693	259598	266668	271148
Potatoes	150	324650	281526	270845	258335	265041	267225	234409	231872	235158	241952	267225	234409	231872	235158	241952
Onions	50															
Source: Living Standards Assessment, Technical Paper 5 Technical annex																
Turkey: Poverty Line 2001																
		MARMARA REGION						AEGEAN REGION								
Calculating the Poverty Line		2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER
Grams Per Day Pe		0	144105	144105	150173	184263	195456	195302	226107	232914	234878	195456	195302	226107	232914	234878
Bread	0	141232	144105	144105	150173	184263	0	0	0	0	0	0	0	0	0	0
Municipal br	350	30541	31140	32030	32559	33774	27561	29222	30623	31570	33403	27561	29222	30623	31570	33403
White flour	60	77900	77534	78862	79706	81750	68384	69498	71111	72446	74974	68384	69498	71111	72446	74974
Rice	60	535314	537268	539618	536437	538208	529361	526511	516861	516741	528721	529361	526511	516861	516741	528721
Mutton	120	83580	84959	86075	87175	89072	69613	72292	74168	75463	77603	69613	72292	74168	75463	77603
Feta Cheese	300	453131	460282	468677	467746	467746	395883	400726	404955	406346	417022	395883	400726	404955	406346	417022
Yogurt	350	3104	3282	3194	3421	3427	2893	3261	3131	3268	34057	2893	3261	3131	3268	34057
Eggs	50	41214	41798	43113	46191	50019	36097	39692	42248	44743	48542	36097	39692	42248	44743	48542
Oil	30	44642	44694	48654	54514	54514	42703	42749	47178	52106	54191	42703	42749	47178	52106	54191
Sugar	60	89087	92821	94389	97860	103832	85162	90908	94837	95878	100288	85162	90908	94837	95878	100288
Jam	30	57130	58207	58549	59277	60314	47683	50141	50732	50953	51759	47683	50141	50732	50953	51759
Black olives	100	83030	87930	72642	77021	73328	52702	55534	60510	69047	65705	52702	55534	60510	69047	65705
Apple	200	0	72793	69180	37996	51708	0	52473	41650	22269	41399	0	52473	41650	22269	41399
Watermelon	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrots	100	95040	82660	62943	45533	66316	65291	50824	48601	32059	56976	65291	50824	48601	32059	56976
Tomatoes	150	82559	84355	85878	86649	89090	66681	68835	71069	72245	73125	66681	68835	71069	72245	73125
Beans	50	53193	48509	45806	46944	45478	40850	40154	38940	40000	40672	40850	40154	38940	40000	40672
Potatoes	150	16233	14076	13542	12817	13252	13361	11720	11594	11758	12098	13361	11720	11594	11758	12098
Onions	50															
POVERTY LINE Turkish Lira P																
Poverty Line PER DAY, Million		1886028	1966280	1947056	1917854	2056626	1729682	1799842	1834315	1829806	1954703	1729682	1799842	1834315	1829806	1954703
Poverty Line Per DAY, 1000 TL		1886.928	1966.280	1947.056	1917.854	2056.626	1729.682	1799.842	1834.315	1829.806	1954.703	1729.682	1799.842	1834.315	1829.806	1954.703
Poverty Line PER DAY, US \$		\$1.26	\$1.31	\$1.30	\$1.28	\$1.28	\$1.15	\$1.20	\$1.22	\$1.22	\$1.30	\$1.15	\$1.20	\$1.22	\$1.22	\$1.30
POVERTY LINE Turkish Lira, f																
Poverty Line Per Month, Million TL		56607845	58988399	58411688	57529607	61698774	51890469	53955253	55029453	54894182	58641098	51890469	53955253	55029453	54894182	58641098
Poverty Line Per Month, Million TL		56608	58998	58412	57530	61699	51890	53995	55029	54894	58641	51890	53995	55029	54894	58641
Poverty Line Per Month, 100C		566.08	589.98	584.12	575.30	616.99	518.90	539.95	550.29	548.94	586.41	518.90	539.95	550.29	548.94	586.41
Poverty Line Per Month, US \$		\$37.74	\$39.33	\$38.94	\$38.35	\$41.13	\$34.59	\$36.00	\$36.69	\$36.60	\$39.09	\$34.59	\$36.00	\$36.69	\$36.60	\$39.09

Turkey: Constructing a Poverty Line in 2001

Grams purchased per day
perequivalenta dult

Items	MEDITERRANEAN REGION					CENTRAL ANATOLIA REGION				
	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 EPTEMBEF
Bread	0	588839	624264	645670	753449	554027	608967	608370	610271	621362
Municipal bread	350	339493	368435	428955	492112	325859	325860	325860	376616	394091
W hie flour	60	497055	521678	553436	570358	468441	494578	510747	520311	545453
Rice	60	1068920	1092231	1137997	1191770	1203187	1201130	1217852	1233148	1292797
Mutton	120	3806381	3883114	3949107	4034872	4056501	4076777	4107352	4173367	4216800
Feta cheese	30	2056502	2085138	2120464	2174622	2349249	2331747	2382819	2460576	2539596
Yogurt	350	1155023	1168034	1188924	1208203	1119209	1132540	1158378	1176975	1206289
Eggs	50	592526	66005	62005	61289	5292	58873	61233	61233	75829
Oil	30	1289587	1371219	1448120	1550111	1359005	1438730	1488272	1575690	1712005
Sugar	60	665750	687639	755663	830715	699169	703743	767872	850168	863612
Jam	30	2621254	2747640	2829229	2871787	2621279	2667259	2723362	2797598	2992820
Black olives	20	2503942	2576999	2643159	2717991	2643937	2709981	2758935	2877604	2893327
Apple	100	482583	514073	594266	626456	436232	555459	624887	597240	551226
Watermelon	200	227945	249659	171960	186001	224390	224390	263550	182677	173586
Carrots	100	0	397159	0	397159	0	0	0	0	408911
Tomatoes	150	393625	297331	275098	240842	370049	321302	336964	234521	338236
Beans	50	1265077	1317965	1369603	1384598	1333959	1375329	1420410	1433820	1510561
Potatoes	150	266639	295542	300776	297606	289225	280318	288442	273181	255872
Onions	50	222926	202568	201488	210151	263594	226936	240410	246290	232647

Source: Living Standards Assessment, Technical Paper 5

Turkey: Poverty Line 2001

Calculating the Poverty Line

Grams Per Day Per Eq.

Items	MEDITERRANEAN REGION					CENTRAL ANATOLIA REGION				
	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 EPTEMBEF
Bread	0	118823	128952	150134	172339	0	114051	114051	131816	0
Municipal bread	350	29823	31313	32548	34221	28106	29675	30645	31219	32732
W hie flour	60	64135	65534	68274	71506	72191	72068	73071	73989	77568
Rice	120	456766	465974	473883	484185	489213	488563	492882	500804	506016
Mutton	30	61695	62554	63614	65239	70477	69952	71485	73817	76188
Feta cheese	350	404258	408812	416123	422971	389273	396389	405432	411941	422201
Yogurt	50	2963	3301	3163	4064	2650	2944	2850	3062	3791
Eggs	30	38088	41137	43444	51704	40677	43162	44648	47271	51360
Oil	60	41145	41270	45340	49843	4950	42225	46072	51010	51217
Sugar	30	78638	82429	84877	86154	78638	80018	81701	83928	89785
Jam	30	50079	51540	52863	54360	52879	54200	55179	57552	57867
Black olives	20	48258	51407	59427	62646	43623	55546	62489	69724	55123
Apple	100	0	45589	49932	34372	0	44878	52710	36535	34717
Watermelon	200	0	0	0	39716	0	0	0	0	40891
Carrots	100	0	0	0	49768	55507	48195	50545	35178	49235
Tomatoes	150	57544	44600	36096	49768	68698	68766	71020	71691	75528
Beans	50	63254	65898	69230	71693	68698	68766	71020	71691	75528
Potatoes	150	39996	44331	45116	40900	43384	42048	43266	40977	38381
Onions	50	11146	10128	10074	10359	13180	11347	12020	12314	11632

Turkey: Poverty Line 2001

Calculating the Poverty Line

Grams Per Day Per Eq.

Items	MEDITERRANEAN REGION					CENTRAL ANATOLIA REGION				
	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 EPTEMBEF
Bread	0	118823	128952	150134	172339	0	114051	114051	131816	0
Municipal bread	350	29823	31313	32548	34221	28106	29675	30645	31219	32732
W hie flour	60	64135	65534	68274	71506	72191	72068	73071	73989	77568
Rice	120	456766	465974	473883	484185	489213	488563	492882	500804	506016
Mutton	30	61695	62554	63614	65239	70477	69952	71485	73817	76188
Feta cheese	350	404258	408812	416123	422971	389273	396389	405432	411941	422201
Yogurt	50	2963	3301	3163	4064	2650	2944	2850	3062	3791
Eggs	30	38088	41137	43444	51704	40677	43162	44648	47271	51360
Oil	60	41145	41270	45340	49843	4950	42225	46072	51010	51217
Sugar	30	78638	82429	84877	86154	78638	80018	81701	83928	89785
Jam	30	50079	51540	52863	54360	52879	54200	55179	57552	57867
Black olives	20	48258	51407	59427	62646	43623	55546	62489	69724	55123
Apple	100	0	45589	49932	34372	0	44878	52710	36535	34717
Watermelon	200	0	0	0	39716	0	0	0	0	40891
Carrots	100	0	0	0	49768	55507	48195	50545	35178	49235
Tomatoes	150	57544	44600	36096	49768	68698	68766	71020	71691	75528
Beans	50	63254	65898	69230	71693	68698	68766	71020	71691	75528
Potatoes	150	39996	44331	45116	40900	43384	42048	43266	40977	38381
Onions	50	11146	10128	10074	10359	13180	11347	12020	12314	11632

Turkey: Poverty Line 2001

Calculating the Poverty Line

Grams Per Day Per Eq.

Items	MEDITERRANEAN REGION					CENTRAL ANATOLIA REGION				
	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 SEPTEMBER	2001 MAY	2001 JUNE	2001 JULY	2001 AUGUST	2001 EPTEMBEF
Bread	0	118823	128952	150134	172339	0	114051	114051	131816	0
Municipal bread	350	29823	31313	32548	34221	28106	29675	30645	31219	32732
W hie flour	60	64135	65534	68274	71506	72191	72068	73071	73989	77568
Rice	120	456766	465974	473883	484185	489213	488563	492882	500804	506016
Mutton	30	61695	62554	63614	65239	70477	69952	71485	73817	76188
Feta cheese	350	404258	408812	416123	422971	389273	396389	405432	411941	422201
Yogurt	50	2963	3301	3163	4064	2650	2944	2850	3062	3791
Eggs	30	38088	41137	43444	51704	40677	43162	44648	47271	51360
Oil	60	41145	41270	45340	49843	4950	42225	46072	51010	51217
Sugar	30	78638	82429	84877	86154	78638	80018	81701	83928	89785
Jam	30	50079	51540	52863	54360	52879	54200	55179	57552	57867
Black olives	20	48258	51407	59427	62646	43623	55546	62489	69724	55123
Apple	100	0	45589	49932	34372	0	44878	52710	36535	34717
Watermelon	200	0	0	0	39716	0	0	0	0	40891
Carrots	100	0	0	0	49768	55507	48195	50545	35178	49235
Tomatoes	150	57544	44600	36096	49768	68698	68766	71020	71691	75528
Beans	50	63254	65898	69230	71693	68698	68766	71020	71691	75528
Potatoes	150	39996	44331	45116	40900	43384	42048	43266	40977	38381
Onions	50	11146	10128	10074	10359	13180	11347	12020	12314	11632

Turkey: Constructing a Poverty Line in 2001
Grams purchased per day
per equivalent adult

BLACK SEA REGION

Items	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001
Bread	0	608372	608372	608372	653589	610859	610860	678919	678919	693781	610859	610860	678919	678919	693781
Municipal bread	350	465116	465116	465116	465116	463893	488602	575083	575083	608361	463893	488602	575083	575083	608361
White flour	60	482162	480345	509103	525832	502371	516154	535297	556789	576634	502371	516154	535297	556789	576634
Rice	60	856228	881758	896662	917379	948182	1117107	1144813	1217711	1258125	948182	1117107	1144813	1217711	1258125
Mutton	120	3659890	3657857	3655824	3699181	3742537	3056871	3097355	3134940	3162463	3056871	3056871	3097355	3134940	3162463
Feta cheese	30	1900358	1906182	1922045	1928441	1990516	2123993	2179106	2228996	2272168	1990516	2123993	2179106	2228996	2272168
Yogurt	350	1117528	1146634	1159600	1185790	1204813	1092272	1123660	1140462	1162439	1092272	1123660	1140462	1140462	1162439
Eggs	50	50759	57050	56379	59552	74800	53855	61748	61561	73276	53855	61748	61561	73276	73276
Oil	30	123062	134749	141254	1541250	1683649	1446140	1493027	1575109	1714490	1446140	1493027	1575109	1714490	1714490
Sugar	60	651477	654578	732665	815462	816814	732388	816445	914403	923722	732388	736976	816445	914403	923722
Jam	30	2585925	2726201	2799451	2849374	2947791	2223018	2250303	2343429	2420837	2223018	2250303	2343429	2420837	2420837
Black olives	20	2555220	2591810	2645222	2686827	2711642	2425544	2456554	2536567	2624955	2425544	2456554	2536567	2624955	2624955
Apple	100	447271	493899	679251	668376	645126	558047	609856	637428	639701	609856	609856	637428	658085	639701
Watermelon	200	281643	309988	214244	261177	669979	260149	296574	191359	230326	260149	260149	296574	191359	230326
Carrots	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tomatoes	150	427750	380185	377586	238306	379654	362381	401589	285151	393812	470093	362381	401589	285151	393812
Beans	50	1593639	1653684	1684377	1721908	1773847	1466623	1513283	1589367	1653576	1466623	1513283	1589367	1638974	1653576
Potatoes	150	272497	286344	277304	270075	275364	262938	297913	313011	299407	262938	262938	297913	313011	299407
Onions	50	224082	216468	219454	208268	206891	230416	230028	239773	243646	230416	233331	230028	239773	243646

Source: Living Standards Assessment, Technical Paper 5, Technical Annex
Turkey: Poverty Line 2001

Calculating the Poverty Line

Grams Per Day Per Eq.

Items	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	EPTEMBEF 2001
Bread	0	162791	162791	162791	162791	0	0	0	0	0	0	0	0	0	0
Municipal bread	350	2821	30546	31550	32964	162363	171011	201279	201279	212926	162363	171011	201279	201279	212926
White flour	60	51374	52905	53800	56891	50142	67028	68689	73063	75488	50142	67028	68689	73063	75488
Rice	60	439187	438943	438699	443902	449104	366036	371683	376193	379496	366036	366036	371683	376193	379496
Mutton	120	57011	57185	57661	57853	59715	62575	65373	66870	68165	59715	62575	65373	66870	68165
Feta cheese	30	391135	401322	405860	415027	421684	382295	393036	399162	406854	382295	389306	393036	399162	406854
Yogurt	350	2538	2819	2819	2978	3690	2693	3087	3078	3664	2693	3100	3087	3078	3664
Eggs	50	38192	40423	42368	46237	50509	40302	44791	47253	51435	40302	43384	44791	47253	51435
Oil	30	39089	39275	43960	48928	49129	43943	48987	54864	55423	43943	44219	48987	54864	55423
Sugar	60	77578	81786	83984	85481	88434	64788	66691	70303	72625	64788	66691	67509	70303	72625
Jam	30	51104	51836	52904	53737	54233	47596	48511	50731	52499	47596	48511	49131	50731	52499
Black olives	20	44727	49390	67925	66838	64513	55805	60986	63743	63970	60986	60986	63743	65808	63970
Apple	100	0	56329	61998	42849	52235	0	59315	38272	46065	0	52030	59315	38272	46065
Watermelon	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrots	100	64163	57028	56638	35746	56948	70514	60238	42773	59072	70514	54357	60238	42773	59072
Tomatoes	150	79682	82684	84219	86095	88692	73331	75654	81949	82679	73331	75654	79268	81949	82679
Beans	50	40875	42952	41596	40511	41305	39441	44687	46952	44911	39441	46794	44687	46952	44911
Potatoes	150	11204	10823	10973	10413	10345	11521	11667	11989	12182	11521	11667	11501	11989	12182
Onions	50	1578377	1657345	1698739	1685978	1810180	1518386	1596257	1663945	1767353	1518386	1596257	1674680	1663945	1767353
POVERTY LINE TURKISH LIRA PER DAY		1578377	1657345	1698739	1685978	1810180	1518386	1596257	1663945	1767353	1518386	1596257	1674680	1663945	1767353
Pov Line Per DAY, Million Turkish Lira		1.578	1.657	1.699	1.686	1.810	1.518	1.596	1.664	1.767	1.518	1.596	1.664	1.664	1.767
Pov Line Per DAY, 1000 TL		1578.377	1657.345	1698.739	1685.978	1810.180	1518.386	1596.257	1663.945	1767.353	1518.386	1596.257	1674.680	1663.945	1767.353
Pov Line Per DAY, US Dollars (exchan		\$1.05	\$1.10	\$1.13	\$1.12	\$1.21	\$1.01	\$1.06	\$1.11	\$1.18	\$1.01	\$1.06	\$1.11	\$1.11	\$1.18
POVERTY LINE, Turkish Lira, PER MONTH		47351314	49720351	50962165	50579331	54305395	45551573	47887733	49918355	53020592	45551573	47887733	50240407	49918355	53020592
Pov Line Per Month, Million TL		47.351	49.720	50.962	50.579	54.305	45.552	47.888	49.918	53.021	45.552	47.888	50.240	49.918	53.021
Pov Line Per Month, 1000 TL		47351	49720	50962	50579	54305	45552	47888	49918	53021	45552	47888	50240	49918	53021
Pov Line Per Month, US \$		\$31.57	\$33.15	\$33.97	\$33.72	\$36.20	\$30.37	\$31.93	\$33.49	\$35.35	\$30.37	\$31.93	\$33.49	\$33.49	\$35.35

Turkey: Constructing a Poverty Line in 2001

Items	Grams purchased per day per equivalent adult	SOUTHEASTERN ANATOLIA REGION													
		2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	SEPTEMBER 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	SEPTEMBER 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001
Bread	0	577862	589075	589075	601475	727543	631956	643091	661504	673973	725952	643091	661504	673973	725952
Municipal bread	350	445449	454171	454171	454171	513280	392272	398125	407435	433197	495643	398125	407435	433197	495643
White flour	60	515616	527130	545474	557016	589797	481669	509182	527488	538985	561998	509182	527488	538985	561998
Rice	60	1105097	1126858	1153025	1187056	1211593	1170426	1178125	1201540	1223980	1286088	1178125	1201540	1223980	1286088
Mutton	120	3827093	3909497	4061648	4085856	4152535	4154698	4176452	4194452	4210539	4547037	4176452	4194452	4210539	4547037
Feta cheese	30	2142536	2169366	2175312	2207403	2310425	2454881	2489186	2530128	2575361	2840081	2489186	2530128	2575361	2840081
Yogurt	350	1264816	1271797	1290453	130432	131147	1201677	1224132	1245043	1247469	1267514	1224132	1245043	1247469	1267514
Eggs	50	68940	68940	64900	65252	77348	58695	63906	63926	65457	81585	63906	63926	65457	81585
Oil	30	1394654	1450206	1489287	1576135	1774065	1325951	1391184	1447318	1545079	1684922	1391184	1447318	1545079	1684922
Sugar	60	725179	731192	792100	875168	887730	714151	716658	785039	872795	876466	716658	785039	872795	876466
Jam	30	240682	2519021	2584770	2649407	2779577	2759841	2873263	2933666	3018810	3196741	2873263	2933666	3018810	3196741
Black olives	20	2483863	2520610	2534066	2584788	2622036	2653066	2717204	2750248	2804982	2847448	2717204	2750248	2804982	2847448
Apple	100	526993	748493	726708	614274	615593	618675	685439	672605	677291	643696	685439	672605	677291	643696
Watermelon	200	238189	171406	246255	137413	171406	618675	290807	289848	174206	221401	290807	289848	174206	221401
Carrots	100	0	0	273193	222886	311333	492437	414524	361225	260741	385401	414524	361225	260741	385401
Tomatoes	150	388613	300691	1384836	1422198	1437589	1472750	1513937	1553700	1574381	1621069	1513937	1553700	1574381	1621069
Beans	50	242345	280796	317353	319441	289815	304249	298899	293358	294945	283714	298899	293358	294945	283714
Potatoes	150	230256	198172	191668	190286	193937	276389	243807	241201	238349	239438	243807	241201	238349	239438
Onions	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Living Standards Assessment, Technical Paper 5 Technical Annex
Turkey: Poverty Line 2001

SOUTHEASTERN ANATOLIA REGION

TURKEY

Items	Grams Per Day Per Eq.	SOUTHEASTERN ANATOLIA REGION													
		2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	SEPTEMBER 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001	SEPTEMBER 2001	2001 MAY	JUNE 2001	JULY 2001	AUGUST 2001
Bread	0	155907	158960	158960	158960	179648	137295	139344	142602	151619	173475	139344	142602	151619	173475
Municipal bread	350	30937	31628	32728	33421	35388	29500	30551	31649	32339	33720	30551	31649	32339	33720
White flour	60	66306	67611	69182	71223	72696	70226	70687	72092	73439	75965	70687	72092	73439	75965
Rice	120	459251	478860	487398	490270	498304	498564	501174	503334	505265	509644	501174	503334	505265	509644
Mutton	30	64276	64811	65259	66222	67171	73646	74676	75904	77261	79202	74676	75904	77261	79202
Feta cheese	350	442686	445129	451659	456509	459006	420587	428446	433765	436614	443630	428446	433765	436614	443630
Yogurt	50	3217	3447	3245	3263	3867	2935	3195	3096	3273	4079	3195	3096	3273	4079
Eggs	50	41840	43506	44679	47284	53222	39779	41736	43420	46352	50548	41736	43420	46352	50548
Oil	30	43511	43872	47526	52510	53264	42849	42999	47102	52368	52588	42999	47102	52368	52588
Sugar	60	72203	7571	77543	79482	83387	82795	86198	88181	90564	95902	86198	88181	90564	95902
Jam	200	49677	50412	50681	51696	52441	53061	54344	55005	56100	56949	54344	55005	56100	56949
Black olives	100	52699	74849	72671	61427	61559	61868	68544	67260	67729	64370	68544	67260	67729	64370
Apple	200	0	47638	49251	27483	34281	0	58161	57970	34841	44280	58161	57970	34841	44280
Watermelon	100	0	0	0	0	42207	0	0	0	0	0	0	0	0	0
Carrots	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tomatoes	150	58292	45104	40979	33433	46700	73866	62179	54184	39111	57810	62179	54184	39111	57810
Beans	50	66314	69242	71110	71179	73638	73638	75697	7685	78719	81053	75697	7685	78719	81053
Potatoes	150	36352	42119	47603	47916	43472	45637	44835	44004	44242	42557	44835	44004	44242	42557
Onions	50	11513	9909	9583	9514	9697	13819	12190	12060	11917	11972	12190	12060	11917	11972
POVERTY LINE Turkish Lira PER DAY		1654981	1750724	1778188	1761724	1868189	1720064	1794956	1811314	1801753	1923964	1794956	1811314	1801753	1923964
Pov Line Per Month, Million TL		1.655	1.751	1.778	1.762	1.868	1.720	1.795	1.811	1.802	1.924	1.795	1.811	1.802	1.924
Pov Line Per Day, 1000 TL		1654.981	1750.724	1778.188	1761.724	1868.189	1720.064	1794.956	1811.314	1801.753	1923.964	1794.956	1811.314	1801.753	1923.964
Pov Line Per Day, US Dollars (exchange rate \$1.10)		\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
POVERTY LINE, Turkish Lira, PER MONTH		49649421	52521730	53345653	52851711	56045679	51601928	53848690	54339413	54052595	57718919	53848690	54339413	54052595	57718919
Pov Line Per Month, Million TL		49.649	52.522	53.346	52.852	56.046	51.602	53.849	54.339	54.053	57.719	53.849	54.339	54.053	57.719
Pov Line Per Month, 1000 TL		49649.421	52521.730	53345.653	52851.711	56045.679	51601.928	53848.690	54339.413	54052.595	57718.919	53848.690	54339.413	54052.595	57718.919
Pov Line Per Month, US \$		\$33.10	\$35.01	\$35.56	\$35.23	\$37.36	\$34.40	\$35.90	\$36.23	\$36.04	\$38.48	\$35.90	\$36.23	\$36.04	\$38.48

Table 1.2. Turkey: Regional and Urban-Rural HCIS and Census Population

	HCIS 2001	Census 2000
Percent Rural	21.2	35.0
Percent Urban	78.8	65.0
Percent by Region:		
Mediterranean	13.1	21.9
Aegean	13.3	13.2
Marmara	33.5	25.6
Southeast	6.8	9.7
East	5.9	9.1
Central	16.9	17.1
Black Sea	10.5	12.4

Sources: 2001HCIS and State Institute of Statistics (DIE).

Note: Census 2000 figures are still preliminary, these used here are as of May 2002.

Table 1.3. Turkey: Comparing Survey and National Accounts Consumption and Income

(In thousand TL per month)

	1987	1994	2001
Survey	HIES	HIES	HCIS
Average per capita income	0.769	31,165	96,551
Average per capita consumption	0.603	24,917	77,472
National Accounts			
GDP per capita	1.427	64,182	232,323
Personal consumption per capita	0.971	44,285	166,879
Survey as percent of national accounts			
Income	53.9	48.6	41.6
Consumption	62.1	56.3	46.4

Source: Electronic mail, Yemtsov, 1999 and calculated from World Bank data and Household Consumption & Income Survey (HCIS).

Table 2.1: Economic Indicators in Most Impacted Earthquake Areas, 1998

	Population	Share in GNP (%)	Industry Value Added (share in GNP, %)	GNP per Capita (Thousand \$)	Budget Tax Revenues (share in GNP, %)	Total Bank Credits (share in GNP, %)
Kocaeli	1,177,379	4.8	11.3	7,845	15.8	0.9
Sakarya	731,800	1.1	1.1	2,734	0.4	0.2
Yalova	163,916	0.4	0.7	4,966	0.1	0.1
Bolu	553,022	0.9	0.7	3,104	0.3	0.2
İstanbul	9,198,809	22.8	26.8	4,728	37.5	41.0
Kocaeli+Sakarya+Yalova	2,073,095	6.3	13.1	5,813	16.4	1.1

Source: State Planning Organization

Table 2.2: Impact of Earthquake on Manufacturing Establishments

	Total number of establishments	Number of establishments that stopped production	Number of establishments damaged
Bolu	233	185	109
Kocaeli	690	590	420
Sakarya	218	208	185
Yalova	45	42	35
Total	1,186	1,025	749

Source: Undersecretariat of Foreign Trade, State Statistical Institute, Turk Eximbank.

Table 2.3: Real GDP Growth by Province

(Constant GDP at 1987 prices, million TL)			
	1998	1999	2000
Kocaeli	0.0	-9.5	10.5
Sakarya	4.9	-7.4	10.3
Yalova	2.1	-3.3	7.1
Bolu	5.4	-1.7	-11.6
Marmara Region	2.1	-4.9	8.1
Turkey	3.1	-4.7	7.4

Source: State Institute of Statistics

Table 2.4: Quarterly Real GNP growth rates (1987 Turkish Lira)

	1999				2000	
	I	II	III	IV	I	II
GNP growth (%)	-7.9	-3.7	-7.6	-4.9	4.2	5.4
Agriculture	5.5	-8.3	-5.8	-3.5	1.4	1.8
Industry	-9.8	0.8	-8.3	-2.6	2.9	5.2
Construction	-9.7	-11.4	-12.9	-15.2	-2.3	3.2
Services ¹	-6.0	-4.5	-7.6	-6.8	3.1	4.2

Source: State Institute of Statistics (SIS)

* percentage change, previous year same quarter

Table 2.5: Turkey: Employment 1998-2000 Quarter*

	1998		1999		2000	
	April	October	April	October	Q1	Q2
Employment (in thousands)	20,351	21,393	21,590	21,236	19,006	21,312
Employment in agriculture	8,145	8,777	9,148	8,595	6,284	7,627
Employment in industry	3,661	3,614	3,495	3,664	3,449	3,814
Employment in manufacturing	3,482	3,436	3,337	3,543	3,295	3,645
Employment in construction	1,225	1,355	1,242	1,346	970	1,503
Employment in services	7,319	7,647	7,705	7,631	8,304	8,367
Unemployment rate	6.94	6.70	7.93	7.37	8.30	6.23

Source: State Institute of Statistics (SIS)

* percentage change, previous quarter

Table 2.6: Direct fiscal costs of the earthquake

	FY1999	FY2000	FY2001
	8/17-12/31		
Consolidated Budget Expenditures	0.40	0.83	0.26
Non-budget fund expenditures	0.15	0.07	0.02
Donations and grants	0.15	0.04	
External credit		0.21	0.11
Insurance	0.01	0.00	
Expenditures of state enterprises	0.07	0.04	0.00
Total Expenditures	0.78	1.18	0.40

Source: Ministry of Finance

¹ Services here are defined trade plus transportation and communication plus financial institutions plus ownership of dwelling plus business and personal services

Table 2.7: Inflation after the earthquake

	1999				2000	
	I	II	III	IV	I	II
Inflation, consumer prices (3 months' averages, %)*	12.4	12.1	12.3	17.4	14.2	7.3

* percentage change, previous quarter

Table 2.8: Real GNP Sectoral Growth Rates 2000-2001

	2000				2001			
	I	II	III	IV	I	II	III	IV
GNP growth (%)	4.2	5.4	7.2	7.8	-3.1	-12.1	-9.0	-12.4
Agriculture	1.4	1.8	1.6	12.2	8.5	-2.9	-5.6	-13.6
Industry	2.9	5.2	10.1	5.5	0.8	-10.1	-8.9	-10.7
Construction	-2.3	3.2	8.6	5.9	-5.2	-5.7	-8.3	-3.6
Services	3.1	4.2	6.9	6.7	5.5	-13.2	-1.3	-3.7

Percentage change, previous year

Source: State Institute of Statistics (SIS)

Table 2.9: Employment by Sector

	2000		2001				2002
	III	IV	I	II	III	IV	I
Employment (in thousands)	21,727	20,182	19,222	21,127	21,875	19,742	18,467
Employment in agriculture	8,163	6,628	6,268	8,222	8,676	6,432	5,624
Employment in industry	3,851	3,811	3,628	3,584	3,764	3,843	3,658
Employment in manufacturing	3,699	3,637	3,465	3,405	3,563	3,659	3,444
Employment in construction	1,437	1,402	1,029	1,183	1,138	955	771
Employment in services	8,277	8,341	8,298	8,138	8,298	8,511	8,414
Unemployment rate	5.63	6.33	8.60	6.90	8.02	10.58	11.76

Source: State Institute of Statistics (SIS)

* percentage change, previous year same quarter

Table 2.10: Responses to TOBB Question on the size of the workforce during the quarter

Responses	1st Survey	2nd Survey	3rd Survey
	Jan.-Mar 2001	Apr.-Sept. 2001	Oct.-Dec. 2001
	Percent		
A- Increased	2.47	5.02	4.51
B- No difference	41.10	35.07	38.52
C- Decreased	56.43	59.91	56.97
Total	100.00	100.00	100.00

Source: Draft Corporate Sector Impact Assessment, World Bank, May 2002

Table 2.11: Economic Indicators (1998-2001)

	1998	1999	2000	2001
GNP per capita (constant 1987 TL)	1,909,918	1,766,837	1,859,910	1,659,199
GNP growth (%)	4.1	-6.1	6.3	-9.4
Agriculture	8.0	-5.0	3.9	-6.1
Industry	2.0	-5.0	6.0	-7.5
Construction	1.1	-12.5	4.4	-5.9
Services	14.8	-14.4	5.4	-10.1
Unemployment rate	6.4	7.1	6.6	8.5
Employment, total (in thousands)	22,399	23,187	20,579	20,367
Employment in agriculture	8,824	9,185	7,103	7,217
Employment in industry	3,639	3,440	3,738	3,734
Employment in manufacturing	3,482	3,337	3,570	3,548
Employment in construction	1,298	1,302	1,313	1,073
Employment in services	8,639	9,261	8,425	8,343
Inflation, consumer prices (annual %)	84.6	64.9	54.9	54.4

Source: SIS, team calculations

Table 2.12: Actual and 1998 Projections for per capita GNP (1998-2001)

	1998	1999	2000	2001
Actual GNP (per capita constant TL)	1,909,918	1,766,837	1,859,910	1,659,199
1998 Projections GNP (per capita constant TL)	1,909,918	1,909,918	1,967,215	2,038,035
Actual GNP per capita (US\$, Atlas method)	3,170	2,880	3,080	2,680
1998 projections (US\$, Atlas method)	3,170	3,170	3,265	3,383

Source: SIS, World Bank; Projected growth rates from December 1998 Unified Survey

Table 3.1. Turkey: Extreme Poverty and Number of Children

Number of Children	Extremely		Total	NOBS	S.E.
	Poor	Not Poor			
0	1.2	98.8	100.0	6088	0.0014
1	0.4	99.6	100.0	3418	0.0011
2	1.1	98.9	100.0	3055	0.0019
3	3.2	96.8	100.0	1452	0.0046
4	9.2	90.8	100.0	738	0.0106
5+	8.0	92.0	100.0	562	0.0114
Total	1.8	98.2	100.0	15313	0.0011

Source: *Turkey 2001 HCIS*.

Notes: Extreme poverty defined as per capita consumption under US \$1 per person per day.

Poverty in percentages, standard errors in levels.

Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS=number of observations.

SE = Standard Error.

Table 3.2. Turkey: Extreme Poverty and Region

	Extremely		Share of	NOBS	S.E.
	Poor	Not Poor	Extreme Poor		
Mediterranean	0.9	99.1	6.4	1969	0.0021
Aegean	0.5	99.5	3.2	1763	0.0017
Marmara	0.3	99.7	3.9	4212	0.0008
South-East Anatolia	8.5	91.5	46.8	1550	0.0071
East Anatolia	3.6	96.4	17.4	1373	0.0050
Central	2.1	97.9	19.9	2605	0.0028
Black Sea	0.4	99.6	2.5	1841	0.0014
Total	1.8	98.2	100.0	15313	0.0011

Source: *Turkey 2001 HCIS*.

Notes: Extreme poverty defined as per capita consumption under US \$1 per person per day.

Poverty in percentages, standard errors in levels.

Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS=number of observations.

SE = Standard Error.

Table 3.3. Turkey: Probit Results for Extreme Poverty

Probit estimates Number of obs = 3883
LR chi2(13) = 92.56
Prob > chi2 = 0.0000
Log likelihood = -199.05651 Pseudo R2 = 0.1886

pppconp	dF/dx	Std. Err.	z	P> z	x-bar	[95% C.I.]
drmed*	.0003138	.0031309	0.10	0.922	.126964	-	.005823	.00645
draeg*	.0019335	.0025645	0.65	0.515	.132372	-	.003093	.00696
drmar*	.0072406	.0024336	2.39	0.017	.31316	-	.002471	.01201
drse*	-.0253631	.0121738	-4.09	0.000	.074942	-	.049223	-.001503
deast*	-.0011924	.0038772	-0.34	0.737	.064126	-	.008792	.006407
dblack*	.0050411	.0018173	1.72	0.085	.120783	-	.001479	.008603
ctadm_1	.0003752	.0009908	0.38	0.705	1.0752	-	.001567	.002317
ctadf_1	-.0017395	.0010942	-1.65	0.100	.987896	-	.003884	.000405
ctkidm_1	-.0021736	.0009269	-2.59	0.010	.523564	-	.00399	-.000357
ctkidf_1	-.0022891	.0009869	-2.61	0.009	.440639	-	.004223	-.000355
cteldm_1	-.0024337	.0027716	-0.89	0.374	.134947	-	.007866	.002999
cteldf_1	.0001313	.0028753	0.05	0.964	.184136	-	.005504	.005767
ilithead*	-.0008298	.0033899	-0.26	0.794	.061035	-	.007474	.005814
obs. P	.988411							
pred. P	.9952755	(at x-bar)						

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| are the test of the underlying coefficient being 0

Source: Author calculations from 2001 HCIS.

Table 4.1. Turkey. Region and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	Percent of Poor	NOBS	S.E.
Mediterranean	17.1	82.9	13.1	13.0	1558	0.0095
Aegean	17.9	82.1	13.3	13.8	1583	0.0096
Marmara	13.2	86.8	33.5	25.6	3989	0.0054
South-East	60.9	39.1	6.8	23.9	804	0.0172
East	23.3	76.7	5.9	8.0	707	0.0159
Central	13.8	86.2	16.9	13.5	2009	0.0077
Black Sea	3.6	96.4	10.5	2.2	1252	0.0053
Total	17.2	82.8	100.0	100.0	11902.0	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.2. Turkey: Household Size and Urban Food Poverty Rates

Size of Household	Urban Food Poor	Not Poor	Percent of Urban Total	NOBS	S.E.
1	1.9	98.1	1.3	154	0.0111
2	4.9	95.1	9.3	1110	0.0065
3	7.6	92.4	17.6	2091	0.0058
4	14.3	85.7	29.9	3564	0.0059
5	21.2	78.8	22.4	2665	0.0079
6	29.1	70.9	9.5	1134	0.0135
7	32.5	67.5	4.9	581	0.0194
8	33.3	66.7	2.2	264	0.0290
9+	45.7	54.3	2.8	339	0.0271
Total	17.2	82.8	100.0	11902	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.3. Turkey: Number of Children and Urban Food Poverty Rates

Number of Children	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
0	11.4	88.6	39.2	4669	0.0047
1	12.8	87.2	24.6	2925	0.0062
2	20.8	79.2	21.4	2543	0.0080
3	29.8	70.2	9.0	1073	0.0140
4	42.5	57.5	4.0	475	0.0227
5+	43.8	56.2	1.8	217	0.0337
Total	17.2	82.8	100.0	11902	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.4. Turkey: Number of Elderly and Urban Food Poverty Rates

Number of Elderly	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
0	17.1	82.9	80.5	9578	0.0038
1	17.6	82.4	11.3	1330	0.0104
2+	17.6	82.4	8.4	994	0.0121
Total	17.2	82.8	100.1	11902	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.5. Turkey: Age and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Age unavailable	16.2	83.8	11.5	1373	0.0099
0-4 years	24.4	75.6	4.6	545	0.0184
5-9 years	24.4	75.6	6.5	776	0.0154
10-14 years	22.2	77.8	7.7	911	0.0138
15-19 years	20.7	79.3	10.0	1190	0.0117
20-29 years	15.2	84.8	18.0	2138	0.0078
30-39 years	17.4	82.6	14.1	1676	0.0093
40-49 years	14.0	86.0	12.7	1512	0.0089
50-59 years	13.4	86.6	8.3	989	0.0108
60 and over	11.9	88.1	6.6	788	0.0115
Total	17.2	82.8	100.0	11898.0	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty rate is identical for ages 0-4 and 5-9, this is not a typographic error.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.6. Turkey: Education of Head and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.	
	Poor	Not Poor				
Some primary	20.4	79.6	14.8	126.2	1624	0.0359
Primary School Graduates	25.9	74.1	31.1	160.1	3406	0.0346
Some Junior High	12.5	87.5	0.7	77.4	80	0.0376
Junior High School Graduates	13.6	86.4	16.7	84.3	1828	0.0374
Some High School	0.0	100.0	0.7	0.0	77	
Some Vocational School	22.0	78.0	0.4	135.9	41	0.0355
High School Graduates	7.6	92.4	18.7	47.2	2047	0.0386
Vocational School Graduates	9.4	90.6	4.0	58.1	437	0.0383
Some University	3.6	96.4	1.0	22.1	112	0.0395
University Graduates	6.7	93.3	11.0	41.2	1202	0.0388
Above University	7.8	92.2	0.8	48.1	90	0.0386
Total	16.2	83.8	100.0	100	10944	0.0368

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Some households were missing head information, so poverty rate is only 16.2 percent not 17.2 percent overall.

Poverty in percentages, standard errors in levels.

SE: Standard Error $=[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.7. Turkey: Main Activity of Head and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Farmer	25.1	74.9	2.3	267	0.0265
Stockbreeder	25.7	74.3	0.3	35	0.0739
Casual worker	21.3	78.7	15.7	1842	0.0095
Artisan	13.1	86.9	15.6	1838	0.0079
Merchant	12.0	88.0	2.8	324	0.0181
Wage worker	13.2	86.8	20.5	2407	0.0069
Student	0.0	100.0	0.4	50	0.0000
Housewife	25.1	74.9	8.1	948	0.0141
Military	0.0	100.0	0.4	42	0.0000
Child	60.0	40.0	0.1	10	0.1549
Retired	12.1	87.9	21.1	2480	0.0065
Unemployed	30.6	69.4	7.1	837	0.0159
Other	21.8	78.2	5.8	682	0.0158
Total	17.1	82.9	100.0	11762	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $=[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.8 Turkey: Ownership Status of House and Urban Food Poverty Rates

	Urban		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Owner	15.4	84.6	62.7	7452	0.0042
Tenant	20.7	79.3	32.2	3825	0.0066
Government housing	0.9	99.1	0.8	101	0.0094
Use house/no rent	19.6	80.4	3.9	466	0.0184
Other	16.3	83.7	0.4	43	0.0563
Total	17.3	82.7	100.0	11887	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.9 Turkey: Housing Type and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Apartment	11.1	88.9	61.3	7135	0.0037
House	23.8	76.2	34.0	3958	0.0068
Gecekondu house	34.7	65.3	3.8	444	0.0226
Shared house	50.0	50.0	0.5	56	0.0668
Other	8.0	92.0	0.4	50	0.0384
Total	16.5	83.5	100.0	11643	0.0034

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.10 Turkey: Wall Type and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Wood	33.7	66.3	2.5	294	0.0276
Earth brick	24.9	75.1	4.7	550	0.0184
Concerte	15.8	84.2	87.5	10145	0.0036
Stone	25.4	74.6	3.1	355	0.0231
Other	8.3	91.7	2.2	253	0.0173
Total	16.8	83.2	100.0	11597	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.11 Turkey: Toilet Type and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Flush in dwelling	14.3	85.7	40.3	4780	0.0051
Latrine in dwelling	21.9	78.1	37.8	4478	0.0062
Pit latrine outside	32.9	67.1	6.6	780	0.0168
Use public facilities	6.3	93.7	1.1	126	0.0216
Both flush & latrine	7.2	92.8	14.2	1687	0.0063
Total	17.3	82.7	100.0	11851	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.12 Turkey: Water Source and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Indoor tap	16.9	83.1	98.2	11602	0.0035
Outdoor private tap	32.6	67.4	1.5	175	0.0354
Outdoor public tap	68.2	31.8	0.2	22	0.0993
Well	0.0	100.0	0.1	11	0.0000
Other	50.0	50.0	0.1	10	0.1581
Total	17.3	82.7	100.0	11820	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.13 Turkey: Electricity and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Electricity	17.1	82.9	99.6	11803	0.0035
No Electricity	29.8	70.2	0.4	47	0.0667
Total	17.2	82.8	100.0	11850	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations

Table 4.14 Turkey: Cooking Sources and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Wood	14.2	85.8	37.7	4485	0.0052
Coal	14.1	85.9	36.4	4329	0.0053
Wood & Coal	13.8	86.2	36.1	4300	0.0053
Gas/LPG	17.1	82.9	95.3	11337	0.0035
Electricity	13.8	86.2	37.3	4435	0.0052
Dung	13.8	86.2	36.0	4297	0.0053
Other	13.9	86.1	35.7	4247	0.0053

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.15. Turkey: Heating Sources and Urban Food Poverty Rates

	Urban Food		Percent of Total	NOBS	S.E.
	Poor	Not Poor			
Wood	16.4	83.6	45.0	5350	0.0051
Coal	15.0	85.0	46.8	5576	0.0048
Wood & Coal	18.4	81.6	59.4	7064	0.0046
Gas/LPG	12.4	87.6	49.2	5853	0.0043
Electricity	13.6	86.4	41.5	4938	0.0049
Dung	14.4	85.6	37.2	4425	0.0053
Other	14.0	86.0	38.0	4524	0.0052

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.16 Turkey: Garbage Disposal and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Collected	17.1	82.9	94.7	11241	0.0036
Dumped	20.1	79.9	5.2	618	0.0161
Burned	0.0	100.0	0.1	13	0.0000
Total	17.2	82.8	100.0	11872	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.17 Turkey: Sewage and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Public	16.9	83.1	91.7	10849	0.0036
Septic Tank	19.9	80.1	8.2	976	0.0128
Left in Open	50.0	50.0	0.1	8	0.1768
Total	17.1	82.9	100.0	11833	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations..

Table 4.18 Turkey: Consumer Durables and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Radio	15.8	84.2	85.2	10128	0.0036
No Radio	25.4	74.6	14.8	1766	0.0104
Telephone	15.7	84.3	87.4	10388	0.0036
No Telephone	28.3	71.7	12.6	1504	0.0116
Cell phone	11.8	88.2	56.9	6764	0.0039
No cell phone	24.4	75.6	43.1	5130	0.0060
Tape Recorder	14.8	85.2	77.9	9267	0.0037
No Tape Recorder	25.8	74.2	22.1	2627	0.0085
Wall clock	17.2	82.8	92.4	10992	0.0036
No wall clock	18.2	81.8	7.6	902	0.0128
Carpet	16.7	83.3	96.3	11448	0.0035
No carpet	30.3	69.7	3.7	446	0.0218
Sewing machine	15.2	84.8	50.5	6005	0.0046
No sewing machine	19.4	80.6	49.5	5889	0.0052
Washing machine	13.3	86.7	83.9	9980	0.0034
No washing machine	37.7	62.3	16.1	1914	0.0111
Dishwasher	5.4	94.6	31.3	3719	0.0037
No dishwasher	22.7	77.3	68.7	8175	0.0046
Oven	14.1	85.9	75.5	8985	0.0037
No oven	26.9	73.1	24.5	2909	0.0082
Microwave	10.3	89.7	12.8	1525	0.0078
No microwave	18.3	81.7	87.2	10369	0.0038
Refrigerator	17.0	83.0	95.8	11397	0.0035
No refrigerator	21.9	78.1	4.2	497	0.0186
Television	16.7	83.3	95.0	11298	0.0035
No television	28.4	71.6	5.0	596	0.0185
VCR	8.4	91.6	19.6	2335	0.0057
No VCR	19.4	80.6	80.4	9559	0.0040
Bicycle	11.9	88.1	25.6	3045	0.0059
No bicycle	19.1	80.9	74.4	8849	0.0042
Motorcycle	16.6	83.4	5.0	592	0.0153
No motorcycle	17.3	82.7	95.0	11302	0.0036
Automobile	7.6	92.4	25.5	3028	0.0048
No automobile	20.5	79.5	74.5	8866	0.0043
Tractor	5.7	94.3	1.8	211	0.0160
No tractor	17.5	82.5	98.2	11683	0.0035
Small truck	6.8	93.2	2.1	250	0.0159
No small truck	17.5	82.5	97.9	11644	0.0035
Truck	16.5	83.5	0.8	91	0.0389
No truck	17.2	82.8	99.2	11803	0.0035
Minibus	11.3	88.7	1.3	151	0.0258
No minibus	17.3	82.7	98.7	11743	0.0035
Computer	4.9	95.1	11.2	1334	0.0059

No computer	18.8	81.2	88.8	10560	0.0038
Vacuum cleaner	10.7	89.3	73.4	8732	0.0033
No vacuum cleaner	35.2	64.8	26.6	3162	0.0085
Satellite antenna	8.3	91.7	12.6	1497	0.0071
No satellite antenna	18.4	81.6	87.4	10397	0.0038
Electric buttermaker	5.0	95.0	3.0	358	0.0115
No electric butter	17.6	82.4	97.0	11536	0.0035
Bath stove	9.0	91.0	9.5	1124	0.0085
No bath stove	18.1	81.9	90.5	10770	0.0037
Hot water heater	9.8	90.2	60.6	7210	0.0035
No hot water heater	28.8	71.2	39.4	4684	0.0066

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.19 Turkey: Assets and Urban Food Poverty Rates+A69

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Second home	10.2	89.8	7.4	859	0.0103
No second home	17.3	82.7	92.6	10741	0.0036
Shop	9.8	90.2	10.3	1200	0.0086
No shop	17.5	82.5	89.7	10398	0.0037
Summer house	1.7	98.3	56.9	584	0.0053
No summer house	17.5	82.5	43.1	10998	0.0036
Storage facility	9.4	90.6	2.9	330	0.0161
No storage facility	16.9	83.1	97.1	11243	0.0035
Foreign currency account	1.7	98.3	5.8	635	0.0051
No foreign curr. Account	17.6	82.4	94.2	10949	0.0036

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.20. Turkey: Urban Food Poverty Probit Results

Probit estimates

Number of obs = 3167

LR chi2(21) = 458.20

Prob > chi2 = 0.0000

Pseudo R2 = 0.1816

Log likelihood = -1032.5885

urbfpic	dF/dx	Std. Err.	z	P> z	x-bar	[95% C.I.]
tertiary*	.0219593	.0186569	1.09	0.274	.130407	-.014607	.058526	
drmed*	-.0739941	.0293921	-2.91	0.004	.123145	-.131602	-.016387	
draeg*	-.0620038	.0256546	-2.73	0.006	.144616	-.112286	-.011722	
drmar*	-.0478394	.0197715	-2.52	0.012	.362488	-.086591	-.009088	
drse*	-.3425386	.0501951	-8.93	0.000	.054942	-.440919	-.244158	
deast*	-.0974801	.0398265	-2.98	0.003	.047679	-.175539	-.019422	
dblack*	.0647402	.0160775	2.93	0.003	.101674	.033229	.096252	
down*	.026707	.0115588	2.36	0.018	.617303	.004052	.049362	
dgece*	-.1061733	.0391104	-3.36	0.001	.034733	-.182828	-.029518	
dshareh*	-.1492341	.1162479	-1.66	0.096	.004421	-.377076	.078608	
dpitout*	-.0378044	.0239061	-1.75	0.079	.056205	-.08466	.009051	
ddishw*	.0722363	.0120387	5.33	0.000	.333439	.048641	.095832	
dcar*	.0310354	.0131515	2.21	0.027	.251658	.005259	.056812	
dcompute*	.0321132	.0189492	1.51	0.132	.118093	-.005027	.069253	
ctadm_1	-.0159554	.0066403	-2.40	0.016	1.07957	-.02897	-.002941	
ctadf_1	-.012055	.0075138	-1.60	0.109	1.01137	-.026782	-.002672	
ctkidf_1	-.028519	.0068602	-4.18	0.000	.419009	-.041965	-.015073	
ctkidm_1	-.0410866	.0063659	-6.50	0.000	.498895	-.053564	-.02861	
cteldm_1	-.0385988	.0181117	-2.13	0.033	.129776	-.074097	-.0031	
cteldf_1	.0141442	.016721	0.85	0.398	.178718	-.018628	.046917	
primary*	-.036586	.0130779	-2.97	0.003	.264919	-.062218	-.010954	
obs. P	.8635933							
pred. P	.904423	(at x-bar)						

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| are the test of the underlying coefficient being 0

Source: Author calculations from 2001 HCIS.

Table 4.21 Turkey: Self-Evaluation and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Poor	29.6	70.4	23.4	2770	0.0087
Below Average	21.2	78.8	25.1	2971	0.0075
Average	10.5	89.5	45.3	5356	0.0042
Above Average	5.1	94.9	5.7	672	0.0085
Rich	0.0	100.0	0.5	59	0.0000
Total	17.3	82.7	100	11828	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.22. Turkey: Self-Comparison with Previous Year and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Much better off	41.4	58.6	3.2	374	0.0255
Somewhat better off	10.6	89.4	3.8	453	0.0145
About the same	9.6	90.4	12.9	1523	0.0075
Worse off	16.8	83.2	39.7	4707	0.0054
Much Worse Off	18.8	81.2	40.5	4785	0.0056
Total	17.3	82.7	100.0	11842	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.23 Turkey: Problems with Satisfying Food Needs and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Never	3.7	96.3	14.9	1763	0.0045
Seldom	12.7	87.3	19.0	2246	0.0070
Sometimes	14.9	85.1	32.2	3803	0.0058
Often	29.2	70.8	22.5	2662	0.0088
Always	25.4	74.6	11.3	1335	0.0119
Total	17.2	82.8	100.0	11809	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 4.24 Turkey: Community Economic Situation and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Much worse	18.7	81.3	54.2	6399	0.0049
Little worse	17.1	82.9	33.1	3910	0.0060
Same	11.9	88.1	7.7	909	0.0107
Little better	18.1	81.9	1.0	116	0.0357
Much better	13.2	86.8	0.4	53	0.0465
Don't know	9.6	90.4	3.5	415	0.0145
Total	17.2	82.8	100.0	11802	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 5.1. Turkey. Region and Urban Vulnerability Rates

	Urban Vulnerable	Not Vulnerable	Percent of Total	Percent of Vulnerable	NOBS	S.E.
Mediterranean	56.4	43.6	13.1	13.2	1558	0.0126
Aegean	56.5	43.5	13.3	13.4	1583	0.0125
Marmara	52.3	47.7	33.5	31.3	3989	0.0079
South-East	93.0	7.0	6.8	11.2	804	0.0090
East	76.5	23.5	5.9	8.1	707	0.0159
Central	51.4	48.6	16.9	15.5	2009	0.0112
Black Sea	39.3	60.7	10.5	7.4	1252	0.0138
Total	56.1	43.9	100.0	100.0	11902	0.0045

Source: 2001HCIS.

Notes: Urban vulnerability defined for urban households as those with FAO equivalent consumption under the vulnerability line.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 5.2. Turkey. Household Size and Urban Vulnerability Rates

	Urban Vulnerable	Not Vulnerable	Percent of Total	NOBS	S.E.
1	16.9	83.1	1.3	154	0.0302
2	28.6	71.4	9.3	1110	0.0136
3	41.8	58.2	17.6	2091	0.0108
4	55.3	44.7	29.9	3564	0.0083
5	64.2	35.8	22.4	2665	0.0093
6	74.1	25.9	9.5	1134	0.0130
7	74.7	25.3	4.9	581	0.0180
8	75.8	24.2	2.2	264	0.0264
9	93.3	6.7	1.1	135	0.0215
10+	85.3	14.7	1.7	204	0.0248
Total	56.1	43.9	100.0	11902	0.0045

Source: 2001HCIS.

Notes: Urban vulnerability defined for urban households as those with FAO equivalent consumption under the vulnerability line.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 5.3. Turkey. Number of and Urban Vulnerability Rates

Number of Children	Urban Vulnerable	Not Vulnerable	NOBS	S.E.
0	42.9	57.1	4669	0.007243
1	53.8	46.2	2925	0.009218
2	68.2	31.8	2543	0.009236
3	74.6	25.4	1073	0.013296
4	77.9	22.1	475	0.019039
5+	88.0	12.0	217	0.022045
Total	56.1	43.9	11902	0.004549

Source: 2001HCIS.

Notes: Urban vulnerability defined for urban households as those with FAO equivalent consumption under the vulnerability line.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 5.4. Turkey. Education of Head and Urban Vulnerability Rates

	Urban Vulnerable	Not Vulnerable	NOBS	S.E.
Some primary	65.1	34.9	1624	0.0118
Primary School Graduates	66.8	33.2	3406	0.0081
Some Junior High	65.0	35.0	80	0.0533
Junior High School Graduates	52.5	47.5	1828	0.0117
Some High School	27.3	72.7	77	0.0508
Some Vocational School	26.8	73.2	41	0.0692
High School Graduates	46.5	53.5	2047	0.0110
Vocational School Graduates	54.5	45.5	437	0.0238
Some University	28.6	71.4	112	0.0427
University Graduates	35.4	64.6	1202	0.0138
Above University	7.8	92.2	90	0.0282
Total	55.1	44.9	10944	0.0048

Source: 2001HCIS.

Notes: Urban vulnerability defined for urban households as those with FAO equivalent consumption under the vulnerability line.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 5.5. Turkey. Main Activity of Head and Urban Vulnerability Rates

	Urban Vulnerable	Not Vulnerable	NOBS	S.E.
Stockbreeder	62.9	37.1	35	0.0817
Casual worker	62.3	37.7	1842	0.0113
Artisan	52.2	47.8	1838	0.0117
Merchant	43.2	56.8	324	0.0275
Wage worker	54.1	45.9	2407	0.0102
Student	14.0	86.0	50	0.0491
Housewife	55.6	44.4	948	0.0161
Military	38.1	61.9	42	0.0749
Child	60.0	40.0	10	0.1549
Retired	49.5	50.5	2480	0.0100
Unemployed	73.8	26.2	837	0.0152
Other	62.0	38.0	682	0.0186
Total	55.8	44.2	11762	0.0046

Source: 2001HCIS.

Notes: Urban vulnerability defined for urban households as those with FAO equivalent consumption under the vulnerability line.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 6.1. Turkey: Inequality Measures 2001.

Per Capita Consumption

relative mean deviation	.28820811
coefficient of variation	.91857168
standard deviation of logs	.72116664
Gini coefficient	.40009117
Mehran measure	.52165214
Piesch measure	.33931068
Kakwani measure	.13901581
Theil entropy measure	.2883049
Theil mean log deviation measure	.27212259

Per Capita Income

relative mean deviation	.3261592
coefficient of variation	1.1868854
standard deviation of logs	.84842002
Gini coefficient	.45515271
Mehran measure	.58663314
Piesch measure	.38941248
Kakwani measure	.17679331
Theil entropy measure	.3939994
Theil mean log deviation measure	.3701176

Table 7.1. Social Risk Management in Turkey:

	Informal	Market-Based	Public
Risk Reduction	Migration Midwife advice on child nutrition and disease prevention	Formal sector in-service training	Macroeconomic policies Child labor statutes Public health interventions
Risk Mitigation	Multiple jobs (informal sector) Investment in assets, including Human and Social Capital Marriage/family Extended family	Investment in multiple financial assets Disability and accident insurance	Formal sector pension system Bag-Kur pension system Unemployment insurance Green card/health insurance
Risk Coping	Selling of assets Borrowing from neighbors Religious charity Sending children to work Seasonal migration Consumption reduction, including cutting back on food	Selling of financial assets Borrowing from banks	Disaster relief (including earthquake benefits) Social Solidarity Fund ad hoc transfers Social Solidarity Fund micro-projects and literacy efforts.

Adapted from: Holzmann and Jorgensen 2000.

Table 7.2. Turkey: Urban and Rural Population, 1960-2000.

	Total Population	Urban	Rural	Share of Rural in Total
1960	27,754,820	8,859,731		18,895,089 68.1
1970	35,605,176	13,691,101		21,914,075 61.5
1980	44,736,957	19,645,007		25,091,950 56.1
1990	56,473,035	33,326,351		23,146,684 41.0
2000	67,844,903	44,109,336		23,735,567 35.0

Source: State Institute of Statistics (DIE) of Turkey.

Notes: Results for 2000 are preliminary. Urban population is defined as population living in province and district centers and rural population as living in villages.

Table 7.3 Turkey: Relatives Abroad and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Yes	10.8	89.2	32.5	3825	0.0050
No	20.4	79.6	67.5	7952	0.0045

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.4 Turkey: Credit Card Use and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Yes, used credit card.	7.1	92.9	29.5	3451	0.0044
No, did not use credit card.	21.2	78.8	70.5	8262	0.0045

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.5 Turkey: Health Insurance and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Civil service	9.5	90.5	15.8	1856	0.0068
SSK (workers)	13.3	86.7	38.7	4546	0.0050
Bag Kur (self-employed)	12.5	87.5	14.2	1664	0.0081
Private	5.6	94.4	1.5	177	0.0173
Green Card	29.9	70.1	2.5	291	0.0268
Other	25.8	74.2	0.5	62	0.0556

None	29.4	70.6	26.8	3155	0.0081
Total	17.3	82.7	100.0		0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.6 Turkey: Selling Assets or Valuables and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	Urban Food Poor	Not Poor
Yes, sold.	19.5	80.5	17.8	2057	0.0087
No, did not sell.	16.2	83.8	82.2	9497	0.0038

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.7 Turkey: Cash or In-Kind to Other Households and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Yes, gave cash or in kind	7.9	92.1	19.9	2342	0.0056
No, did not give cash or in kind	19.5	80.5	80.1	9401	0.0041

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.8 Turkey: Borrowing from Relatives/Friends and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Yes, borrowed.	20.8	79.2	46.8	5507	0.0055
No, did not borrow.	14.0	86.0	53.2	6270	0.0044

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.9. Turkey: Reported Consumption and Urban Food Poverty Rates

	Yes, consumed this			No, did not consume this			NOBS	S.E.
	Urban Food		Percent of Total	Urban Food		Percent of Total		
	Poor	Not Poor	Yes	Poor	Not Poor	No		
Red meat	11.8	88.2	60.3	24.6	75.4	39.7	7068	0.0038
Poultry	12.3	87.7	79.2	36.0	64.0	20.8	9420	0.0034
Milk & dairy	15.7	84.3	92.7	37.3	62.7	7.3	11035	0.0035
Bread	17.1	82.9	98.7	23.8	76.2	1.3	11750	0.0035
Fruit	15.5	84.5	93.8	43.1	56.9	6.2	11167	0.0034
Vegetables	16.8	83.2	97.6	33.8	66.2	2.4	11611	0.0035
Tobacco	15.5	84.5	60.2	19.8	80.2	39.8	7159	0.0043

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error $= [(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.10 Turkey: Food Coping and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Cut down	22.1	77.9	58.8	6963	0.0050
Stopped	18.0	82.0	4.5	533	0.0166
Increased	11.5	88.5	17.2	2035	0.0071
No change	7.3	92.7	19.6	2317	0.0054
Total	17.2	82.8	100.0	11848	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.11 Turkey: Non-Food Coping and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Cut down	20.8	79.2	57.8	6850	0.0049
Stopped	18.5	81.5	14.7	1739	0.0093
Increased	11	89.0	13.1	1550	0.0079
No change	7.1	92.9	14.4	1711	0.0062
Total	17.2	82.8	100.0	11850	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.12 Turkey: Education Coping and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Cut down	23.2	76.8	35.4	3941	0.0067
Stopped	26.5	73.5	17.8	1985	0.0099
Increased	10.2	89.8	13.1	1464	0.0079
No change	8.8	91.2	33.7	3756	0.0046
Total	17.2	82.8	100.0	11146	0.0036

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.13 Turkey: Health Coping and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Cut down	25.3	74.7	35.2	4122	0.0068
Stopped	29	71.0	13.8	1618	0.0113
Increased	10.3	89.7	14.5	1696	0.0074
No change	7.8	92.2	36.5	4281	0.0041
Total	17.2	82.8	100.0	11717	0.0035

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.14 Turkey: Food Quality Reduction and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Completely	27.0	73.0	29.9	3515	0.0075
Somewhat	18.1	81.9	34.7	4077	0.0060
Little	11.2	88.8	18.5	2170	0.0068
No change	4.3	95.7	17.0	1996	0.0045

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 7.15. Turkey: Social Solidarity Fund and Urban Food Poverty Rates

	Urban Food Poor	Not Poor	Percent of Total	NOBS	S.E.
Received from SSD	30.2	69.8	1.0	116	0.0426
Did not receive	17.1	82.9	99.0	11887	0.0035
SSF courses in area	8.6	91.4	22.4	2656	0.0054
No courses	19.8	80.2	77.6	9200	0.0042
<i>Memorandum Items, of which courses in area:</i>					
Attended & finished courses	9.7	90.3	0.1	299	0.0171
Attended, didn't finish	4.3	95.7	1.7	46	0.0299
Currently attending	0.0	100.0	1.4	36	0.0000
Did not attend	8.7	91.3	85.6	2268	0.0059

Source: 2001HCIS.

Notes: Urban food poverty defined for urban households as those with FAO equivalent consumption under the cost of a food basket expressed in CPI prices.

Poverty in percentages, standard errors in levels.

SE: Standard Error = $[(H*(1-H))/NOBS]^{0.5}$ where H = (0,1) poverty.

NOBS: Number of observations.

Table 8.1. Selected Social Indicators – Country Comparison

Selected Social Indicators – Country Comparison									
Indicator	Turkey	Chile	Colombia	Mexico	Poland	Hungary	Malaysia	Tunisia	EU
Population Growth (%)	1.5	1.6	2.0	2.0	0.2	-0.3	2.8	2.0	NA
Life Expectancy at Birth (years)	69.5	75.0	70.0	72.5	72.5	71	72.5	69.5	77.4
Infant Mortality Rate (per 1,000 live births)	38	13	30	31	15	10	11	30	6.1
Maternal Mortality (per 100,00 live births)	180	65	100	110	19	30	34	170	NA
Literacy Rate (% of adult population)	84 ^{1/}	95	91	90	100	99	86	67	100
Female Literacy Rate	75 ^{1/}	95	91	88	100	99	81	56	100
GNP per Capita (US\$)	2,900 ^{2/}	4,810	2,600	3,970	3,900	4,510	3,600	2,050	NA

1/ 1998 data

2/ 1999

Sources: *World Development Indicators, 2000*; *WHO World Health Report 1999*; *Turkey Demographic and Health Survey, 1998* (Hacettepe University, Institute of Population Studies); *Turkey Human Development Report, 1997* (UNDP)

