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# Turkey

## Economic Reforms, Living Standards and Social Welfare Study

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## CURRENCY EQUIVALENTS

(as of January 27, 2000)

Currency Unit = Lira  
US\$1 = 550995.00 Lira

## WEIGHTS AND MEASURES

Metric System

## ABBREVIATIONS AND ACRONYMS

ECA	-	Europe and Central Asia
EES	-	Emikli Sandığı
GDP	-	Gross Domestic Product
GFCF	-	Gross Fixed Capital Formation
HDI	-	Human Development Index
HICES	-	Household Income and Consumption Expenditure Survey
IMR	-	Infant Mortality Rates
LFS	-	Labor Force Survey
MoNE	-	Ministry of National Education
OECD	-	Organization of Economic Cooperation and Development
SIS	-	State Institute of Statistics
SOE	-	State Owned Enterprises
SSK	-	Sosyal Sigortalar Kurumu
SSPCA	-	Social Services and Child Protection Agency
UNDP	-	United Nations Development Program

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## Executive Summary and Policy Recommendations

During the last two decades there has been a significant improvement in Turkey's social indicators. Infant mortality rates have fallen sharply. Literacy rates have climbed. Life expectancy has reached respectable levels for both men and women. And both economic vulnerability and absolute poverty have fallen. Survey evidence, moreover, reveals that between 1987 and 1994 the total number of the poor in Turkey actually dropped.

This progress, however, has occurred against a complex background, characterized by positive but volatile GDP growth; relatively weak employment and wage performance; and rising regional disparities. Despite all of Turkey's social achievements, some very significant gaps remain. About 20 percent of adults are still illiterate. Disparities by gender are large. And although Turkey is a middle income country, a non-negligible fraction of Turkish communities (rural and urban) can be characterized as low human development areas. Literacy rates in those areas are just two thirds of the average; and life expectancy is a full 10 years lower than in richer communities.

There is no simple story that can weave together these often counteracting forces and trends. What is clear, however, is that despite the progress, the country still faces a steep challenge in bringing the great majority of its poor and economically vulnerable population into the economic mainstream. Progress in reducing poverty and vulnerability, while significant, has been uneven.

As Turkey faces the 21<sup>st</sup> century, it must confront a series of critical policy questions: Can it continue to make progress in the fight against poverty? Is it possible to accelerate this improvement, which given Turkish growth rates, has been disappointing? What needs to be done to ensure that GDP growth pays off in terms of broad-based increases in employment and wages? Is it realistic to envision a future growth path in which 40% of employment remains in the agriculture sector? Can the widening of disparities between regions somehow be reversed?

The aim of this Report is to provide Turkish policymakers, the Bank audience and other interested parties, with a foundation of information from which to tackle these pressing social issues and policy questions. For this purpose, the Report brings together a wealth of data sources, from detailed household surveys carried out by the State Institute of Statistics (SIS) to officially published data at the macroeconomic and sector level. All data utilized are publicly available from official web sites or publications, with the sole exception of the unit data from the 1987 and 1994 Household Income and Consumption Expenditure Surveys. The latter were made available to the team by SIS, but used only on SIS premises and with the collaboration of a SIS team.<sup>1</sup>

### *Turkey faces a serious challenge in generating employment*

While Turkey has been successful in sustaining positive GDP growth rates throughout most of the recent period, it has been less successful at generating employment. Employment to working-age population rates have declined sharply since the 1970s, suggesting that a much

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<sup>1</sup> Concerns over the quality of the data used have been raised at different times during the review process, particularly in light of what is perceived as underreporting of income in household surveys. In view of these concerns, the team would like to stress that the analysis in the Report is solidly based on a *variety* of data sources (see technical appendix) and on the triangulation of findings. Only in the instances when different data sources tell a consistently similar story does the Report take a definite stand on an issue. Where lack or low quality of data is perceived to be an obstacle, for example in the analysis of use of health services, the report highlights this clearly. Moreover, the team would also like to emphasize that relative to other countries, the quality of data in Turkey is very good, particularly with respect to the information derived from the household surveys carried out by SIS. Information from both the HICES and the LFS are used extensively in this Report.

smaller fraction of Turkey's potential labor force is economically active and employed today than it was 20 years ago (Table 1). In 1975, Turkey had one of the highest employment rates among the OECD countries, second only to Japan's. By 1997, Turkey's employment rate had fallen to 50.2%, the lowest in the OECD except for Spain.

This downward trend holds whether we use the traditional definition of working-age population (those 15-64 years of age), or the more common definition for Turkey that looks at all individuals over the age of 12. And it is observed regardless of the primary data source used. Whether we examine figures from the successive Censuses of Population, from the semi-annual Labor Force Surveys, from the OECD, or from the State Planning Office (SPO), we find a consistent decline in labor force participation and employment rates for the 1975-97 period. This decline is worrisome because it means that a significant fraction of Turkey's labor resources are underutilized.

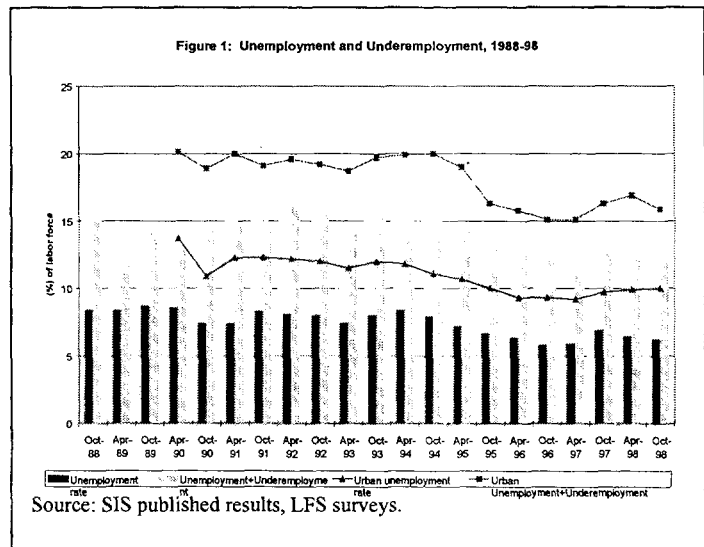
**Table 1. Employment Rates and Labor Force Participation, 1975-97 (%)<sup>2</sup>**

	1975	1980	1985	1990	1997
<b>Population 12 and over (Census)</b>					
Employment/Population	63.5	60.7	58.2	57.3	44.8
Labor Force Participation	64.5	62.9	61.1	60.6	47.9
<b>Population 15-64 (OECD)</b>					
Employment/Population	69.2	65.2	59.9	54.9	50.4
Labor Force Participation	74.0	71.2	64.7	59.8	54.0
<b>Population 15-64 (SPO/Yamaz)</b>					
Employment/Population	68.4	65.6	58.5	58.9	53.5
Labor Force Participation	74.1	71.5	63.1	64.1	56.0

Source: All primary data are from SIS sources, namely from the Census of Population (several years and projections); and published results from the semi-annual Labor Force Survey. SPO/OECD data from same primary sources, but processed (and adjusted) by those two institutions.

That Turkey faces a labor absorption problem is also visible in its open unemployment rates, which are high when compared to those of other middle-income countries with no unemployment insurance. *Urban* unemployment rates have hovered between 10 and 15% for the last decade, as compared to a range of 3 to 6% for Mexico—a country with similar per capita income levels and a worse growth record. Soft measures of unemployment, which adjust for those who involuntarily work few hours per week, give a more worrisome picture (Figure 1).

*Why is Turkey not succeeding at generating sufficient jobs for its growing workforce? There are two potential explanations, not necessarily competing, but with different implications for policy. One is that the economy is simply not growing sufficiently to generate jobs for a fast-expanding population. The second is that the economy is growing enough, but somehow this growth is not sufficiently labor-intensive—or in other words, this growth does not*



<sup>2</sup> Reported census data for 1997 are from published projections.

generate enough jobs. The former explanation would highlight barriers to growth as the main policy problem. The second would suggest looking at constraints to labor demand, and biases in the pattern of growth.

***Meeting the employment challenge requires faster GDP growth***

While respectable, GDP growth has not been sufficient to fully employ Turkey's fast-growing working age population. During 1981-97, total employment grew by only 1.5% per year—while the working-age population (the pool of all potential workers) grew by over 3% per annum. A simple decomposition shows that *output per person of working-age* increased, on average, by only 1.5% per year. This, in turn, broke down into annual productivity growth of about 3%, and a decline in the employment rate of some 1.5% per year. *Had Turkey achieved higher overall GDP growth rates, it would have been able to sustain higher increases in output per worker, and/or employ a higher proportion of its potential workforce.*

While Turkey sustained very fast growth rates during the 1960s and early 1970s (of over 6% per annum), these rates slowed significantly during the 1980s and 90s and became more volatile. During 1981-97, GDP growth averaged 4.5% per year—still an impressive achievement when compared to the poor performance of other middle-income countries during this period. But arguably not enough to sustain Turkey's goal of converging to the income levels of the rest of the OECD.

If we compare Turkey's recent growth performance to that of two "successful" case studies of catching up to the OECD, Spain and Korea, we see that in order to emulate their performance Turkey needs to grow faster than it has during the past two decades (Table 2). Annual GDP growth in Spain during its "take-off" period, when its income level was comparable to Turkey's today, averaged 6.4% per year, while that in Korea during its peak growth phase was close to 10% per annum. In both Spain and Korea, high GDP growth provided the basis for large increases in non-agricultural employment and wages, and a sustained rise in living standards. As a result, both countries are now solidly entrenched among the world's richest group of nations. Turkey is not there yet. With an income per capita equal one-third that of Korea, and one-fifth that of Spain, Turkey needs to continue to grow at 7-10% per year in order to deliver to its citizens a similar leap in living standards and incomes, in a relatively short period of time.

**Table 2. Turkey's Growth Performance, 1981-97: Comparisons with Spain and Korea During their Take-Off Periods**

<b>Avg. annual growth rate (%):</b>	<b>Turkey, 1981-1997</b>	<b>Spain, 1964-74</b>	<b>Korea, 1965-80</b>	<b>Korea, 1980-1989</b>
<i>Total GDP:</i>	4.5	6.4	9.9	9.7
Agriculture	1.4	2.5	3.0	3.3
Industry	6.5	9.1	18.7	13.1
Services	4.4	5.4	9.6	9.1
<i>Value added per worker:</i>				
Agriculture	1.3	8.4	0.5	19.0
Industry	3.8	8.7	16.6	16.3
Services	1.4	2.7	11.8	12.5
<i>Real wages in manufacturing:</i>	1.6	8.8	10 <sup>a</sup>	5.9 <sup>b</sup>

Source: WDR, several years; Turkey: SPO and SIS (from LFS). Spain: Instituto Nacional de Estadística.  
<sup>a</sup> 1970-1980; <sup>b</sup> 1980-1988.

*What kept Turkey from growing faster during the last two decades?* A full analysis of this is clearly beyond the scope of this study, but low investment rates seem to have played an important role. Gross fixed capital formation (GFCF) as a percent of GNP dropped sharply in the early 1980s and has since recovered only very slowly. Public investment has steadily declined, and while there has been an expansion in private investment, this has been driven mainly by a boom in the housing sector. Private investment outside of housing has remained stagnant at 10-12% of GNP. And despite Turkey's export boom private GFCF in manufacturing has remained very low. Raising investment rates would thus appear to be crucial to underpinning faster growth over the medium term.

***Productivity growth is key***

Beyond the impact of accumulation, the other big determinant of a country's growth path is the behavior of factor productivity. Factor productivity, in turn, reflects the outcome of two major forces: the shift of resources (mainly, capital and labor) from low to high value added activities, on the one hand; and increased efficiency within activities and sectors, which allow firms to produce more with a given resource endowment, on the other. In examples of "virtuous" development cycles, these two forces often combine: rising demand for labor in industry and services interacts with rising productivity in agriculture, to stimulate a massive flow of workers to the higher value added sectors. This in turn leads to enormous increases in labor productivity, and hence in the real incomes of workers.

In Turkey, the first source of productivity growth (sectoral shifts) has operated strongly during the last two decades, accounting for over three-quarters of all productivity growth (Table 3). However, *productivity growth within-sectors has been very low*, especially outside of industry. Low within-sector productivity growth is at the root of why overall labor demand has not grown faster. Of particular concern is the weak performance of agriculture in the poorer regions of Turkey. It is this sluggish performance, in combination with the importance of agriculture in terms of shares of output and especially employment, that is slowing down overall growth and employment creation. Thus, providing a foundation for improved productivity performance in agriculture, especially in the poorer regions, can have a large payoff in terms of overall growth.

**Table 3. Decomposition of Productivity Growth in Turkey by Sector, 1975-1990**

	<i>Turkey</i>					
	<i>Within</i>	<i>%</i>	<i>Across</i>	<i>%</i>	<i>Total</i>	<i>%</i>
<i>Agriculture</i>	0.27	12.5	-0.52	-24.2	-0.25	-11.7
<i>Industry</i>	0.49	22.7	0.59	27.6	1.08	50.4
<i>Construction</i>	-0.20	-9.3	0.35	16.2	0.15	6.8
<i>Services</i>	0.01	0.3	1.16	54.2	1.16	54.5
<b><i>Total</i></b>	<b>0.56</b>	<b>26.2</b>	<b>1.58</b>	<b>73.8</b>	<b>2.14</b>	<b>100.0</b>

Source: Background paper by Filiztekin (1999). Based on province-level National Accounts data. Author's own computations.

***Eliminating constraints on non-agricultural labor demand is also important***

The above discussion suggests that overall GDP growth in Turkey was simply not high enough to fully absorb its rapidly-growing labor resources into the high productivity sectors, at growing wages. However, given a certain level of (fairly respectable) growth, could labor absorption have been greater? In other words, could growth have been more "labor-intensive"? And if so, what were the constraints to labor demand?

While both industry and services experienced non-negligible output growth during the 1981-97 period, the distribution of growth into employment gains versus productivity gains was quite different in both sectors. Industry experienced higher growth in productivity and proportionately less growth in employment, while services (incl. construction) generated many more jobs, but with much lower productivity. On the whole, employment in higher value added activities (especially manufacturing) appears to have been held in check by a combination of rising labor costs; lack of capital investment; rising real interest rates; and the appreciation of the real exchange rate during the 1988-93 period.

There is evidence of a growing differential between wages in construction and trade—the two “low productivity” sectors that are most likely to absorb the flow of labor released from agriculture—and wages in the more “formal” industrial and public sectors. This rising gap in relative wages is emerging in parallel to a modest shift in relative employment *towards* the low wage sectors—which suggests that wages in the “formal” sectors may be set too high, causing surplus labor to be crowded into informal activities in construction and trade. What is less clear is what factors underlie high formal sector wages: alternative explanations are (i) the size and wage-setting behavior of the public sector and its impact on wages on the private sector; (ii) the existence of oligopolistic product market structures and/or bargaining power on the part of employed workers, who are able to raise wages at the expense of employment; and (iii) the impact of labor market regulations. Unfortunately, the lack of adequate data prevents us from clearly untangling these different potential effects.

***Income inequality in Turkey is high***

Turkey is a country with large and entrenched inequalities. Income differentials across regions and social groups are wide and persistent. When measured by the Gini coefficient, inequality in Turkey is close to the levels observed in some highly unequal countries such as Peru or Russia (Table 4).

**Table 4. Gini Coefficients for Income and Consumption *per capita***

<i>Income</i>		<i>Consumption expenditures</i>	
Chile (1994)	0.51	Peru (1994)	0.45
Costa Rica (1996)	0.47	Philippines (1994)	0.43
Russia (1995)*	0.47	Ecuador (1994)	0.43
<b>Turkey (1994)</b>	<b>0.45</b>	<b>Turkey (1994)</b>	<b>0.41</b>
Bolivia (1990)	0.42	Tunisia (1990)	0.40
Bulgaria (1995)	0.38	Morocco (1991)	0.39
Italy (1995)*	0.35	Portugal (1990)	0.32

Source: WDI, 1998 (World Bank); \* LIS. Turkey: Calculations based on primary SIS HICES data adjusted for inflation.

*A significant share of total inequality in Turkey is explained by differences in endowments, geography and opportunities faced in the labor market.* Two critical variables, education and employment status, each explain between a fifth and a quarter of all observed inequality. Rural/urban differences explain more than 10 percent of the total inequality in the country. Regional factors explain another 11 percent.

Inequality between regions can be traced to a number of factors, most importantly to differences in sectoral structure and differences in productivity across sectors. Lagging regions are poorer largely because they have a bigger share of their resources employed in agriculture. They also exhibit much lower productivity within agriculture than richer regions. These productivity differences across rural areas are in turn a reflection of differences in endowments (land, labor and

capital). Poorer provinces are typically those with the lowest capital to land and land to labor ratios, and with the least access to public infrastructure (roads and water).

Comparisons over time suggest that inequality between regions is growing. We find that the share of overall inequality explained by differences in regional means has grown by 10 percent. Similarly, using provincial-level data on GDP for the 1975-95 period, we find that productivity differences between provinces are getting bigger; not smaller. This is true not only for productivity levels but also for productivity growth rates. The result is that Turkish provinces are diverging: richer provinces (mainly those from Marmara or historically major port cities around the Aegean or the Mediterranean coast) are converging towards each other, while poor provinces are falling further behind. And while provinces in the middle of the distribution show some mobility over the 20-year period of observation, those at the top or bottom of the distribution do not change very much at all. Of the 13 poorest provinces in 1975, 10 were still in the bottom quintile 20 years later. And of the 13 richest in 1975, 11 remained in the top quintile in 1995

***But the distribution of income is fairly stable***

If we look at households rather than regions, and compare the whole distribution of income between 1987 and 1994, we find that income inequality has remained roughly unchanged. The distribution of household *monetary income* worsened during this period, with the Gini coefficient for household *money incomes* increasing from 0.411 to 0.453. However, this was partly arrested by a countervailing effect from *in-kind components of income*. As a result, inequality in *total incomes* increased much less. The Gini coefficient for total income did not change between 1987 and 1994, and quintile shares remained surprisingly stable (Table 5). Specific inequality measures which give greater weight to the ends of the distribution, however, show a “stretching” of the distribution, with inequality increasing both at the very bottom and at the top

Inflation does not appear to have had a long-lasting distributional impact *Non-anticipated jumps in inflation or periods of accelerating inflation have unambiguously hurt the poor and worsened the distribution*. However, this effect appears to wear off over time, as households modify their behavior, indexation mechanisms came into play, and nominal incomes adjust. And during periods of relative stability, the poor tend to gain vis-a-vis the rich. This may help explain why, despite years of high inflation, Turkey’s income distribution has not deteriorated as much as could have been expected.<sup>3</sup>

**Table 5. Changes in the Distribution of Total Income: Quintiles Shares and Summary Statistics**

	<i>Households</i> <i>Individuals, per capita</i>		<i>Households</i> <i>Individuals, per capita</i>	
	<i>1987</i>		<i>1994</i>	
First quintile (20% poorest)	5.3%	4.9%	5.4%	4.8%
Second quintile	9.7%	9.0%	9.7%	8.9%
Third Quintile	14.1%	13.4%	14.1%	13.4%
Fourth quintile	21.1%	20.1%	20.6%	20.2%
Fifth Quintile (20% richest)	49.8%	52.7%	50.1%	52.7%
Coefficient of variation*	1.25	1.39	1.78	1.85
Gini coefficient	0.44	0.47	0.44	0.47
Theil entropy measure**	0.38	0.44	0.42	0.49
Theil mean log deviation***	0.33	0.38	0.34	0.39

Note: all values are based on monthly record, deflated using regional CPI to average 1987 prices. Source: SIS HICES primary data.

<sup>3</sup> A similar case is Brazil, where despite huge macroeconomic volatility, the distribution of income has not changed much since 1976.

*The main factor driving the worsening of the distribution of money incomes appears to be the labor market, and specifically the emergence of growing wage differentials by educational attainment.* Another contributing factor is the growing dependence of total household income on wages. Comparing 1987 and 1994, we find that an increasing number of households rely on wages as their sole source of household income. This is an expected result of economic growth and modernization. What is interesting is that this process affects the households in the lower part of the distribution more than those at the top. In other words: low-wage casual workers increasingly rely solely on wages as their source of income. On the other hand, well-paid professionals have a growing fraction of their income coming from non-wage sources, especially from financial assets.

*State transfers play a negligible redistributive role.* In its pre-transfer (or market-determined) income inequality, Turkey shows levels similar to many OECD countries (equal to France or Italy, for example, and lower than Great Britain). But in all of these countries high market-determined inequality is reduced by a progressive safety net and by redistributive taxes. This is not the case in Turkey, where market-driven inequalities are largely left to determine the shape of the final distribution of income, and hence living standards. Although Turkey spends a substantial amount of resources on transfers, most of these are not aimed at redistribution *per se*. The most important component of state transfers is pensions, which is explicitly meant to be a social insurance scheme and hence not redistributive. In practice, pensions accrue mostly to the top of the distribution.<sup>4</sup> Old-age assistance and scholarships similarly tend to go to higher-income households. In contrast, in-kind transfers are clearly progressive, but have a small impact on household income (Table 6).

**Table 6. Incidence Analysis: Distribution of State Transfers by Household Income Quintiles in 1994**  
Distribution by Quintiles (% of total income source)

	1 poorest	2	3	4	5 richest	Memo: share in total income, percent
State Pensions	4%	9%	16%	25%	47%	5.59%
Tax return	3%	9%	16%	26%	46%	0.69%
Old age income and scholarships	8%	11%	16%	21%	44%	0.68%
In-kind transfers from the State	29%	19%	17%	22%	13%	0.05%

Note: annual income data for 1994. Source: Calculations based on SIS Income Distribution Survey primary data.

***Absolute poverty is low but economic vulnerability is widespread***

*Absolute poverty in Turkey is low based on an international standard.* When we use the internationally comparable “One-Dollar-a-Day” line, we find an extremely low incidence of poverty. Only 2.5 percent of the population have monthly consumption below this level (Table 7). This puts Turkey in the range of countries with small incidence of absolute deprivation.

*Absolute poverty based on a country-specific minimum food basket is also low.* Although the minimum food allowances adopted in Turkey are relatively high by international standards, only 5.7% of households and 7.2% of the population can be considered poor in an absolute sense—i.e. have total monthly consumption below the cost of the minimum food basket.<sup>5</sup> However, unlike absolute poverty, economic vulnerability is a widespread problem. A

<sup>4</sup> The pension system in Turkey is conceived as a social insurance scheme and hence need not have a progressive distributional impact. On the contrary, to the extent that pensions are linked to past wages, they are likely to be accrue more to the top of the distribution. Despite this, pensions play an important role in protecting the elderly from potential poverty, and hence have an important social dimension. What is more problematic is the potential degree of “unfairness” of the pension system—the extent to which benefits are not linked to past contributions and the extent to which the system supports the early retirement of people who can still work; as well as the financial unsustainability of the system.

<sup>5</sup> The cost of the minimum food basket in 1994 was about US\$36 per month per equivalent adult.

substantial number of households (31%) and an important fraction of the population (36%) have consumption below the economic vulnerability line (equal to the food line plus an allowance for non-food items).<sup>6</sup>

**Table 7. Poverty Incidence in Turkey Under Different Methodologies, 1994**

Methodology	Poverty line	Poverty incidence
Absolute poverty, int. standards	One-Dollar-a-Day per capita at 1985 PPP prices	2.5%
Absolute poverty	Local cost of minimum food basket <sup>a</sup>	7.3%
Economic vulnerability	Local cost of basic needs basket (incl. non-food) <sup>a</sup>	36.3%
Relative income poverty	One-half of national median income	15.7%

Source: Own calculations from 1994 HICES. <sup>a</sup> Consumption per equivalent adult; economies of scale.

The comparison of the 1987 and 1994 Household Income and Consumption Expenditure Surveys results suggests that during this period there was a reduction of about 2.3 percentage points in the overall incidence of economic vulnerability (from 38.5 to 36.2 percent of the population). However, the relatively rapid growth of the population meant that despite the drop in incidence, there was an actual increase in the number of economically vulnerable persons, which grew by more than one million. Progress in reducing *absolute poverty* was more pronounced and actually lead to a *reduction in the total number of the poor in Turkey*. Although the direction of change is unmistakable, it is also important to note that the magnitude of decline in poverty is not dramatic. Most households that left poverty between 1987 and 1994, would still be categorized as economically vulnerable in 1994.<sup>7</sup>

What contributed to this reduction in poverty? The main factor was the large population shift between urban and rural areas. As the population in the relatively less poor urban areas has expanded with migration flows, poverty in rural areas has fallen dramatically and hence total poverty has also declined. Demographic changes (lowering of fertility rates among the poor) also contributed to reducing the number of poor in the country as a whole. Almost a quarter of the overall reduction of poverty was due to these "structural" factors. The other big contributor to the drop in poverty was the increase in literacy rates among heads of households: by itself, this accounted for almost one-half of the measured reduction in economic vulnerability and poverty between 1987 and 1994.

**Table 8. Decomposition of Poverty Change into Growth and Redistribution Components**

	Total change in poverty rate (%)	Of which		
		Growth	Redistribution	Interaction
Rural	-7.0	-8.5	-1.2	+2.7
Urban	+2.6	+4.3	+12.7	-14.4
Turkey	-2.3	-2.4	+5.4	-5.2

Source: Calculations based on SIS HICES primary data for 1987 and 1994.

If we decompose the 1987-1994 change in poverty into its growth and redistribution components (see Table 8), we find that the impact of redistribution was negative: *i.e. distributional changes have actually slowed the fall in total poverty, particularly in urban areas*. In urban areas, in fact, both growth effects and redistribution effects have combined to create an

<sup>6</sup> Approximately equivalent to twice the level of the minimum food basket—or about US\$190 *per household* per month.

<sup>7</sup> Since 1994 was a crisis year, the comparison may underestimate the true decrease in poverty that has occurred since 1987. Unfortunately, at this time, the 1994 HICES data are the latest available that document household expenditures and incomes in detail.



*increase in urban poverty.* Going a step further, we decompose the growth component of changes in urban poverty into a "real growth effect" and an "effect of the poverty line" (related to prices of poverty basket rising faster or slower than other prices). We find that most of the negative growth effect in urban areas is explained by a fast rise in the cost of poverty basket.

***Poverty in Turkey is linked mainly to education and employment status***

*Education is the single characteristic with the strongest correlation to poverty risk.* One half of all households headed by an illiterate person are economically vulnerable, and nearly 15 percent are poor in an absolute sense (Table 9). These households represent only 14 percent of the total population of Turkey, but account for nearly a third of all poor households.

**Table 9. Poverty Profile in 1994 by Education of Household Head**

<i>Education of household head</i>	Poverty indicators			Structure and decomposition, percent		
	Incidence of economic vulnerability	Incidence of poverty	Average shortfall of the poor	Population	Vulnerable population	Poor population
Illiterate	0.526	0.149	0.329	13.6%	19.7%	27.8%
Literate w/o diploma	0.453	0.105	0.305	7.4%	9.3%	10.7%
Primary	0.382	0.072	0.301	55.8%	58.8%	55.0%
Secondary	0.231	0.025	0.261	17.9%	11.4%	6.2%
Higher	0.056	0.003	0.159	5.3%	0.8%	0.2%
<b>Total</b>	<b>0.363</b>	<b>0.073</b>	<b>0.301</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

\*Note: average shortfall is the gap between the average consumption of the poor and the poverty line. A shortfall of 0.3 means that an average poor person has a consumption that is 30% below the poverty line. Source: Calculations using SIS HICES primary data.

*Labor market status is another important correlate of poverty.* The risk of poverty is the highest for households in which the head is employed in seasonal or casual jobs. Households whose income depends solely on casual or seasonal work are even more vulnerable than the unemployed. Sadly, the share of this type of employment is astonishingly high: every fourth wage earner in Turkey is a casual employee. Self-employment ranks second in terms of poverty risks for all the employed, and 45 percent of the poor in Turkey live in families where the head is self-employed.

*There are big differences in poverty incidence between regions of the country.* The Aegean region has a vulnerability risk that is only half of the national average; in contrast, East and South East Anatolia have a risk that is 50% above the national average. Differences in absolute poverty rates by region are even wider. But even in the richest regions we find groups that are poor. If we try to predict whether the household is poor or not solely based on location, only 2% of cases are predicted correctly. Location by itself is neither a cause or a correlate of poverty.

*Unlike other studies, we find only small differences in vulnerability and poverty between urban and rural areas.* This is the result of applying different poverty lines in urban and rural areas, taking into account that *prices are much lower in the latter*. If we were to apply a single national line (as has been done in earlier studies), rural poverty and vulnerability would always be higher than urban. Going beyond a purely commodity-based measure of living standards, however, yields evidence that rural areas are lagging behind urban areas in many measures of human development. Akder (1999), for example, finds that rural districts significantly lag urban districts in both education and life expectancy.

We find only a slight difference in poverty risks between male-headed households and female-headed ones. And individual poverty risks on average are the same for men and women. But poverty of female-headed households is *deeper*. Other indicators of well-being all point towards *the existence of severe gender gaps in human development*. Female literacy, educational

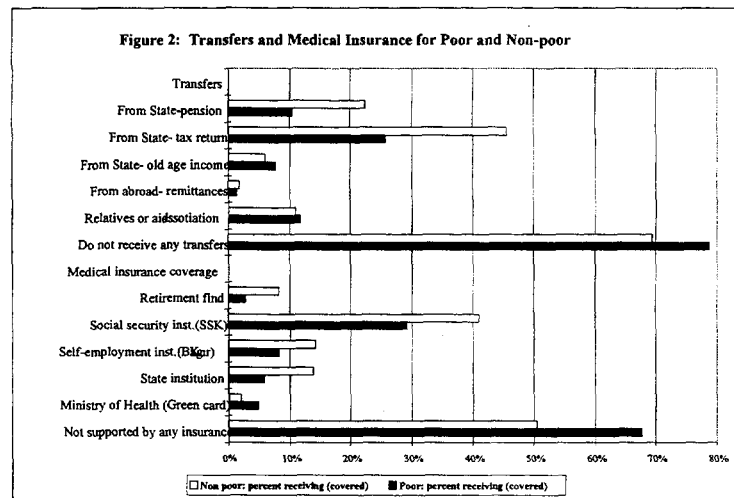
attainment and participation rates in monetarily gainful economic activities are all far below what is observed for males. According to the 1994 HICES, only 16 percent of women in rural Turkey work for pay (a much larger fraction are employed as unpaid family workers). In urban areas the proportion is barely larger, only 20 percent.

***Government spending needs to be better targeted to the economically vulnerable***

*The social protection system in Turkey is one of the most extensive in the region.* In terms of current transfers, the social insurance system now covers a large fraction of the population (as direct recipients or family members), and provides for pension payments as well as health care, disability, maternity and occupational injury. The Government also provides subsidies to agriculture, although it is not clear whether these transfers help the poor. Most importantly, the Government also finances and manages a comprehensive system of compulsory primary education for five years—recently increased to eight.

While extensive, the Turkish Government’s social protection framework is plagued by several problems which require attention:

- Social assistance schemes are dispersed and disjointed.* The level of benefits is very small, and biased towards certain categories of the population. Some accrue equally to the poor and non-poor (e.g. old age income assistance). The best-covered groups are the elderly and the disabled; while the worse off are the working poor and the unemployed. There is a need to consolidate these disparate efforts, and develop a comprehensive and more uniform social assistance program that adequately targets the poor.
- Despite the wide coverage of the system, social insurance (and especially the pension system) fails to reach the most vulnerable households.* The wide coverage of Turkey’s social security schemes is clearly a very positive achievement, which places Turkey ahead of other countries with a similar income level. However, to the extent that the system is primarily linked to holding a formal-sector job, it may fail to reach the poorest individuals (Figure 2, which is based on SIS Income Distribution Survey data). While this is not a failure of the social insurance system per se, the lack of systematic anti-poverty interventions that fall outside of the insurance framework raises concerns for the future. If future social protection efforts are channeled exclusively through social insurance mechanisms, they are likely to keep excluding the poorest of the poor. Hence, in parallel to the continued development and improvement of its social insurance system, Turkey also needs to focus on systematic interventions aimed at those who cannot be reached through such formal mechanisms. Moreover, given the present scarcity of redistributive instruments in Turkey, the Government may want to assess the need for introducing a well-distinguished redistributive component within the social insurance system over the medium term.



- *The social insurance system is fiscally unsustainable, and is generating large deficits that need to be covered by the State budget.* By absorbing a large and growing fraction of state revenues, these deficits may crowd out any additional resources that would be directed towards the poorest in society. Moreover, the deficits in the general budget are a major contributor to inflation, which acts as a regressive tax. Efforts to place the system on a financially sustainable path are already underway with the new pension reform law approved in August 1999. However, the system will continue to require significant subsidies through the medium term.
- *The system of agricultural subsidies represents a significant drain on the budget, and is biased towards richer regions and larger farmers.* Agricultural support policies accentuate rather than mitigate the existing regional disparities. The system needs to be revisited, and consolidated into a limited lump-sum transfer, and targeted towards poorer farmers and poor regions.
- *The educational system, while comprehensive, does not provide enough access for the poorest.* The problem of access is particularly critical for secondary education. There also needs to be a greater push towards ensuring that *rural girls* have improved entry into schooling. The existing distributional gap between urbanized and rural Turkey, and between men and women, will not be eradicated unless there is truly equal educational opportunity for all Turkish children.

#### ***Key elements of a strategy to improve living standards and reduce poverty***

- *Provide a macroeconomic environment that is conducive to growth and price stability.* Address fundamental structural reforms, including the much-needed reform of the public sector, to underpin a sustained reduction in inflation and the basis for continued growth.
- *Remove biases against employment creation outside of agriculture.* Reduce public sector borrowing requirements, to bring down real interest rates and stimulate investment. Eliminate barriers to competition in product markets.
- *Facilitate the outflow of resources from agriculture and provide a basis for productivity growth in the sector.* Facilitate rural-urban migration flows. Improve the availability of public infrastructure, especially roads and water supply, in poorer agriculture areas.
- *Invest in education, and especially in that of poor children.* Facilitate public compliance with the program to extend universal schooling through the eighth grade. Provide incentives for educating girls and flexibility in schooling arrangements. Eliminate barriers that reduce access and attendance among children of poor and rural families. Reduce adult illiteracy through adult education programs.
- *Reallocate Government expenditures so that they are better targeted to the economically vulnerable.* Continue the reforms of the social insurance system, and assess the need for a well-defined redistributive component. Improve the targeting and coordination of existing social assistance schemes, and gradually increase their size and coverage. Over the medium term, merge existing multiple system into a comprehensive single benefit scheme linked to means or proxy-means testing. Consolidate the system of agricultural subsidies into a limited lump-sum transfer, and target towards poorer farmers and poor regions.



## Chapter 1. Growth, Employment and Wages <sup>1</sup>

*Productivity growth and the transformation of employment from low to high productivity activities lies at the core of achieving broad-based increases in real wages in living standards for Turkish workers. While Turkey has been successful in sustaining positive GDP growth rates throughout most of the 1970-1997 period, it has been less successful at generating employment. Productivity differentials between sectors are large; and a substantial fraction of the Turkish labor force remains engaged in low-productivity agriculture. With a rapidly growing labor force, Turkey faces a "demographic window of opportunity": high growth rates of the working age population hold the potential to fuel decades of fast economic growth. But for this to materialize, formal wage employment must grow. This will require, first of all, achieving even faster rates of GDP growth; and secondly, avoiding policy biases and other constraints to labor demand.*

### 1.1 The Challenge of Generating Employment

1. Productivity growth and the transformation of employment from low to high productivity activities lie at the core of achieving broad-based increases in real wages in living standards for Turkish workers. While Turkey has been successful in sustaining positive GDP growth rates throughout most of the 1970-1997 period, it has been less successful at generating employment. Employment to working-age population rates have declined sharply since the 1970s, suggesting that a much smaller fraction of Turkey's potential labor force is economically active and employed today than it was 20 years ago (Table 1). In 1975, Turkey had one of the highest employment rates among the OECD countries (69.2%), second only to Japan's (70.7%). By 1997, Turkey's employment rate had fallen to 50.2%, the lowest in the OECD except for Spain (49.0%).

Table 1. Employment Rates and Labor Force Participation, 1975-97 (%)<sup>2</sup>

	1975	1980	1985	1990	1997
<b>Population 12 and over (Census)</b>					
<i>Employment/Population</i>	63.5	60.7	58.2	57.3	44.8
<i>Labor Force Participation</i>	64.5	62.9	61.1	60.6	47.9
<b>Population 15-64 (OECD)</b>					
<i>Employment/Population</i>	69.2	65.2	59.9	54.9	50.4
<i>Labor Force Participation</i>	74.0	71.2	64.7	59.8	54.0
<b>Population 15-64 (SPO/Yamaz)</b>					
<i>Employment/Population</i>	68.4	65.6	58.5	58.9	53.5
<i>Labor Force Participation</i>	74.1	71.5	63.1	64.1	56.0

Source: All primary data are from SIS sources, namely from the Census of Population (several years and projections); and published results from the semi-annual Labor Force Survey. SPO/OECD data from same primary sources, but processed (and adjusted) by those two institutions.

2. This trend holds whether we use the traditional (OECD) definition of working-age population (those 15-64 years of age), or the more common definition for Turkey that looks at all individuals over the age of 12.<sup>3</sup> And it is observed regardless of the data source used: whether we examine figures from the successive Censuses of Population, from the quarterly Labor Force Surveys, from the OECD, or from the State Planning Office (SPO), *we find a consistent decline in labor force participation and employment rates for the 1975-97 period.* This decline is

<sup>1</sup> This Chapter draws heavily on background papers by Erol Taymaz (*Trade Liberalization and Employment Generation: the Experience of Turkey in the 1980s*); Hakan Ercan (*The Structure of Turkish Labor Markets: 1988-2025*); Alpay Filiztekin (*Convergence Across Turkish Provinces and Sectoral Dynamics*) and Marnia Lazreg (*Rural to Urban Migrant Women's Participation in the Labor Force*).

<sup>2</sup> Reported census data for 1997 are from published projections.

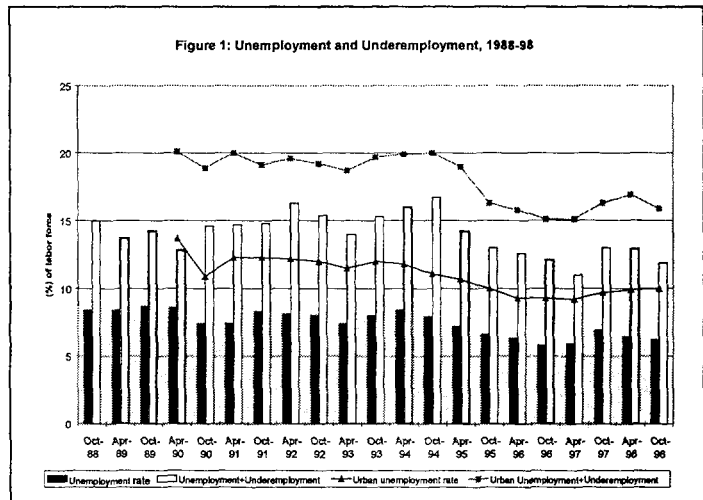
<sup>3</sup> This is, for example, the definition used in published Census statistics, and also the most commonly reported in published tables from the semi-annual Labor Force Survey.

worrisome because it means that a significant fraction of Turkey's labor resources are underutilized.

3. If we separate out different age cohorts, we find that among those aged 15-24, Turkey's employment rate is close to the average for the European Union (38.1% versus 37.1%), and not far off the average for the OECD as a whole (44.1%). Among older workers (aged 55-64), Turkey's employment rate (39.7%) is somewhat lower than the OECD average (47.6%), but actually higher than the average for the European Union (36.7%). *The big difference in employment rates comes from individuals aged 25-54 (prime age workers):* Turkey's employment rate for that category is only 58.2%, as compared to an OECD average of 75.4%.

4. What factors explain Turkey's currently low employment rate? Part is supply driven—the result of dropping labor force participation rates—which come about from people staying in school longer, choosing to stay at home rather than entering the labor force, or retiring earlier. As seen in Table 1 above, *labor force participation rates* have dropped sharply even for the more narrowly-defined 15-64 age group. Much of this is due to women staying at home rather than entering the labor force (see discussion in Section 1.5 below). But even labor force participation decisions, which reflect the opportunity cost of staying home rather than entering the market to search for a job, are influenced by the availability of sufficiently attractive employment opportunities.

5. Turkey's labor absorption problems have not necessarily been reflected in high open unemployment—at least not at first glance. According to the LFS, during 1988-1997 open unemployment rates oscillated between a low of 5.8 percent in the second half of 1996 and a high of 8.7 percent in 1989. In April 1994, in the midst of the economic crisis, the LFS-based open unemployment rate was 8.4 percent.<sup>4</sup> By OECD standards, these rates are fairly moderate. However, *they are actually high if compared to open unemployment rates in other middle income countries:* in Mexico, for example, at the peak of the 1982 debt crisis, unemployment reached only 6



percent; in 1994, following the currency crisis, it climbed to 7.4 percent – but has since fallen back down to under 3 percent. In Korea, unemployment averaged only 2.8 percent during 1985-95, climbing to nearly 6 percent after the East Asia crisis. *The problem is that, unlike in much of the OECD, in countries like Turkey or Mexico, with no unemployment insurance and a tradition of self-employment, open unemployment rates do not necessarily tell us very much. Poor households can simply not afford to be unemployed; and self-employment in low productivity activities is often the preferred (or only viable) alternative. Recognizing this problem, in parallel to its series on unemployment, the State Institute of Statistics (SIS) also publishes a series on*

<sup>4</sup> Using the 1994 HICES data rather than the LFS, however, yields a significantly higher unemployment rate for 1994 of 11.9 percent. Both the LFS and HICES rates are calculated using Turkey's standard definition of unemployment, which treats an individual as employed if he/she has worked at least 1 hour during the previous week. While this is the same definition as used in Mexico, it is a much softer interpretation of employment than one usually sees in the OECD (which requires that an individual work at least 15 hours per week to be considered employed).

underemployment, which attempts to measure this other dimension of labor market “slack”. Both series are plotted in Figure 1.

6. *Turkey’s unemployment problem starts to look worse if one considers that it is primarily an urban phenomenon:* in rural areas, where the bulk of employment is in agriculture, and much of it in the form of unpaid family work, it is hard to talk about unemployment. And in fact, measured rural unemployment is extremely low (under 3% in 1998). However, when one looks at the aggregate unemployment series, the denominator of the unemployment rate (the total labor force) does include these agriculture workers. What happens if one looks only at the urban labor market? Then, as shown in Figure 1, unemployment rates look much worse. Put together with the evidence presented in Table 1, *these trends suggest that Turkey faces a problem in creating enough jobs to fully employ its labor resources.*

7. *Why is Turkey not succeeding at generating sufficient jobs for its growing workforce?* There are two potential explanations, not necessarily competing, but with different implications for policy. One is that *the economy is simply not growing sufficiently* to generate jobs for a fast-expanding population. The second is that *the economy is growing enough, but somehow this growth is not sufficiently labor-intensive*—or in other words, this growth does not generate enough jobs. The former explanation would highlight barriers to growth as the main policy problem. The second would suggest looking at constraints to labor demand, and biases in the pattern of growth. We explore both alternatives in some detail below, and conclude that both have played a role in determining Turkey’s lackluster employment performance.

8. Before doing this, however, it is worth examining *potential measurement problems*. In an economy as complex as Turkey’s, with a large agricultural sector and informal economy, we need to ascertain that we are actually capturing total employment, and not missing some crucial parts. To explore this, Table 2 presents employment and labor force figures for the 1987-97 period from the two most accurate sources of data, the semi-annual Labor Force Surveys (LFS), which started in 1988, and the Household Income and Consumption Expenditure Surveys (HICES), which were carried out in 1987 and 1994.<sup>5</sup> Both are household-based surveys, and should be able to capture informal employment, self-employment and very small-scale activities (unlike, for example, establishment-based surveys which tend to sample only establishments above a certain size). We can then compare these figures to those obtained from other sources.

9. Table 2 shows that, as suggested above, the growth of the working-age population has outpaced that of employment—by over one and a half percentage points per year. According to the LFS data, *between 1989 and 1997 (the years for which comparable survey-based labor force and employment data are available) the working age population grew at over 3% per annum, but employment growth averaged only between 1.5-1.7% per year.* We get a similar, albeit a somewhat bleaker picture, if we look at the 1987 and 1994 HICES: according to these detailed and extensive surveys, population growth during that period was several times higher than employment growth. This result from the HICES still holds even if we compare only the first quarter of 1987 to the first quarter of 1994 (prior to the April 1994 devaluation and the ensuing crisis).

10. How good are the survey-based estimates? Our impression is that they are quite accurate: comparing either the LFS or the HICES figures to those from the social security registry, for

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<sup>5</sup> We did not use the results of the 1988 Labor Force Survey because comparisons with posterior years indicated that there were some start-up (learning) problems with the Survey in the first year. This is normal, and is usually corrected as interviewers gain in experience. For this reason, and to avoid measurement biases, we begin using the survey in 1989.

example, clearly reveals that the survey data are much better at capturing the informal sector. Comparison with establishment-based figures (which exist only for some specific sectors of the economy) also indicate that the household-based surveys are far superior in measuring true employment conditions. In textiles, for example, the establishment-based surveys yield a total employment figure of nearly 500,000 workers (including casual and non-wage employees) in 1994; for that same year, the HICES shows comparable employment in textiles of over one million workers! The interesting fact is that even though the survey data appear to accurately capture informal employment that may be missed in other data sources, they *still present a worrisome picture on the employment front.*

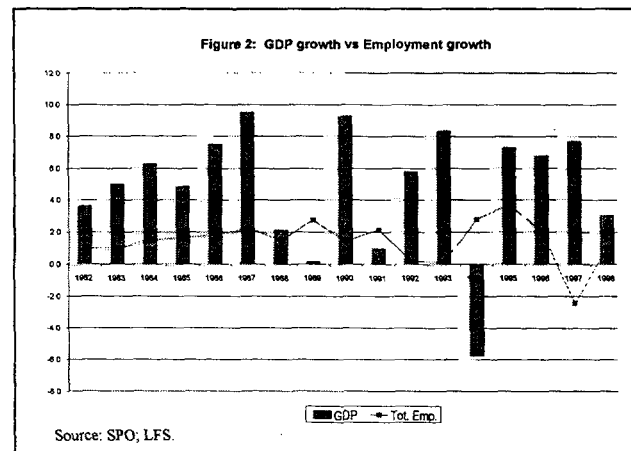
**Table 2. Employment, Labor Force and Working-Age Population, 1987-97**

	1987	1989	1990	1994	1997	%Chg 87-94	%Chg. 89-97	Annual Growth 1989-97
<b>Working-Age Population</b>								
Population 12 and over	37,994	38,026	39,296	44,845	46,880	+18.0%	+23.3%	3.3%
Population 15-64	31,635	31,805	32,823	36,801	39,269	+16.3%	+23.5%	3.4%
<b>Employment</b>								
<b>Pop 12 +</b>								
Labor Force Survey		19,048	19,322	20,356	21,008		+10.3%	1.5%
HICES (1987, 1994)	21,175			22,444		+6.0%		
<b>Pop 15-64</b>								
Labor Force Survey		17,691	18,030	19,065	19,797		+11.9%	1.7%
HICES (1987, 1994)	19,393			20,737		+6.9%		
<b>Labor Force</b>								
<b>Pop 12 +</b>								
Labor Force Survey		20,902	21,046	22,158	22,448		+7.4%	1.1%
HICES (1987, 1994)	22,018			24,927		+13.2%		
<b>Pop 15-64</b>								
Labor Force Survey		19,388	19,635	20,807	21,189		+9.3%	1.3%
HICES (1987, 1994)	19,880			23,202		+16.7%		
<b>Employment Other Sources</b>								
SPO/Yavan, 1995	18268	18541	19048	20357	21008	+11.4%	+13.3%	1.9%
MOL registered employ.	3,268	3,564	3,563	3,815	4,051	+16.7%	+13.7%	2.0%

**1.2 Has Growth Been Too Low?**

11. Despite its high inflation and relatively volatile macroeconomic situation, Turkey has been able to achieve respectable growth rates for the last two decades. Between 1981 and 1997, GDP grew at an average of 4.5% per year. This was slower than during the 1960s and early 70s, but still an impressive achievement when compared to the poor performance of other middle-income countries during this period. However, growth has been very volatile, and has not been sustained for more than three or four years in a row (Figure 2). More importantly from the point of view of its impact on living standards, Turkey's high growth rates have not translated into equally rapid employment growth. Between 1981 and 1997, total employment grew by only 1.5% per year (Table 3).

12. *How can we assess whether Turkey's growth performance has been good enough?* And specifically, whether it has been good enough to absorb Turkey's fast-growing potential workforce, and to put Turkey on path that converges to the more advanced OECD countries? *One possibility* is to compare its growth performance to that of some successful country examples of "catching-up" with the OECD.





13. Table 4 compares Turkey's growth performance to that of two such "successful" development cases: Spain and Korea. For Spain, we consider two comparison periods: the growth "spurt" between 1964 and 1974, when its level of income was more comparable to Turkey's today; and the full 1964-90 period which includes the politically and economically more turbulent late-70s and 80s. In the case of Korea, we also distinguish two periods: 1965-80, during which Korea moved into the realm of higher middle income countries; and 1980-89, during which it continued to converge to OECD income levels.

**Table 3. Growth in Output and Employment (%), 1981-1997**

	Average GDP growth				Average Employment Growth			
	Agriculture	Industry	Services	Total	Agriculture	Industry	Services	Total
1981-87	1.3	8.8	4.9	5.2	-0.3	2.9	3.8	1.5
1988-93	1.8	5.4	4.2	4.1	0.5	1.6	2.5	1.4
1994-97	0.8	4.6	4.2	3.8	0.0	3.9	2.5	1.5
1981-97	1.4	6.5	4.4	4.5	0.1	2.7	3.0	1.5

Source: SPO; SIS.

14. Table 4 shows that average annual GDP growth in Turkey during the 1981-97 period was slower than that experienced by Spain during its "growth" decade; but quite comparable to Spain's performance during the full 1964-90 period. What is different is that Turkey started at a lower income level, and hence has further to go to "catch up" with the rest of the OECD. In this sense, it cannot afford to let growth slow down. The contrast with Korea is more striking: annual GDP growth in Korea during its peak growth period was twice that observed for Turkey. Table 4 also presents some simple comparisons of growth of value added per worker. The table shows that labor productivity grew more slowly in Turkey than in Spain or Korea, particularly in industry and agriculture. Weaker productivity performance has been reflected in a lower ability to sustain real wage increases for workers, as illustrated by the comparison of changes in real earnings in manufacturing.

**Table 4. Turkey's Growth Performance, 1981-97: Comparisons with Spain and Korea**

Avg. annual growth rate (%):	Turkey, 1981-1997	Spain, 1964-74	Spain, 1964-90	Korea, 1965-80	Korea, 1980-1989
<i>Total GDP:</i>	4.5	6.4	4.0	9.9	9.7
Agriculture	1.4	2.5	1.7	3.0	3.3
Industry	6.5	9.1	4.8	18.7	13.1
Services	4.4	5.4	3.8	9.6	9.1
<i>Value added per worker:</i>					
Agriculture	1.3	8.4	14.0	0.5	19.0
Industry	3.8	8.7	7.7	16.6	16.3
Services	1.4	2.7	2.1	11.8	12.5
<i>Real wages in manufacturing:</i>	1.6	8.8	7.6	10 <sup>a</sup>	5.9 <sup>b</sup>
<i>Memo (e.o.p.):</i>					
Share of agriculture (%)					
in GDP	14.6	6.4	5.1	15	10
in Employment	45.1	24.9	11.7	37	18
Wage Employment as % of total	33.0	68.0	74.7	35.6	58.7

Source: WDR, several years; Turkey: SPO, LFS. Spain: Instituto Nacional de Estadística. <sup>a</sup> 1970-1980; <sup>b</sup> 1980-1988.

15. In terms of overall economic structure, Turkey in 1997 looks somewhat like Korea in 1980, with an agriculture sector that still accounts for over 40 percent of total employment and about 15 percent of GDP. The share of wage employment in total employment is also similar.

The fact that by 1989 Korea looked very different, with an economic structure much closer to that of Spain, suggests a clear path for Turkey to follow if it is to converge quickly to the richer OECD economies. But this is a path that will require growth on the order of 7-10 percent per annum.

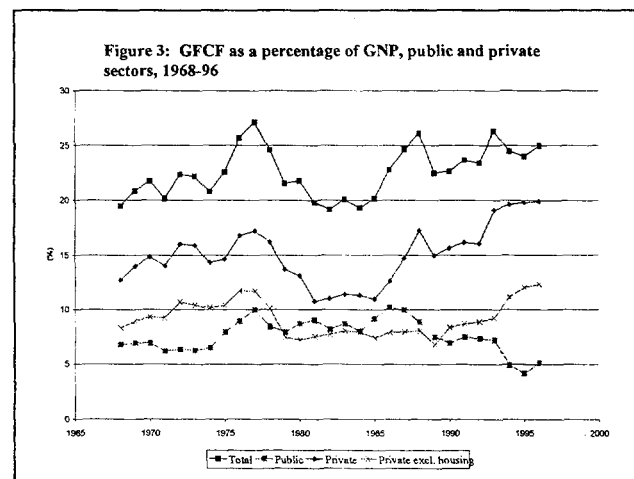
16. A second way to assess whether GDP growth has been sufficiently high in Turkey over the 1981-97 period is to look at the evolution of *output per person of working age*. To see why, consider the following simple exercise: assume that two of Turkey's key policy objectives are: (i) to employ all those who are able and willing to work; and (ii) to maximize the product of their labor, and hence their wage. And assume that policymakers care about both objectives: i.e. employing a large fraction of the working-age population but only in low productivity (and hence low wage) activities is not desirable; and neither is achieving a high output per worker, but only for a small fraction of the potential workforce. Given these assumptions, the policymaker will try to maximize output per person (of working age). Leaving distributional issues aside, this is the same as maximizing the slice of output that corresponds to each individual than can (potentially) work. And it can be expressed as the product of output per employed person and the employment rate:

$$\frac{\text{Output}}{\text{Population}} = \frac{\text{Output}}{\text{Employment}} \times \frac{\text{Employment}}{\text{Population}}$$

17. In Turkey's case, with GDP averaging growth of 4.5% per year and working-age population growing at 3% per year, the scope for sustained increases in output per potential worker was limited. During the 1981-97 period, output per person grew on average by only 1.5% per year. This, in turn, broke down into annual productivity growth of about 3%, and a decline in the employment rate of some 1.5% per year. *Had Turkey achieved higher overall GDP growth rates, it would have been able to sustain higher increases in output per worker, and/or employ a higher proportion of its potential workforce.*

18. What kept Turkey from growing faster during the 1980s and 1990s? A full analysis of the dynamics of economic growth in Turkey is clearly beyond the scope of this study, and we will not attempt it here. However, we can consider several potential hypotheses, and point to questions to be pursued further in follow-up work. We begin by briefly examining *the role of labor force growth, human capital and physical capital accumulation.*

19. Between 1981 and 1997, Turkey's potential workforce, as measured by working-age population, grew very quickly. However, because of declining labor force participation rates, the growth in the actual labor force was much lower (on the order of 1.3% per year). Nevertheless *the demographic transition favored faster, not slower, growth* (Tunali, 1997). Moreover, during the period, there was a *significant improvement in the educational attainment of the labor force*, with mean years of schooling increasing from 4.2 years in 1980 to 5.5 years by 1994.<sup>6</sup> The percentage of the labor force with at least primary education increased from 47.6 percent in 1980 to about



<sup>6</sup> This was the last year for which we were able to calculate mean years of schooling for the *labor force* (aged 12 and over), using the 1994 HICES. For the 1980 figures see Tansel and Gungor.

56 percent in 1994. And the proportion of the labor force with at least secondary education increased from about 16 percent in 1980 to 24.7 percent in 1994 (although it remains below the norm for middle-income countries). All of these factors should have worked for growth, not against it.

20. *Low investment rates, and the consequent slow rate of accumulation of physical capital, probably represented a much more serious constraint to growth.* Gross fixed capital formation as a percent of GNP had increased steadily until 1977, but then dropped sharply in the early 1980s (partly as a result of the limited availability of foreign exchange). The investment rate remained around 20% of GNP until the mid-80s, and has since recovered only very slowly (Figure 3, based on SPO data). While overall investment levels have remained roughly constant, there has been a marked change in the composition of investment, with public investment declining, and the share of private investment increasing. However, the expansion of private investment since 1985 has been driven primarily by an investment boom in the housing sector; *private investment outside of housing has remained stagnant at 10-12% of GNP.*

21. Unlike in the East Asian success stories, Turkey's export boom in the 1980s and 1990s was *not* linked to an increase in investment, but relied rather on increased capacity utilization. However, even after the exhaustion of excess capacity towards the end of the 1980s, investment performance remained weak (Senses, 1996). And despite manufacturing's essential role in the expansion of exports during the 1980s and 1990s, private GFCF in manufacturing has remained very low: it accounted for less than 4% of GNP during the 1980s and increased only slightly in the 1990s. According to several Turkish researchers, most notably Celasun (1994), investment and the reallocation of capital towards manufacturing were hindered by high real interest rates and high inflation—both, in turn, the product of unsustainably high public sector borrowing requirements. *In this regard, there is evidence of a crowding out of private investment by public borrowing.*

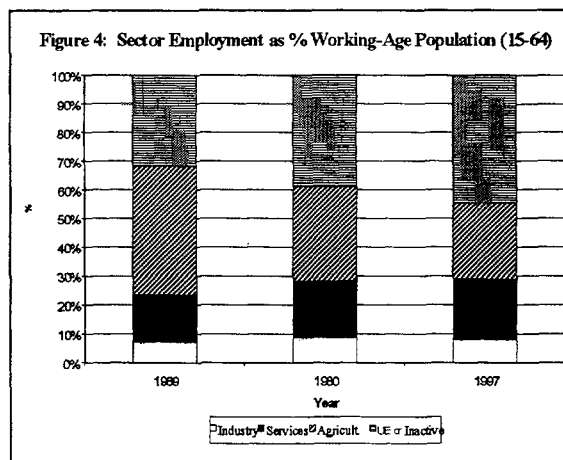
22. *The role of productivity growth.* Beyond the impact of accumulation, the other big determinant of a country's growth path is the behavior of factor productivity. Unfortunately, we do not have evidence on the evolution of total factor productivity in Turkey during the 1981-97 period. However, some insights can be gleaned from looking at labor productivity. As shown in Table 4, *annual growth in value added per worker was much lower in Turkey than in either Korea or Spain during the comparison periods.* The differences are very marked for industry where Turkey's annual productivity growth of 4 percent, while respectable, is still only half of that seen in Spain, and a quarter of that experienced by Korea. The differences are also large in agriculture—although it is notable that during the 1965-80 period, when it most resembled Turkey in economic structure, Korea's agricultural productivity growth rate was also very low. This may reflect a natural time path, which requires that the high-productivity sectors absorb a sufficiently large amount of employment from agriculture, before the latter can sustain a significant jump in its rate of productivity growth. Without drawing any strong conclusions, these trends suggest that Turkey may have been less successful in increasing efficiency and allocating existing resources to high-productivity activities than either Spain or Korea were during their high-growth periods. This, in turn, suggests that there may be barriers to inter-sectoral mobility or other constraints to labor demand in high-productivity sectors that are holding back this process.

### ***1.3 Or was it Constraints on Labor Demand that Mattered?***

23. The above section suggests that overall GDP growth in Turkey was perhaps not high enough to fully absorb its rapidly-growing labor resources into the high productivity sectors, at growing wages. However, given a certain level of (fairly respectable) growth, could labor

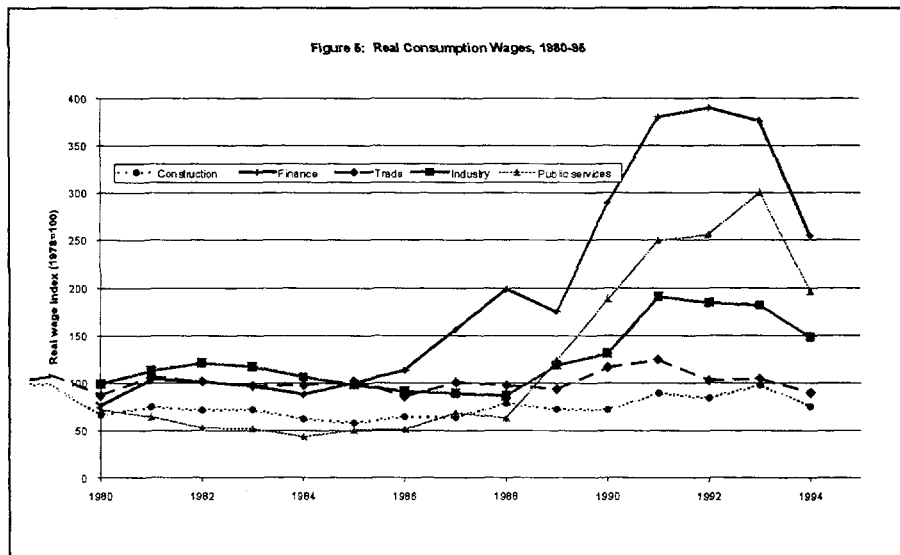
absorption have been greater? In other words, could growth have been more “labor-intensive”? And if so, what were the constraints to labor demand?

24. As shown above, both industry and services experienced non-negligible output growth during the 1981-97 period. However, the distribution of growth into employment gains versus productivity gains was different in both sectors: industry experienced higher productivity growth, and proportionately less growth in employment; while services (incl. construction) generated more jobs, but with much lower productivity. Productivity growth in services, in fact, averaged just over 1 percent per year for the period—not enough to sustain significant real wage increases for workers employed in that sector.



25. The benefits from rising productivity in industry do not appear to have been widely shared: in 1997, industry employed only 13 percent of the total labor force (the same proportion as in 1980), and only 8 percent of the total working age population (less than in 1980). The share of the labor force employed in services has grown more significantly, from 29% of the labor force in 1980 to 35% in 1997. But as a share of working age population, services have remained fairly constant, at about 20 percent. Figure 4 suggests that neither services nor industry have been able to absorb the net potential labor resources (as measured by the working-age population) that have been released from the agricultural sector. The question is why? Were there any factors—other than overall growth—that may have constrained labor demand in industry and services?

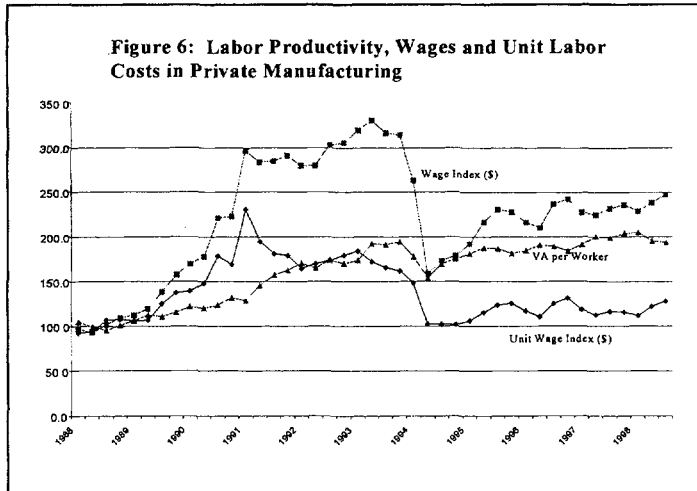
26. Real Wages, Productivity and the Real Exchange Rate. Figure 5 plots real consumption wages for different sectors during the 1980-95 period.<sup>7</sup> The figure shows that sector wages moved closely together during the first half



of the 1980s, but started to diverge after 1987, with wages in finance, government services and industry growing much faster than those in construction or trade. The fast growth of wages in the finance sector may be linked to the liberalization of capital movements in the late-1980s, and the resulting increased demand for workers with those specialized skills. However, the growth in wages for public services and industry seems to have been driven primarily by a succession of populist public wage hikes during the late-80s and early 90s, which were quickly mirrored by the private sector. The impact of these rounds of wage hikes can be seen clearly in Figure 6, which

<sup>7</sup> Unfortunately, we were not able to extend the wage series in a comparable data for the 1995-97 period.

private sector. The impact of these rounds of wage hikes can be seen clearly in Figure 6, which plots labor productivity, dollar wages and unit dollar labor costs in private manufacturing during the 1988-98 period.<sup>8</sup> It shows that even in private manufacturing, wage gains far outstripped productivity gains during the whole period leading up to the currency crisis in 1994. The result was a significant increase in unit labor costs, with a probable negative impact on labor demand.

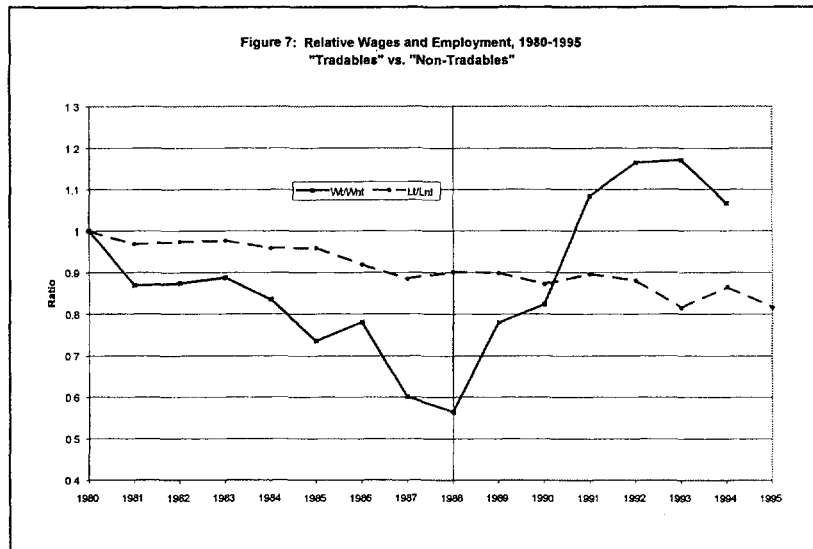


27. These trends point to the emergence during the 1988-94 period of a growing differential between

wages in construction and trade—the two “low productivity” sectors which are most likely to absorb the flow of labor released from agriculture—and wages in the more “formal” industrial and public sectors. On the one hand, this could simply reflect a positive productivity shock in favor of the latter. However, the shift in relative wages occurred at the same time as a modest shift in relative employment *towards* the low wage sectors—which would suggest, instead, that wages in the “formal” sectors were set too high, leading to labor being crowded out into more informal activities in construction and trade. To explore this further, Figure 7 presents the evolution of the wages in what we have called “tradables”, comprising mining, manufacturing, energy and transport; and “non-tradables”, which includes construction and trade. Alternatively, we could have called the two sectors “regular” and “casual”, in reference to the type of contract that tends to dominate the sector.<sup>9</sup> For simplicity, we have left out the civil service and publicly-provided services such as education and health, as well as the finance sector.

28. Figure 7 shows a marked change in the evolution of relative wages starting in 1988: until then, wages had actually been shifting in favor of trade and construction, but this reverses sharply in 1988, in parallel with the appreciation of the real exchange rate.

Surprisingly, shifts in relative employment appear to be unrelated to movements in relative wages (or the real exchange rate), showing instead a relatively constant move towards construction and trade over the full period.



<sup>8</sup> Unit labor costs are defined as the real wage index (in \$) divided by the productivity index. Unit labor costs do not include the non-wage component of total labor costs.

<sup>9</sup> This is documented by the 1994 HICES, which shows that as many as 62% of workers in construction and 44% of those in trade are casual employees, without a written contract, or self-employed (but not employers).

29. *Econometric evidence from panel of manufacturing industries.*<sup>10</sup> The relationship between the real exchange rate, labor costs, and employment can be tested more formally using available data from the Census of Manufacturing Industry and the Annual Survey of Manufactures. Table 5 summarizes some of the key results of estimating a reduced-form labor demand function on pooled 4-digit ISIC data for the 1980-94 period.<sup>11</sup> Detailed results and estimation methodology are presented in Taymaz (1999).

**Table 5. Labor Demand in Manufacturing, 1981-94  
(dependent variable = ln (employment))**

Variable	Model 1		Model 2		Model 3	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
ln(real wage) <sub>i</sub>	-0.096	-2.198 **	-0.063	-1.619 *	-0.166	-4.631 **
ln(price raw materials) <sub>i</sub>	0.015	0.461	-0.007	-0.218	0.115	4.394 **
ln(price energy) <sub>i</sub>	0.087	2.613 **	0.113	3.717 **	0.032	1.119
ln(price capital) <sub>i</sub>	-0.124	-2.528 **	-0.084	-1.865 **	0.019	
Tariff	1.921	7.619 **	0.795	3.218 **	1.275	5.636 **
Ln(real XR)	0.353	3.988 **	0.116	1.416	0.143	1.851 *
CVPR	0.412	2.336 **	0.087	0.546	0.164	1.072
Real interest rate	-0.137	-3.386 **	-0.127	-3.388 **	-0.098	-2.824 **
Inflation	0.015	0.282	-0.068	-1.381	0.038	0.815
Markup <sub>i</sub>	-0.310	-1.663 *	-0.029	-0.177	-0.433	-3.060 **
Markup*lwc <sub>i</sub>	0.040	1.683 *	0.004	0.187	0.033	1.840 *
ln(output) <sub>i</sub>					0.266	21.027 **
ln(employment) <sub>i,-1</sub>			0.410	13.092 **	0.306	11.447 **
ln(electricity cons.) <sub>i,-1</sub>			0.029	2.756 **	0.015	1.566
Fixed effects	yes		yes		yes	
Year effects	yes		yes		yes	
R-squared	0.987		0.989		0.993	
Adj. R-squared	0.984		0.987		0.991	
SE of regression	0.171		0.153		0.125	
# observations	1078		1078		1078	
# sectors	77		77		77	

\*\* (\*) means statistically significant at the 5% (10%) level, two tail test. Sector-specific variables are denoted by the subscript i.

30. The results show that the elasticity of employment with respect to wages is negative but low. The short run point elasticity is -0.096 for the static model (model 1); -0.063 for the dynamic model (model 2); and -0.166 for the constant-output model (model 3). Long-run elasticities are on the order of -0.11 to -0.24. Hence, a 10% rise in real wages is associated with a long-run decline in employment of 1 to 2.5%. Although not large, this effect can be significant when put into the Turkish context of rapidly rising real labor costs: a doubling of real unit labor costs, such as that observed between 1988 and 1993, would have been responsible—other factors held constant—for a decline in manufacturing employment of at least 11%.

31. The coefficients on the trade policy and macro variables are significant in almost all models, and suggest that the macro environment has played an important role in determining the path of employment. Table 6 summarizes the estimated impact of some of these key variables. The findings suggest that high real interest rates and the appreciation of the real exchange rate, which played a key role in attracting capital inflows after the liberalization of capital accounts in the late 1980s, may have had a negative effect on employment performance in manufacturing. They also provide some evidence on the negative impact of rising labor costs.

<sup>10</sup> This section draws heavily from Erol Taymaz, *Trade Liberalization and Employment Generation: The Experience of Turkey in the 1980s*, March, 1999. Background paper available upon request.

<sup>11</sup> Unfortunately, the disaggregated 4-digit data were available only through 1994, so we must limit the econometric analysis to this period.

**Table 6. Job Losses and Job Gains in Turkish Manufacturing: Impact of a 10% Change in Key Policy Variables**

10% change in:	Jobs Lost (-) or Gained (+)	
	Short run	Long run
Tariff rate (-)	-80,000	-134,000
Real XR (-)	-12,000	-20,000
Real int. rate (+)	-13,000	-22,000
Labor cost (+)	-6,300	-11,000

\* Calculated from Table 5, Model 2

not a major factor explaining Turkey's weak employment performance—at least relative to their importance for other countries. *Macroeconomic policies and labor costs seem to be more important.*

#### **1.4 The Dynamics of Productivity Growth in Turkey and the Role of Regional Factors**

33. Economic development involves dramatic changes in the structure of employment and enormous increases in productivity, and hence in the real incomes of workers. Typically, the process of development reflects two major forces: on the one hand, the shift of resources (mainly, capital and labor) from low to high productivity activities; on the other, increasing productivity within activities and sectors, which allow firms to produce more with a given resource endowment. In examples of “virtuous” development cycles, these two forces often combine: rising demand for labor in industry and services interacts with rising productivity in agriculture, to stimulate a massive flow of workers. Malaysia's experience during 1970-90 provides such an example: its impressive productivity performance reflected *both* an expansion of employment in higher-productivity industrial and service sectors, and a sharp increase in agricultural productivity. A breakdown of labor productivity growth in Malaysia and Korea for the 1970-90 period reveals that about 60 percent of the total came from rising productivity within sectors, and the remainder from shifts between sectors.<sup>12</sup>

34. How does Turkey's experience compare to this? Has growth originated primarily from movements of resources across sectors, or from productivity growth within each sector? And how have regional factors—in particular, the existence of very large and entrenched regional differences in income levels and economic structures—affected this natural development process? To answer this question, we use *provincial-level* data on GDP from the national accounts for 1975 through 1995 and examine regional convergence patterns, resource shifts between sectors and the dynamics of productivity growth.<sup>13</sup> By relying on *province-level* data, we get a more detailed picture of the overall growth process than that provided by the aggregate analysis presented in section 1.2 above. We also gain some insight into the role that geographical and regional differences may play in slowing down overall growth.

35. Turkey is a country with deep and entrenched geographical disparities. Income differentials between rich and poor provinces are very large, with GDP per capita in the richest provinces being nearly six times higher than in the poorest. The evidence suggests, moreover, that these differences are getting larger, not smaller over time. The coefficient of variation of provincial per capita output increased from 0.33 in 1975 to 0.44 in 1995. If we decompose this movement into what happens at the top and the bottom of the distribution of provinces, we find

<sup>12</sup> World Bank, *Workers in an Integrating World*; World Development Report, 1995.

<sup>13</sup> This discussion is based on the background paper by Filiztekin (1999) (available upon request). Because of data limitations, the decomposition of sector productivity is limited to 1975-90.

that rich provinces (those in the top quintile, mainly those from Marmara or historically major port cities around the Aegean or the Mediterranean coast) are actually coming closer together, or “converging” to each other. Those at the bottom, on the other hand, are becoming more dispersed. Moreover, while provinces in the middle of the distribution show some mobility over the 20-year period of observation, those at the top or bottom of the distribution do not change very much at all. Of the 13 poorest provinces in 1975, 10 were still in the bottom quintile 20 years later. And of the 13 richest in 1975, 11 remained in the top quintile in 1995.

**Table 7. Productivity Levels and Dispersion by Sector**

	1975		1990	
	Average	C.V.	Average	C.V.
Agriculture	978,847	0.284	1,113,224	0.470
Industry	5,079,535	0.663	6,778,433	0.845
Construction	5,563,940	0.594	4,081,622	0.635
Services	3,718,213	0.317	3,704,499	0.399
Aggregate	1,839,779	0.519	2,447,668	0.591

\* Averages are across provinces and expressed in 1987 TL  
Source: Filiztekin (1999).

36. What lies behind this fairly static structure? Filiztekin (1999) argues that sectoral composition, along with productivity differentials within sectors, can explain much of the story. Not surprisingly, the poorer provinces are those which have larger share of their resources employed in agriculture. But they also have *lower productivity within-sectors* than richer provinces.

Moreover, *productivity differences within sectors have actually increased over time* (Table 7). These patterns are true not only for productivity levels but also for growth rates.

37. More formal analysis shows that, if one controls for certain factors, productivity levels in construction, services and manufacturing are actually converging across provinces over time. In other words, sector-specific productivity in poorer provinces grows faster than in rich ones, so that the former are “catching up”. However, this is *not* true for agriculture, where there is no evidence of convergence across provinces. The implication is straightforward: *it is the sluggish performance of agriculture in poor provinces, in combination with its importance in terms of shares of output and employment, that is keeping those regions poor and slowing down overall growth*. This is consistent, moreover, with the microeconomic evidence found through the analysis of the 1987 and 1994 Household Income and Consumption Expenditure Surveys (HICES): low productivity in agriculture (linked to poor endowments, poor infrastructure and poor access to markets) appears as the major factor behind regional and rural patterns of poverty (see Chapter 3).

38. In other economies, such as Spain or Italy, an initially dualistic structure like that observed in Turkey has actually served to strengthen economic growth: the rapid flow of labor from unproductive sectors/regions to more productive ones fed much of the Spanish growth spurt of the 1960s, and contributed to reducing regional differentials (de la Fuente, 1996). Similarly, Paci and Pigliaru (1997a, 1997b; 1998), in three different studies, reached a similar conclusion for Italy. In Turkey’s case, the story is less clear.

39. Table 7 decomposes productivity growth in Turkey into within-sector productivity growth and gains in productivity due to the flow of labor from one sector to another. The top panel shows that *indeed the main source of productivity growth in Turkey between 1975 and 1990 were changes in sectoral composition*—i.e. the flow of labor from agriculture (in the poor provinces) to other sectors. The average annual percentage change in productivity (when measured at the provincial level) was 2.14%; changes in sectoral composition accounted for about three-quarters of that (1.58%). However, the size of these productivity gains is not that large considering the magnitude of the productivity differentials between sectors, and the amount of potentially “reallocatable” labor that is found in agriculture. Or in other words, going back to the point made



in section 1.3 above, *there appears to be scope for significantly more reallocation of labor from agriculture to the other sectors, than has actually taken place.*

**Table 8. Decomposition of Productivity Growth in Turkey, Spain and Italy, 1975-1990**

<i>Turkey</i>						
	<i>Within</i>	<i>%</i>	<i>Across</i>	<i>%</i>	<i>Total</i>	<i>%</i>
<i>Agriculture</i>	0.27	12.5	-0.52	-24.2	-0.25	-11.7
<i>Industry</i>	0.49	22.7	0.59	27.6	1.08	50.4
<i>Construction</i>	-0.20	-9.3	0.35	16.2	0.15	6.8
<i>Services</i>	0.01	0.3	1.16	54.2	1.16	54.5
<i>Total</i>	0.56	26.2	1.58	73.8	2.14	100.0
<i>Italy</i>						
	<i>Within</i>	<i>%</i>	<i>Across</i>	<i>%</i>	<i>Total</i>	<i>%</i>
<i>Agriculture</i>	0.28	9	-0.29	-10	-0.01	0
<i>Industry</i>	1.36	45	-0.33	-11	1.03	34
<i>Construction</i>	0.04	1	-0.16	-5	-0.12	-4
<i>Services</i>	0.54	18	1.55	52	2.09	70
<i>Total</i>	2.22	74	0.77	26	2.99	100
<i>Spain</i>						
	<i>Within</i>	<i>%</i>	<i>Across</i>	<i>%</i>	<i>Total</i>	<i>%</i>
<i>Agriculture</i>	0.57	14	-0.69	-17	-0.13	-3
<i>Industry</i>	0.91	22	-0.31	-7	0.61	15
<i>Construction</i>	0.44	11	0.06	1	0.50	12
<i>Services</i>	1.37	33	1.74	43	3.12	76
<i>Total</i>	3.29	80	0.81	20	4.10	100

Source: Filiztekin (1999).

40. In the bottom two panels of Table 8, we compare Turkey's experience to that of Italy and Spain during the same period, and using the same kind of *province-level* data for comparability purposes. Total productivity growth in Italy and Spain was higher than in Turkey, even though these countries were already at a higher level of income than Turkey, and thus had less potential for achieving productivity growth purely through the inter-sectoral reallocation of resources. Total average productivity grew by 3% per year in Italy, and by 4.1% in Spain—as compared to an average of 2.1% per year for Turkey. Most of the difference is explained by within-sector productivity growth (column 1). In both Italy and Spain, three quarters of total productivity growth came from *within-sector* productivity growth, whereas in Turkey only one-quarter of total productivity growth was due to this factor. Moreover, within-sector productivity growth was six times higher in Spain, and almost four times higher in Italy, than in Turkey.<sup>14</sup>

41. Throughout the period, industry and services were the leading sectors, with almost equal contributions to aggregate growth (last column). The contribution of industry came from both improvements in productivity level within this sector and increases in labor's share in this sector. The gain in services was entirely due to flow of labor into this sector. Despite employing a growing share of resources, the net contribution of construction was minimal. Not surprisingly,

<sup>14</sup> If we look at the 1960s and 1970s, when Italy and especially Spain were at a comparable level of development as Turkey today, we find the same pattern, *except that the differences in productivity growth between Turkey and the Southern Mediterranean countries are more marked.* Between 1955 and 1975, for example, Spanish productivity grew by almost 8% per annum; 80% of this growth came from within sector growth in productivity, and 20% from sectoral changes.

the net contribution of agriculture was negative which, in combination with the sector productivity trends by provinces outlined above, suggests that stagnant, low-productivity agriculture in the poor provinces is holding back overall growth.

**1.5 The Paradox of Women's Low Labor Force Participation: Choice or Opportunities?**

42. In explaining Turkey's declining employment rate, we have so far focused exclusively on the demand side: first on growth (section 1.2), then on labor demand (section 1.3), then on the regional and sectoral dynamics of growth (section 1.4). We now turn to the *supply side*, and in particular to how women's labor supply choices may have influenced Turkey's declining employment rate.

43. Our starting point is the observation that much of the decline in the employment rate is rooted in *an apparent decline in labor force participation among the working-age population*. Using the LFS data, Table 9 decomposes this decline into its different components. It shows that *it is women dropping out of the labor force (as a result of migration to urban areas) that explains the bulk of the increase in inactivity*. The combination of people staying in school longer and an increase in retirements explain the rest.<sup>15</sup>

44. The movement of women out of the labor force as a result of migration is a striking characteristic of Turkey's labor market, and one that has generated much debate. It has been documented by numerous Turkish academics—most recently by Bulutay (1995), and Tunalı (1997)—and is observed regardless of the data source used (Labor Force Surveys; 1987 and 1994 HICES; or the Censuses of Population).

**Table 9. Decomposition of Changes in Inactivity, 1988-97**

	Million	%
<b>Change in non-active population</b>	+8.16	100
of which:		
increase in students	+2.40	29
increase in retirees	+1.17	14
increase in women OLF	+3.26	40
increase in non-active other	+1.33	16

Note: individuals aged 12 and over. Source: computed from published SIS Labor Force Survey, 1988 and 1996.

45. This decline in women's labor force participation appears linked to both cultural and economic factors (see Box 1). In rural areas, women are predominantly employed as unpaid family workers. But when a family migrates to an urban center, the women tend to drop out of the labor force and stay home. This happens among old and young women alike, and appears more linked to education than to age.<sup>16</sup> Although there are important cultural determinants, an important *economic factor* influencing the decision to stay at home appears to be *the decline in wage-earning opportunities for women in urban areas, especially for those with low education*, which translates into a low and falling opportunity cost of staying home.<sup>17</sup>

46. In contrast, when women with low education face viable economic opportunities, their participation rate is significantly higher, although it remains heavily influenced by cultural factors. For example, in Denizli, which experienced a boom in labor intensive textile

<sup>15</sup> If we were to limit our analysis to prime-aged workers (those aged 25-54), for whom labor force participation rates in Turkey are particularly low compared to the OECD, we would find that women account for almost all of it.

<sup>16</sup> This pattern fits international evidence on women's labor force participation and development, which suggests that in many countries, female LFPR declines first with urbanization, then picks up as the new urban female labor force increases its educational level.

<sup>17</sup> Between 1987 and 1994, as suggested by SIS HICES data, the relative wage of unskilled female workers in urban Turkey relative to the average fell sharply; in contrast, the relative wage for unskilled male workers remained roughly constant.

employment during the 1980s and early 1990s, labor force participation among prime-age women is significantly higher than in other large Turkish cities, and particularly so for pre-marriage age women (Schwartz, 1999). In general, women's LFPR appears to increase with education, but significantly so only for women in their early productive years. For women in their middle productive years (typically married and with children), only a university degree appears to make a difference (Tunali, 1997).

**Box 1: Rural-Urban Migration and Women's Labor Force Participation:  
Evidence from a Study of Gecekondu**

Many Turkish researchers have linked rural-urban migration to the observed secular drop in women's labor force participation. In a recent paper, Tunali (1997) attributes this decline to 'the different conditions that households face in their respective [rural and urban] locations', or more specifically, to the greater difficulty in urban areas of integrating the domains of market and non-market (home) production. These difficulties are explored further by Lazreg (1999) in a qualitative study of the conditions and factors affecting migrant women's labor force participation in gecekondu Ankara, Istanbul, Izmir and Mersin.

Lazreg finds that migrant women in urban gecekondu tend to marry younger, have more children and less education than non-migrant dwellers of gecekondu and the city center. A larger fraction declare themselves as "not working", and among those who work the majority report doing so without social security coverage or health insurance. Low or no education limits their employability outside the home, but many do find employment in domestic or cleaning services; many more are involved in home or piece work. According to Lazreg, migrant women's apparent low labor force participation is largely a definitional issue, reflecting the low value attributed culturally and economically to women's work: "women in the gecekondu do not consider what they do as work, even when their earnings are essential to the survival of the family". A number of factors seem to account for this attitude: much of women's work is irregular, performed at home and sometimes not remunerated; cultural and gender attitudes perceive men as the only legitimate breadwinners; and the traditional division of labor within the family reinforces the notion that women's earnings are less valuable than men's.

Women's participation in the labor force as paid workers increases with education and with the availability of local employment opportunities; decreases with spouse's income and with age (pre-marriage women are likely to work for pay, then shift to home-based work once they get married). Home-based work (self-production or piecework) is common for married women, but is often not reported or counted as work. All in all, Lazreg concludes that "although real, the often invoked cultural restrictions on women's ability to move about and work outside their homes does not resist economic necessity". Where and when there is a need, and there are opportunities, migrant women work for pay, and are as likely to engage in income-earning opportunities as non-migrant women.

Source: Marnia Lazreg, *Rural to Urban Migrant Women's Participation in the Labor Force in Turkey: A Qualitative Analysis*

47. If Turkey is to converge to other OECD economies, fully exploit its human potential and, as is its stated objective, join the European Union, female labor force participation rates can be expected to increase. Simple predictions based on international patterns suggest that labor force participation among Turkish women will increase from about 30% today to 36% by 2025. The bulk of this increase will come from increased participation rates for prime-aged women workers (25-54), whose LFPR is expected to increase from about 34% today to 47% by the year 2025. Participation among younger women is also expected to rise, albeit more slowly. In contrast, participation among older women (those 55 and over) is expected to decline in line with international patterns (see Ercan, 1999).<sup>18</sup>

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<sup>18</sup> Participation rates for women aged 44-54 (who would elsewhere still be considered prime-age) are low relative to other countries. Most likely, this reflects the ease with which women can retire early under the Turkish social security system (after only 20 years of service or at age 50).

48. Absorbing this increase in its female labor force will present a particular challenge for the Turkish labor market. An OECD example of such a dramatic shift in women's labor force participation can be found in Spain's during 1976-1991, when participation rates for prime age women rose from about 30% (similar to Turkey today) to 49%. In Spain, this increase was driven mainly by structural factors that shifted women's earnings potential, and in particular by the increase in women's educational levels and by a drop in fertility rates (Arellano and Bover, 1995). Similar forces are at work in Turkey today. According to Tunali (1997), for example, "*a turnaround in female participation is likely, even imminent*". As in Spain in the 1970s and 80s, there appears to be a strong link between education and participation for women, along with a steady improvement in educational attainment, and dropping fertility rates. All of these suggest that the decline in female labor force participation may have reached its trough, and that a fast increase can be expected in the future. It remains to be seen whether, and how, the Turkish labor market will absorb this influx.

## Chapter 2. Inequality and Income Distribution

*Turkey is a country with large and entrenched inequalities. Income differentials across regions and social groups are wide and persistent. Nevertheless, if we look at households and compare the whole distribution of income between 1987 and 1994 we find that income inequality has remained roughly unchanged. When we look at provinces rather than households, the picture is bleaker: Turkish provinces are diverging in an absolute sense—or in other words, rich areas are getting richer, while poor areas are getting poorer. Unlike in other OECD countries, in Turkey today there is very little redistribution of incomes through taxation or social spending: market outcomes and final outcomes are the same, and these are often highly unequal. Whether existing income disparities increase or fall in the future depends crucially on the ability of Government to redress macroeconomic imbalances, improve its redistributive policies and especially the targeting of its social transfers.*

### 2.1 Assessing the Extent of Inequality

49. *Why do we care about inequality?* Unless a society is highly mobile, the economic distance between the rich and the poor presents an important indicator of differences in values, aspirations, consumption patterns and lifestyles across groups. While international evidence on the impact of inequality on economic development is spotty and inconclusive,<sup>1</sup> there is a growing body of research that assesses the measurable relationship between economic inequality and other important social goals. Medical researchers, for example, have found that high and increasing inequality, within countries, is highly correlated with increasing mortality.<sup>2</sup> Inequality has many correlates: social exclusion, declining investment in human capital in low income areas, declining confidence in the government, increased economic insecurity, and impaired functioning of democracy. Simply put, if the rich and the poor share no common economic and social reality, there will be little or no agreement on common social goals or vehicles to achieve these goals.

50. Inequality also matters because it largely determines how the benefits of growth are to be distributed. If poverty is our concern, and growth remains the main tool to alleviate poverty, it matters very much who receives the benefits of that growth. Growth which accrues mainly to the top of the distribution may do little to improve poverty; and increases in inequality may easily swamp the positive impact of growth. On the contrary, when there are significant improvements in the distribution of income, even slow growth can have a big impact on poverty.

51. How can we assess the level of inequality? It is not possible to collect information on living standards for all members of society. Therefore, to judge how unequally incomes and wealth are distributed, one has to rely on data from household surveys, which collect information on income and consumption from a representative group of households.<sup>3</sup> Whenever possible we supplement this information with other sources, for example, national accounts data which exist at the national and provincial level.

52. There is not a single measure of social distance or inequality which comprehensively describes such a complex phenomenon. One potential and intuitive measure is the relationship between incomes of the rich (persons at 90th percentile of the distribution) and those of the poor (those at the 10th percentile), or decile ratio. It is often helpful to break this decile ratio into its

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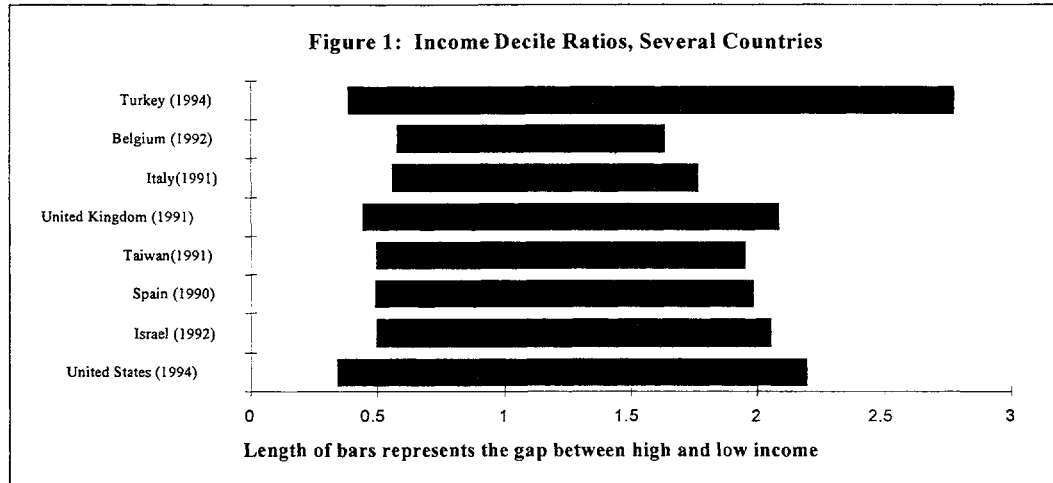
<sup>1</sup> Benabou, R. "Inequality and Growth", *NBER Macroeconomic Annual*, 1997.

<sup>2</sup> As summarized in Smeeding, "American Income Inequality in a Cross-National Perspective", LIS Working Paper 157, 1997.

<sup>3</sup> A more detailed description of the household survey data used can be found in Chapter 3 and the Technical Annex.

bottom and top portions: the distance between the poor and the middle class (or median); and distance between the middle class (median) and the rich. Another way to assess inequality is to compute a single coefficient that gives an integral view of the overall distribution of income or consumption between households in a survey. The higher is the value of such coefficient, the more unequal is the distribution. There are a number of such indices; each sensitive to a particular part of the distribution.<sup>4</sup> Finally, inequality can be interpreted as the inequality in shares of the total wealth (or incomes) that accrue to rich and poor. In this case, the population is typically divided into equal groups with different levels of income or consumption (so called quintiles, if there are 5 groups, or deciles, if they are 10); one then measures the share of total income or consumption accruing to each group.

53. *Is inequality in Turkey high?* Inequality in Turkey is above the median for upper and upper-middle income economies. This is illustrated in Figure 1, which shows decile ratios for annual incomes for a number of countries. The length of the bar for each country represents the decile ratio, while the position of left and right ends of each bar gives the incomes of poor and rich relative to the median.



Note: For all countries disposable incomes after taxes and transfers (excluding imputed rents) divided by square root of family size ( $\Theta=0.5$ ). Source: T. Smeeding "Poverty in Developed Countries: The Evidence from the Luxembourg Income Survey" in *Human Development Papers*, UNDP, 1997. For Turkey: same methodology applied to annual income data for 1994 (from Income Distribution Survey).

54. Figure 1 shows that the *social distance between rich and poor in Turkey is higher than in other countries*, even after we have adjusted for taxes, transfers, and family size. Inequality in Turkey is coming from both the bottom and the top of the distribution. The incomes of the rich in Turkey are more than 7 times higher than the incomes of the poor, compared to an average for the Luxembourg Income Survey database of about 3.5. *Average* income is thus not a good indicator of the well-being of a representative Turk.

55. Broader comparisons of inequality are reported in Table 1. These show that inequality in Turkey is high, and close to the levels observed in some highly polarized economies such as Peru or Russia. Although inequality in Turkey is not yet as high as in some historically unequal Latin American countries, it is higher than what is observed in many of its neighbors. It also exceeds levels of inequality observed in Central European or Mediterranean countries.

<sup>4</sup> The most well known is the Gini index, which is sensitive mostly to the middle of the income distribution.

**Table 1. Gini Coefficients for Income and Consumption per capita**

<i>Income</i>		<i>Consumption expenditures</i>	
Chile (1994)	0.51	Peru (1994)	0.45
Costa Rica (1996)	0.47	Philippines (1994)	0.43
Russia (1995)*	0.47	Ecuador (1994)	0.43
<b>Turkey (1994)</b>	<b>0.45</b>	<b>Turkey (1994)</b>	<b>0.41</b>
Bolivia (1990)	0.42	Tunisia (1990)	0.40
Bulgaria (1995)	0.38	Morocco (1991)	0.39
Italy (1995)*	0.35	Portugal (1990)	0.32

Source: World Development Indicators, 1998 (World Bank); \* LIS. Turkey: SIS, monthly data adjusted for inflation from 1994 HICES.

## 2.2 Understanding the Sources of Inequality

56. There are two ways to study the sources of inequality. The first is to see how each component of income contributes to overall inequality. This contribution will depend on how unequally each source is distributed and on its weight in total income. The second way to understand inequality is to link it with differences between groups of the population.

57. *Income sources and inequality.* A decomposition of inequality by sources of income is presented in Table 2. It shows that labor income is the main driving factor of inequality. Labor income (wages and self-employment income) account for 77% of total income inequality between households in Turkey. Income from self-employment is particularly unequally distributed and dominates as the single largest source of inequality. Capital and property income are both very unequally distributed, but represent only a small share of total incomes.

**Table 2. Decomposition of Income Inequality (Gini Index) by Income Components**

Source of income	Structure of incomes, percent	Concentration coefficients*	Contribution to total inequality, percent
<b>Total labor income</b>	<b>73.7%</b>		<b>76.9%</b>
Wage earnings	31.8%	0.377	28.1%
Additional wages (bonuses etc.)	3.7%	0.573	5.0%
Income from self-employment**	38.1%	0.491	43.8%
<b>Total capital and property income</b>	<b>5.3%</b>		<b>8.0%</b>
Interest and income from securities	2.4%	0.714	3.9%
Rent and other property income	3.0%	0.587	4.1%
<b>Total transfers</b>	<b>13.2%</b>		<b>8.4%</b>
State transfers	7.5%	0.215	3.8%
Transfers from abroad	2.1%	0.545	2.6%
Other transfers	3.6%	0.240	2.0%
<b>Other income (imputed rents)</b>	<b>7.8%</b>	<b>0.367</b>	<b>6.7%</b>
<b>Total household monthly income</b>	<b>100.0%</b>	<b>0.428</b>	<b>100.0%</b>

Note: Monthly incomes drawn from 1994 HICES survey, deflated to average 1994 Central Anatolia prices. \* Coefficient of concentration is a measure of how unequally the income source is distributed relative to total income. Coefficient of concentration for total income equals to Gini index. \*\* Includes entrepreneurial income.

58. The fact that income inequality predominantly reflects differences in labor outcomes and opportunities is not surprising. This is observed in all countries. What is noteworthy is that there is very little redistribution of incomes through either transfers or safety nets.<sup>5</sup> *None of the sources of*

<sup>5</sup> In many countries one normally finds that coefficient of concentration for transfers is negative, i.e. transfers are progressive and act to reduce inequality.

*household income in Turkey contributes towards reducing inequality.* State transfers are the least regressively distributed source of incomes, but the rich still receive a larger share than the poor.<sup>6</sup>

59. How does Turkey differ from what we observe in most of the OECD? Remarkably, *in its pre-transfer (or market-determined) income inequality, Turkey does not differ much from other OECD countries*, showing levels similar to France or Italy (with a Gini coefficient for pre-tax and transfer income of around 0.4); and lower than Great Britain (with a Gini of over 0.5). But in all of these countries inequality is reduced by a progressive safety net and by redistributive taxes. This is not the case in Turkey, where market-driven inequalities are left to determine the shape of the final distribution of income, and hence living standards. Among the OECD countries, only Mexico has a more unequal distribution of income than Turkey, and less redistribution.

60. *Assets, endowments and inequality.* The distribution of incomes is ultimately determined by the distribution of assets (including human capital) and by the rates of return on those assets. To study these factors, we partition the population into subgroups that are generally associated with different asset ownership or returns, such as location, education, occupation. Using these partitions we then decompose the observed level of inequality into a part that reflects inequality between subgroups (or “explained” inequality), and a part that arises from unobservable differences within each subgroup (or “unexplained” inequality).

61. Table 3 reports the results of five such partitions: by employment status, by education, by location, by region, and by a combination of all of the above. Since every partition is only a very rough approximation of asset ownership, we find substantial within-group inequalities in every classification. But the share of inequality that is “explained” by differences in means between groups alone is nevertheless very large for every partition—e.g. *a significant share of total inequality is explained by differences in endowments, geography or employment status*

**Table 3. Share of Income Inequality\* Explained by Differences Between Groups**

Partition	Number of groups	Share of inequality between groups
Region	7	11%
Urban/rural	2	10%
Education of household head	5	22%
Employment of household head**	5	25%
<b>All of the above</b>	<b>340***</b>	<b>46%</b>

\* Annual income data for 1994, from SIS Income Distribution Survey. The measure of inequality is the Theil mean log deviation index per equivalent adult, OECD equivalence scale. \*\* Not employed, regular employee, casual employee, employer, self-employed. \*\*\* Total number of groups is smaller than the possible number of partitions because some of the combinations produce empty cells (for example, no one is an casual worker in rural areas with higher education).

62. Combining all our classifications, we can “explain” close to 50 percent of the overall inequality, which is a high proportion by international standards. Thus, it is possible to predict the level of the living standards of a household by a relatively narrow set of simple characteristics. This, in turn, has substantial implications for targeting of social aid, suggesting that it may be possible to target assistance based on a few observable variables. It also suggests that, as we hypothesized, *inequality is largely tied to endowments and assets, and to opportunities faced in the*

<sup>6</sup> State transfers may still play an important role in preventing certain groups, for example the elderly, from falling into poverty. Table 2 is not incompatible with that important social role. It simply suggests that transfers are not used (or effective) as a redistributive tool per se. There may be good reasons for this being the case.

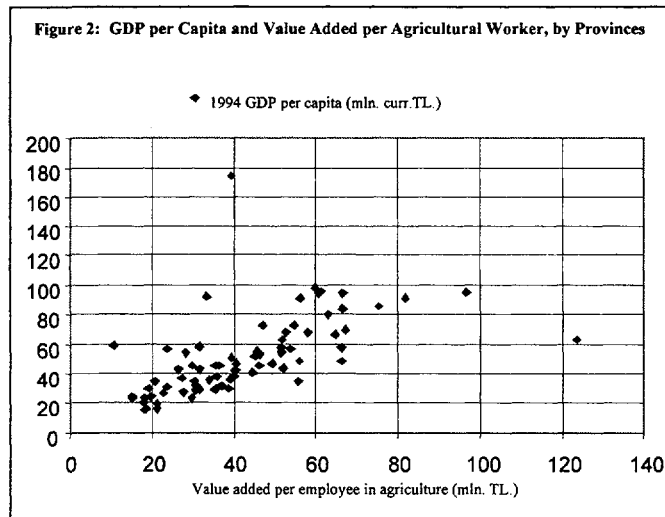


*labor market.* Two critical variables, education and employment status, each explain between a fifth and a quarter of observed inequality.

63. Even though much of inequality can be “explained” in this way, a large fraction of observed income differentials still originate from differences *within* subgroups of the population rather than from inequality *between* groups. In other words, there is still much of inequality that cannot be explained through endowments or other easily observable characteristics, and that reflects the impact of unobservable heterogeneity in abilities, opportunities, discrimination or social barriers. Some of these aspects—for example, differences in opportunities between men and women—are explored in other parts of this Report.

64. *The role of geography and regional factors.* Rural/urban differences are an important correlate of inequality in Turkey. Differences between urban and rural areas alone explain more than 10 percent of the total inequality in the country.<sup>7</sup> This proportion is high for a middle income country, and is reflected in sharp differences in living standards and poverty rates between urban and rural households (see Chapter 3).<sup>8</sup> As discussed in Chapter 1 and in Filiztekin (1999), these differences can be traced to the existence of large and growing productivity differentials between agriculture and the rest of the economy, which are reflected in much lower income earning opportunities for rural households.

65. *Regional factors* are also an important determinant of inequality. According to the 1994 HICES, average household income per capita in the richest region of Turkey is three times the income per capita in the poorest region. Variation of incomes across provinces or districts, finer administrative partitions of the country, are even larger, with the richest district 146 times above the poorest in terms of GDP per capita in 1996.<sup>9</sup> However, once we adjust for inflation and for price differences between regions or geographical areas, these differences are significantly reduced.<sup>10</sup> This means that achieving a certain standard of living costs significantly less in poorer regions than in richer ones (and costs much less in rural areas than in urban ones). It also means that ignoring these price differentials can give a skewed picture of inequality and poverty in Turkey (see Chapter 3).



<sup>7</sup> This proportion is even greater if we look at the inequality *in consumption* and express all values in Central Anatolia prices; the share of urban/rural differential in explaining total inequality reaches 14 percent.

<sup>8</sup> For example, Tsakoglou (1993) finds that 9 percent of expenditure inequality in Greece is explained by differences between urban and rural areas. Anand (1983) found only 8% for Malaysia. Baily (1997) found the largest difference for Eastern Europe in Poland but it was still only 4 percent, while Glewwe (1986) reports 12-14 percent for Sri Lanka.

<sup>9</sup> Data from Akder, H., “Dimensions of Rural Poverty in Turkey”, 1999.

<sup>10</sup> Using HICES of 1994 and expressing all monthly incomes in average Central Anatolia prices reduces the level of inequality in the country; at the same time the share of inter-regional differences falls to only 2 percent of total income inequality.

66. Inequality between regions can be traced to a number of factors. Filiztekin (1999) attributes inter-regional differences in average GDP per capita to differences in sectoral structure and differences in productivity across sectors. Lagging regions are poorer largely because they have a bigger share of their resources employed in agriculture. In addition, Filiztekin (1999) finds large cross-regional differences in productivity *within* the same sector: not only do poor regions have a larger share of their resources engaged in agriculture, but they also exhibit *much lower productivity within agriculture* than richer regions. Figure 2 shows the link between the productivity of labor in agriculture and the level of GDP per capita by provinces. It shows that, to a large extent, the rural economy and agriculture remain the key determinant of living standards in Turkey.

**Table 4. Province Groups According to Land, Labor and Capital**

High mechanization/Low labor intensity		High mechanization/High labor intensity	
Canakkale	Tekirdağ	Sakarya	Balikesir
Edirne	Aksaray	Aydin	Antalya
Bilecik	Cankiri	Bolu	Ystanbul
Kirklareli	Nevşehir	Bursa	Samsun
Amasya	Eskişehir	Yzmir	Kastamonu
Burdur	Upak	Manisa	Tokat
		Muğla	Nigde
		Denzili	Isparta
		Kocaeli	Icel
		Hatay	Hakkari*
Low mechanization/Low labor intensity		Low mechanization/High labor intensity	
Afyon	Konya	Zonguldak*	Erzurum
Corum	Kars	Sinop	Van
Adana	Kayseri	Gumuphane	Muğ
Karaman	Kirşehir	Elazig	Giresun*
Kutahya	Agri	Adiyaman	K.Maraş
Sivas	Diyarbakir	Malatya	Bitlis
Yozgat	Mardin	Gaziantep	Tunceli
Kirikkale	Sanliurfa	Erzincan	Ordu*
Ankara		Bingol*	Batman
		Siirt	Trabzon*
		Sirnak	Rize*
		Artvin	

Note: mechanization measured as tractors per 100 hectares of cultivated land; labor intensity measured as active population in agriculture per 100 hectares of cultivated land. Source: Akder (1999); Graph 1.

67. As shown in Akder (1999), these productivity differences across rural areas are in turn a reflection of differences in endowments (land, labor and capital). Akder correlates capital-land ratios and labor-land ratios, and then classifies provinces into four distinct groups: (a) low mechanization/low labor intensity provinces, engaged primarily in basic extensive agriculture; (b) low mechanization/high labor intensity provinces, characterized by a scarcity of arable land and the lowest agriculture productivity; (c) high mechanization/low labor intensity provinces, which tend to specialize in oil seeds and some tuber crops; and (d) high mechanization/high labor intensity provinces, which are the most productive and grow the bulk of vegetables, fruits, tubers and industrial crops (Table 4). Poor provinces (and poor districts) are disproportionately concentrated in the low mechanization/high labor intensity group, with some poor districts found also in the low mechanization/low labor intensity category. In other words, *the poorer provinces are typically those with the lowest capital to land and land to labor ratios.*<sup>11</sup>

68. *Comparisons over time suggest that inequality between regions is growing.* Applying similar methodologies to the 1987 and 1994 HICES, we find that the share of overall inequality explained

<sup>11</sup> Akder also finds a correlation between poor (low human development) provinces and public infrastructure, as proxied by the availability of asphalt roads. See Chapter 3.

by differences in regional means has grown by 10 percent. Similarly, using provincial-level data on GDP and GDP per capita for the 1975-1995 period Filiztekin (1999) finds that Turkish provinces are in fact diverging in an absolute sense. While richer provinces are converging towards each other, poor provinces are falling further behind. The trend is an evolution towards bimodal distribution with rich provinces becoming richer, and poor provinces getting poorer.<sup>12</sup>

69. *Access to education and inequality.* Table 3 showed that much of inequality in Turkey is linked to differences between education groups. These differences alone explain as much as 22% of total income inequality between households, and reveal the existence of entrenched inequities in access to education in Turkey—in line with those observed in many Latin American countries.<sup>13</sup>

70. Table 5 presents a more detailed decomposition of inequality in annual incomes by education group and employment status. The table shows that the average income for a person with higher education is almost 6 times that of an illiterate adult. It also shows that adults with a higher education are still a relatively small fraction of the total population (only 7%). As is usual with these decompositions, there are very large differences in income within education groups; and these differences tend to increase with the level of education. Hence, individuals with a higher education have the highest average income, but also the highest variance. This reflects also that they have the most diverse set of income earning opportunities. In contrast, individuals with little or no education have the lowest variance in their incomes—or rather, they face less diversity in income-earning opportunities and hence their incomes are closer together.

**Table 5. Detailed Decomposition of Inequality in Annual Income (per equivalent adult), 1994**

Groups	Ratio of group income to average income in Turkey	Ratio of inequality within group to average	Share of population (equivalent adults)	Contribution to total inequality
<i>Education of household head</i>				
Illiterate	0.48	0.53	10%	5%
Literate w/o diploma	0.60	0.58	7%	4%
Primary	0.82	0.72	54%	39%
Secondary*	1.29	0.99	22%	22%
Higher	2.71	1.24	7%	8%
<i>Between groups</i>	<i>5.7 (high/low)</i>			22%
<b>All</b>	<b>1.00</b>	<b>1.00</b>	<b>100%</b>	
<i>Employment status of household head</i>				
Not employed	0.82	0.94	8%	7%
Regular employee	0.99	0.65	41%	27%
Casual employee	0.52	0.48	11%	5%
Employer	3.57	1.99	6%	11%
Self-employed	0.77	0.70	35%	25%
<i>Between groups</i>	<i>6.8 (high/low)</i>			25%
<b>All</b>	<b>1.00</b>	<b>1.00</b>	<b>100%</b>	

Note: annual income data for 1994, taken from SIS Income Distribution Survey. Measure of inequality is Theil mean log deviation index. \* includes vocational level.

<sup>12</sup> When he includes region-specific dummies and the share of agriculture in total provincial output, Filiztekin finds evidence of conditional convergence of about 1.7% per year: this means that Turkish provinces are converging each to their very different steady states. Simply put: income (GDP per capita) differences across provinces are wide and entrenched, and on their own will not disappear.

<sup>13</sup> According to the World Bank's *Chile: Poverty and Income Distribution* (1998), in 1994 educational disparities explained 26% of total income inequality in Chile. A similar analysis for Eastern Europe, reported in Bailey (1997), gives a share of total inequality explained by education in the much lower range of 12-16 percent.

71. Repeating the same decomposition for 1987 and comparing it to 1994, we find that during those 7 years *the share of inequality explained by differences between education groups has increased*. Income disparities by educational attainment have risen significantly—much as in other middle income countries (such as Argentina, Chile or Mexico). Although the subject is still the focus of much debate, increasing income differentials by education in upper and middle income countries have been attributed, in varying degrees, to the impact of technological change, globalization, trade liberalization and capital flows, which as discussed in Chapter 1 are perceived to be complementary with education and skilled labor.

72. How will these forces play themselves out in the future? On the one hand, the expansion of educational opportunities for younger Turkish cohorts (linked to the extension of compulsory education and to demographic trends) should operate to reduce income differentials between groups. In this sense, it remains as true today as always that education is the great equalizer in market economies. And in this regard, Turkey can reflect positively on the experiences of its Southern Mediterranean neighbors, Spain and Portugal, where increases in education were clearly associated with a sharp decline in income and wage differentials during the 1960s and 1970s (Revenga, 1991). At the same time, to the extent that a large fraction of inequality originates in differences within groups, and to the extent that these differences increase with education, we can expect that a significant amount of inequality will remain. However, as long as educational opportunities expand, future income inequality will reflect differences in returns to similar human capital endowments rather than pre-determined differences in opportunities arising from unequal access to education. Moreover, if as growing international evidence suggests, Turkey and other middle income countries face a worldwide shift in demand towards skilled labor, failure to increase the educational attainment of its population will not only reduce Turkey's comparative advantage as a world exporter, but will also lead to very significant increases in inequality, as the top of the distribution is stretched out by growing demand for skills.

73. *Employment and inequality*. Although education is an important determinant of inequality, the labor market status of the household head is even more significant, explaining as much as 25 percent of total observed income inequality (Table 5). If we decompose inequality by occupation groups, we find the largest inequality *within* group for households with an unemployed or inactive head, and for households headed by employers. For the former, as in many countries, high within-group inequality can be explained by the very different situations of relatively well-off pensioners and the unemployed with no sources of income, both of which are found in this group. In the case of employers, high within-group inequality results from lumping together small entrepreneurs and large capitalists.

74. Although both of these groups exhibit the largest within-group inequality, they represent a relatively small fraction of the population, and hence are only secondary contributors to overall inequality in Turkey. The largest contributor to overall inequality are regular wage employees (which also comprise the largest fraction of the population). Inequality between wage earners is therefore a key factor of inequality.

75. The decomposition of inequality across *sectors of employment* (agriculture, industry etc.) accounts only for 10 percent of total income inequality, playing a much smaller role than labor market status per se. It suggests that there are large differences in incomes within sectors, and that it is specific characteristics of employers and employees rather than broad sectoral factors that are the key to determining individual earnings.

### 2.3 Trends in Inequality

76. It is not easy to assess changes in inequality over time. Since one has to rely on household data any differences in surveys design or sampling can make comparisons of inequality indices unreliable. In addition, in a high inflation economy all comparisons require deflation of nominal values and thus are sensitive to how accurately the inflation is measured.

77. *Has income inequality increased between 1987 and 1994?* The comparison of the 1987 and 1994 HICES reveals that income inequality for household *monetary income* increased significantly during this period.<sup>14</sup> Deflating all monthly incomes to average 1987 prices shows that the Gini coefficient for household *money incomes* increased from 0.411 to 0.453—almost a 10% increase in 7 years.<sup>15</sup> However, inequality in *total incomes* increased much less.<sup>16</sup> The Gini coefficient for total income did not change between 1987 and 1994, and quintile shares remained surprisingly stable (Table 6). All in all, the overall income distribution appears to have remained broadly unchanged despite a highly volatile macroeconomic environment.

78. More careful study, however, shows a slightly more complex picture: specific distributional measures which give greater weight to the ends of the distribution (the coefficient of variation and mean log deviation) show a “stretching” of the distribution. And there are some other signs of growing polarization in incomes, namely an increase in the decile ratio, with inequality increasing both at the bottom (the P10/50 ratio has dropped from .42 to .40), and at the top. To the extent that the Gini gives greater weight to what happens in the middle of the distribution, it fails to pick up these trends.

**Table 6. Changes in the Distribution of Total Income: Quintiles Shares and Summary Statistics**

	<i>Households</i> <i>Individuals, per capita</i>		<i>Households</i> <i>Individuals, per capita</i>	
	1987		1994	
First quintile (20% poorest)	5.3%	4.9%	5.4%	4.8%
Second quintile	9.7%	9.0%	9.7%	8.9%
Third Quintile	14.1%	13.4%	14.1%	13.4%
Fourth quintile	21.1%	20.1%	20.6%	20.2%
Fifth Quintile (20% richest)	49.8%	52.7%	50.1%	52.7%
Coefficient of variation*	1.25	1.39	1.78	1.85
Gini coefficient	0.44	0.47	0.44	0.47
Theil entropy measure**	0.38	0.44	0.42	0.49
Theil mean log deviation***	0.33	0.38	0.34	0.39

Note: all values are based on monthly records, deflated using regional CPI to average 1987 prices. From 1987 and 1994 HICES.

\* Unlike Gini, which reflects the inequality in the middle this measure of inequality is sensitive to the inequality between the rich.

\*\* Unlike Gini, which reflects the inequality in the middle this measure of inequality is sensitive to the entire spectrum of incomes.

\*\*\* This measure of inequality is sensitive to the inequality between the poorest.

<sup>14</sup> Unfortunately, consumption data from 1987 and 1994 surveys are not directly comparable, therefore we cannot say much about changes in consumption inequality.

<sup>15</sup> At the time of 1987 survey, the Gini index for total household nominal incomes was 0.437. Using the same definition of income (unadjusted for inflation and price differences, monthly data) in 1994 yields a Gini of 0.448. These two numbers, though often cited together, are not directly comparable, as the level and monthly variability of inflation was very different within the two years.

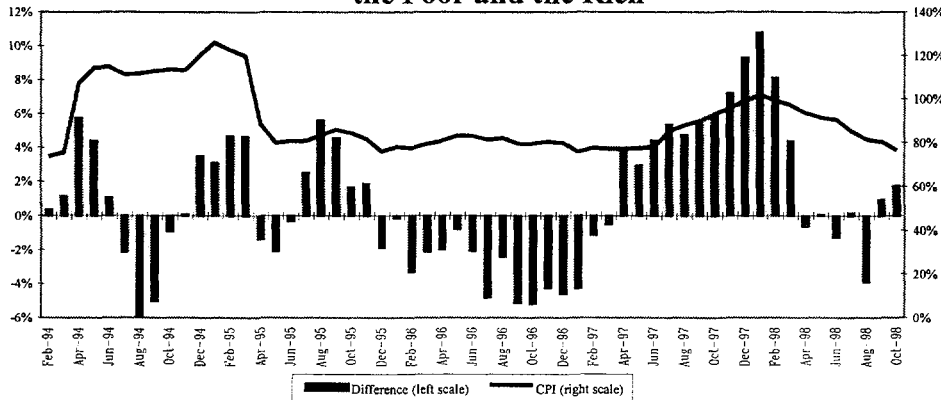
<sup>16</sup> Between 1994 and 1987 the increase in inequality in money incomes was partly arrested by a countervailing effect from in-kind components of income.

79. *What factors have driven these changes?* As discussed above, *money incomes* do appear to have become more unequal between 1987 and 1994. This can be traced to the impact of macroeconomic imbalances and structural changes in the economy. *Inflation* in particular is likely to have had a significant distributional impact by affecting both within-wage inequality, and relative factor incomes. The link between inflation and inequality is explored by He (1999), who finds that inflation did indeed favor those households with greater access to financial and interest income over those households dependent on wages and transfers. On the expenditure side, inflation also generated inequality, as the prices of goods that are most important for the poor actually rose faster than other prices, undermining the purchasing power of the poor faster than of the rich (Box 1).

**Box 1: Inflation and the Distribution of Income**

In a recent paper, He (1999) investigates the extent of both income and expenditure effects of inflation on different income classes in Turkey. He finds that *poor households were more affected by accelerating inflation than rich households*, but not in a systematic or persistent way. When the general inflation rate was increasing, the poorest quintile's inflation rate was higher than the richest quintile's inflation rate, but when the general inflation rate was fairly stable, the richest quintile's inflation rate was higher than the poorest quintile's inflation.

**Difference in 12-Month Inflation Rates between the Poor and the Rich**



The paper also shows that within-region differences in inflation rates between the poor and the rich were much smaller than differences in the general inflation rates between regions. In 1994, the poorest quintile of households in Central Anatolia experienced an inflation rate which was 12 percentage points higher than the poorest quintile in the Aegean. In comparison, the largest within-region differences in inflation between poor and rich was only 5 percentage points in the Mediterranean region.

On the income side, the effects of inflation are less clear. Changes in the relative shares of wages and profits in national income indicate that the income distribution was becoming more equalized in the late 1980s and early 1990s. The sharp drop of the wage share in national income in 1994 clearly worsened the distribution. The richest quintile was the biggest winner, since they relied less heavily on wage income and much more on interest income. Moreover, effective real interest rates rose sharply in 1994. On the other hand, the poorest quintile was not necessarily hardest hit from an income effect point of view: their reliance on both wages and transfer income was less than the middle classes.

Source: Dong He, *Turkey: Inflation and the Distribution of Income*, 1999.

80. However, both our analysis of month to month differences in the 1994 HICES and He's (1999) own work, suggest that the impact of inflation on the poor is transitory. Non-anticipated jumps in inflation or periods of accelerating inflation hurt the poor and worsen the distribution. But

nominal incomes appear to adjust quickly to new *stable* levels of inflation.<sup>17</sup> And during periods of relative stability, the poor tend to gain vis-a-vis the rich. This may help explain why, despite years of high inflation, Turkey's income distribution has not deteriorated as much as in other high-inflation countries (Box 2). Nevertheless, over the long-term, high inflation (even if stable) is bound to have a negative impact on poverty and inequality through its dampening effect on growth.

81. *Despite the importance of inflation, the main driver of changes in inequality between 1987 and 1994 was the labor market.* Table 7 decomposes the overall change in inequality in monetary incomes between 1994 and 1987 by sources of income. As we see, changes in *wage income inequality* were the major factor driving the evolution of total household income. The share of wage income in total income increased significantly and its contribution to overall inequality quadrupled. A rising share of interest income was also an important contributor to inequality, as were private transfers. State transfers (primarily pensions) are the *most equally distributed source of income*; but they are falling as a share of household income.

82. Income from self-employment remains an important source of household incomes, reflecting the high share of employment still engaged in agriculture. But since 1987 its share in total income has shrunk considerably, and it has become less unequally distributed than before. Both of these factors have contributed towards *decreasing* overall inequality.

**Table 7. Decomposition of Changes Inequality in Monetary Income Between 1987 and 1994**

	Share of monetary income in 1987	Share of monetary income in 1994	Contribution to inequality in 1987	Contribution to inequality in 1994	Total change in inequality
Wage earnings	26.8%	41.8%	0.042	0.179	+0.136
Income from self-employment**	55.3%	38.2%	0.302	0.199	-0.103
<b>Total labor earnings</b>	<b>82.0%</b>	<b>80.0%</b>	<b>0.344</b>	<b>0.377</b>	<b>+0.033</b>
Interest and securities	2.0%	2.3%	0.014	0.017	+0.003
Rent and property	3.9%	3.0%	0.023	0.018	-0.006
State transfers	9.1%	8.6%	0.017	0.018	+0.001
Transfers from abroad	1.7%	2.2%	0.010	0.013	+0.002
Other transfers	1.2%	3.8%	0.002	0.011	+0.008
<b>Total household income</b>	<b>100%</b>	<b>100%</b>	<b>0.411*</b>	<b>0.453*</b>	<b>+0.042</b>

In 1987 average prices, excluding imputed rent \*Gini coefficient. Source: Calculations using SIS HICES primary data.

\*\* includes profits.

83. It is interesting to place the ongoing shift from self-employment to wage employment (which results from the flow of labor resources from agriculture into other sectors), into this context. Historically, such a shift has been equalizing in most countries, particularly when it has occurred in an undistorted labor market. In the absence of market failures such as discrimination, the wage labor market ensures that similarly productive workers employed in comparable jobs, receive similar pay. As a result, outcomes in the wage labor market are less tied to workers' initial endowments of assets than are outcomes from self-employment. In the case of Turkey, this is reflected in the fact that inequality among the self-employed is even higher than among wage employees (with an own-Gini of 0.53 as opposed to 0.42 for wages), and is less explainable through observable characteristics: less than one-half of the variance in self-employment earnings can be explained through observed characteristics, as opposed to 70% for wages.

<sup>17</sup> This is because in a context of high but stable inflation, indexation mechanisms and *household behavior* (including labor market choices) adjust to try to reduce the volatility and vulnerability of incomes.

84. Hence, in the long term, and despite growing inequality in wage incomes, the move from self-employment (primarily in agriculture but also in urban informal markets) to wage employment should have a strong equalizing effect on the distribution of income in Turkey. On the contrary, efforts to slow these flows would work against this. In this regard, Turkey's sluggish employment wage generation record is again a reason for concern.

**Box 2.: Inflation and Inequality: A Persistent Puzzle**

*Empirical paradox:* there are many countries where, despite high and unstable inflation over long periods of time, the overall distribution of incomes does not change over time. Brazil is a well-documented case of a country with high and unstable inflation, but long-term stability of the distribution. Despite tremendous macroeconomic instability, Brazil's urban income distribution in 1976 and 1996 appear strikingly similar. The Gini coefficient for per capita income hovered just around 0.59 in both years, and poverty incidence was effectively unchanged at 22% (Ferreira and Paes de Barros, 1999). Similarly, Italy was for a long time the country with the worse inflation record in Europe and yet gradually improving income distribution.

*Context:* it is extremely difficult to separate the effect of inflation from other factors. The channels through which macroeconomic factors affect income distribution are intricate. Clearly, changes in the inflation rate reflect a myriad of macroeconomic policies. The most direct impact of inflation on welfare is through taxation of cash balances. The rich are better able to avoid this tax, since typically they have better access to financial instruments that hedge against inflation, while the poor are likely to have a larger share of their portfolios in cash. Second, inflation may have an impact on disposable income flows. If wages and transfer payments are fixed in nominal terms and cannot be readjusted immediately, real incomes will clearly be affected (in the short-run) by unanticipated inflation. If the poor are the main recipients of these incomes, inflation will increase inequality, and disinflation will reduce it. On the other hand, with progressive tax scales defined in nominal terms, inflation pushes higher income earners into higher tax brackets, which leads to less after-tax inequality. Last, but not least, unanticipated inflation leads to a transfer of wealth from creditors to debtors. The overall impact of inflation on the distribution is not clear, and is likely to be specific to the institutions and history of each economy (Easterly and Fisher, 1999).

*Empirical result 1:* inflation rates explain a small fraction of differences in inequality between countries. Only up to 5 percent of the variation in income inequality between countries can be explained by inflation (controlling for other macroeconomic factors). Within this low explanatory power, unexpected inflation has nevertheless a statistically significant positive effect on country's inequality. (Bulir and Gulde, 1995; Easterly and Fisher, 1999).

*Empirical result 2:* the link between inflation and inequality differs between countries. In their seminal paper, Blinder and Esaki (1978) found that the impact of inflation in income distribution is close to zero in the United States. Gustafsson and Johansson (1997), on the other hand, find a negative and significant association between inflation and inequality (i.e. higher inflation leads to lower inequality) for most OECD countries. But, Bulir and Gulde (1995) reported that inflation has worked to increase inequality in Greece, Israel and Russia, but not in other countries in their sample. In Brazil, inequality in earnings has been positively affected by inflation (Cardoso, 1993). The same result holds for the Philippines (Blejer and Guerrero, 1990).

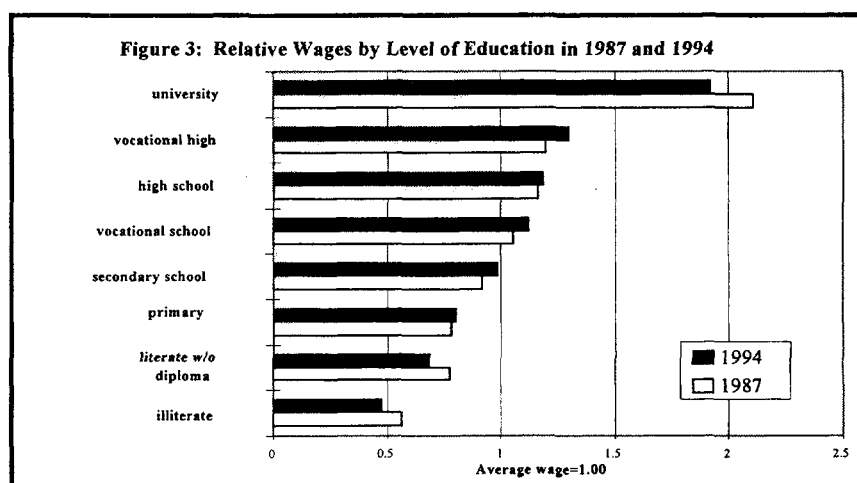
*Conclusion:* In the absence of a conclusive theoretical framework, the analysis of the link between inflation and distribution must rely on empirical studies. However, such studies have found no systematic or robust relationship between inequality and inflation.

**2.4 Wages as a Factor of Inequality**

85. Wage incomes are a key determinant of inequality in Turkey, and are likely to become even more important as the economy continues to modernize and formalize. Thus, to understand better the reasons behind changes in inequality we have to analyze the key determinants of wage earnings, concentrating on working persons, rather than households.



86. *Wage disparities and endowments.* Wage differentials in Turkey largely reflect differences in education, experience, occupational status; type of contract; form of ownership; and conditions in the local labor market. These factors combined together predict over 70% of the observed variance in wages.<sup>18</sup> This is a high proportion by international standards: even in the highly integrated market of the United States, detailed studies of wage differentials find that individual and industry-, occupation, and firm-related factors explain only between 50 and 70 percent of the observed variance.<sup>19</sup> Hence, much of the observed “inequality” in wages in Turkey reflects actual differences in endowments, productivity, or working conditions—in this sense, wage differentials are simply capturing the way the market rewards different worker characteristics.



87. *Are wage premia by education increasing in Turkey?* One of the most striking facts of the 1980s and 1990s in high and middle income countries alike, is the rise in the wage premium for education—usually interpreted as evidence of rising demand for skilled labor, and linked in different degrees to trade, organizational change or technology. Are the same forces at work in Turkey? A preliminary answer can be found in Figure 3, which presents wages by education levels relative to the mean for the 1987 and 1994 HICES. If we exclude university level education, *wage differentials between education groups do appear to have increased*, albeit not dramatically. Thus, rising educational differentials could be one factor contributing to higher wage inequality in Turkey.

88. What is surprising, however, about Figure 3, is that unlike in other OECD and middle-income countries, the wage of university graduates actually appears to have fallen relative to the mean. This need not be inconsistent with rising demand for higher education: it may simply reflect fast growth in the supply of young graduates. However, it is also possible that an aggregate look, such as that presented in Figure 3, fails to capture some of the more subtle forces at work. A more careful analysis of wage differentials by education *and* experience reveals an interesting pattern. Returns to education appear to be much higher for younger cohorts (workers with less than 5 years of experience) than for older cohorts (those with 10 to 25 years of experience). As Table 8 shows, a university graduate with 10 to 25 years of experience earns only 50% more than primary school

<sup>18</sup> We model what would be the inequality in wages if we assume that within each of the groups (be it education, gender ownership, occupation code, location) the wages would be the same for everybody, controlling for individual labor market (potential) experience. We can calculate the hypothetical level of inequality based on this assumption and compare it to actual level of inequality. That is going to be the proportion explained by each factor. Results available on request.

<sup>19</sup> See, for example, World Development Report, 1995.

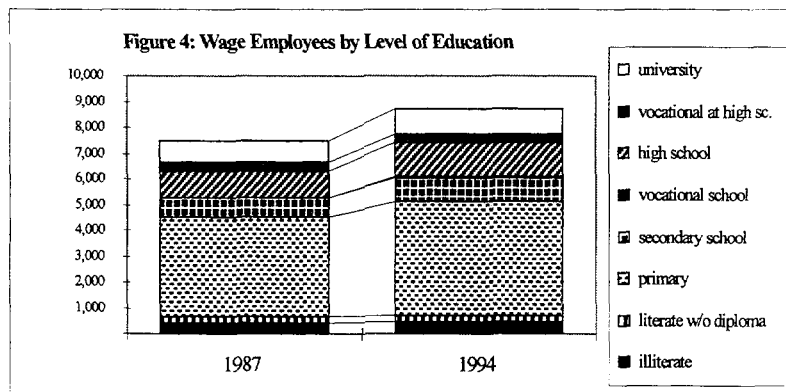
graduate with the same experience; however, a young university graduate with less than 5 years of experience will earn 131% more than a comparable worker with only primary education. This is the same pattern that is observed, for example, in the United States, and suggests that wage differentials by education in Turkey are getting larger.

**Table 8. Wage Differentials by Educational Attainment for Turkish Male Workers, 1994**  
(difference in log monthly earnings)

	Medium to Low	High to Low
Males:		
Less than 5 years experience	.543	1.310
0-9 years of experience	.490	1.152
10-25 years of experience	.219	.492

Low educational attainment = primary or less; Medium educational attainment = secondary/high school/vocational; High educational attainment = higher education/university. Own calculations from 1994 HICES.

89. All in all, the evidence suggests that returns to education have indeed increased since 1987. At a very minimum, there appears to be a premium on education for new entrants into the labor force. The underlying changes in wage differentials, however, are moderate in comparison to what we have seen in the United States, the United Kingdom, Argentina, Mexico or Chile during the same time period. And these changes in wage differentials have not yet been coupled with large shifts in the structure of wage employment by education (Figure 4).



90. Given the relatively modest increase in the wage premium by education and slow changes in the structure of employment, it is not surprising to find that the own Gini coefficient for wages actually increased very little between 1987 and 1994: from 0.395 to 0.418. As with total incomes, the picture is one of *high but stable inequality*.

91. According to Table 7, wages have been the main factor driving the observed increase in money income inequality between 1987 and 1994. But how could this have happened if wages themselves did not become more unequal? This is a statistical puzzle, which can be linked to wages being much more closely correlated with total incomes in 1994 compared to 1987. Simply put: an increasing number of households rely solely on wages as their only source of household income—a development well in line with normal economic growth and modernization patterns. What is peculiar to Turkey, however, is that *this process affects mostly the households in the lower part of the distribution*. In other words: worse paid casual workers are increasingly numerous and tend to rely solely on wages. On the other hand, well-paid professionals have higher income from other

sources, for example, interest incomes and income from securities, than in 1987. They also tend to receive higher non-wage benefits.<sup>20</sup>

### 2.5 The Distributional Impact of Government Transfers

92. In most market economies, the State has a large impact on the overall distribution of welfare through its taxation and expenditure policies. In Turkey, however, the redistributive impact of state taxes and transfers appears to be fairly small. As discussed above, the distribution of income before and after taxes and transfers looks remarkably similar.

93. Although important, the analysis of the incidence of tax policies far exceeds the scope of this study. We note only that in terms of revenue effort, Turkey's overall tax ratios (on the order of 20-23% of GDP) are in line with what is observed for countries at similar income levels. We then limit ourselves to examining the overall incidence of social transfers. The broader impact of Government spending policies is addressed further in Chapter 3, and especially in Chapter 4. Needless to say, Government spending covers a realm that is much broader than transfers, and some of its components, for example education spending, may have a redistributive impact that is not captured here. In this regard, this analysis is clearly partial and limited.

**Table 9. Incidence Analysis: Distribution of State Transfers by Household Income Quintiles in 1994**  
Distribution by Quintiles (% of total income source)

	1	2	3	4	5	Memo: share in total income, percent
	poorest				richest	
State Pensions	4%	9%	16%	25%	47%	5.59%
Tax return	3%	9%	16%	26%	46%	0.69%
Old age income and scholarships	8%	11%	16%	21%	44%	0.68%
In-kind transfers from the State	29%	19%	17%	22%	13%	0.05%

Note: annual income data for 1994, from SIS Income Distribution Survey.

94. Table 9 presents a simple incidence analysis of the main state transfers as reflected in the 1994 HICES.<sup>21</sup> The most important component is pensions, and these are fairly unequally distributed, with the richest 20 percent receiving almost 50 percent of all pensions. Since the pension system is designed primarily as an insurance scheme, without an explicit redistributive aim, this is not surprising. To the extent that pensions are linked to past contributions, and hence to past wages, a larger fraction is bound to accrue to the top of the distribution. This is not at odds with pensions playing an important social role. On the contrary, pensions are key in preventing certain groups of the population, most notably the elderly, from falling into poverty. It is worth noting, however, that many pension recipients are not that old—a result of the absence (until recently) of a minimum retirement age and of a short minimum contribution period. This problem, and recent reforms to correct it, are discussed in more detail in Chapter 4.

95. Because the pension system is designed *de facto* as a pay-as-you-go system, there is also another dimension to its redistributive impact, and that is the inter-generational one. Since current contributions pay for the pensions of current retirees, the system redistributes incomes from the young to the old. Evaluating the impact of this channel for redistribution on overall

<sup>20</sup> A higher reliance on non-wage incomes and non-wage benefits among highly paid workers would, of course, be expected in a high inflation environment. He (1999) explores this issue, but unfortunately cannot draw conclusive results because of data limitations.

<sup>21</sup> Some important transfer programs, such as agricultural subsidies, are aimed at producers rather than households, and thus are not adequately picked up by the household survey. Their impact is analyzed in Chapter 4.

inequality exceeds the scope of this study and what can be done the available data, but is a subject worthy of study on its own.

96. Like pensions, old-age income transfers and scholarships appear to be unequally distributed. In contrast, in-kind transfers from the State clearly favor the poor, but unfortunately are small in terms of their impact on household income.

## Chapter 3. Focusing on the Bottom of the Income Distribution: Who are the Poor?

*Turkey does not face a problem of absolute poverty by the standards of a developing country. However, indicators of living standards and economic opportunity describe a country which despite substantial progress, still faces a steep challenge in bringing the great majority of its poor and economically vulnerable population into the economic mainstream. Progress in reducing poverty, while significant, has been decidedly uneven. The data also reveal sharp disparities within the country, between city and countryside, between prospering regions and impoverished ones. Poverty in Turkey affects mostly specific groups of the population whose ability to participate in economic progress is handicapped. Education, employment and earnings opportunities are key determinants of poverty risks.*

### 3.1 Living Standards and Poverty

97. *Why do we care about poverty?* Unless incomes are equally shared, average indicators do not give a comprehensive picture of living standards in a country. When there are inequalities, the fact that a household in the “middle” enjoys economic security does not preclude the deprivation of basic necessities for those at the bottom. Poverty means denial of opportunities to live a tolerable life. The lives of the poor can be prematurely shortened by ill nutrition and poor health care; made hard, painful or hazardous; deprived of understanding and communication; and robbed of dignity, confidence and self-respect. Widespread poverty means low investment in human capital and poses a heavy burden on society. Poverty was and remains a major policy concern of the developed and well as developing countries.<sup>1</sup> While the problem of poverty is age-old and ever-present, the specific definition of poverty and solutions to address this problem, have changed over time.

98. In the broadest definition, *poverty* is the status of a person who falls short of a level of economic welfare deemed to constitute a reasonable minimum, either in some *absolute sense* or *relative to the standards of a specific society*. In the absolute sense, a household is considered poor if it *consumes* less than the cost of absolute minimum required to provide for nutrition and shelter of its members. Also some households may not be absolutely poor, yet are economically *vulnerable* to poverty, and an economic shock (loss of employment, disability etc.) may push them into absolute deprivation.

99. Both concepts of poverty and vulnerability are defined as basic needs deprivation, resulting from inadequate command over commodities. This deprivation is proxied by income or consumption data obtained from household surveys. A clear advantage of using this approach is the ability to split (decompose) poverty into population sub-groups (regions, economic sectors etc.). Such decompositions can provide a useful perspective on how living standards have evolved over time, and help to reveal which population sub-groups are at higher risk of poverty. However, it has some shortcomings.<sup>2</sup> This conventional practice is often contrasted with an alternative, broader, approach to deprivation.<sup>3</sup> This broader approach suggests that a number of social indicators (access to health and education), in addition to income or expenditure, should be examined when assessing well-being. The Human Development Index (HDI) developed by the

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<sup>1</sup> Countries as diverse as United States (U.S. Bureau of the Census), Canada (HBAI) or India (NSS) have official poverty series.

<sup>2</sup> The first comes from the data, as being generated by surveys. Changes in survey design may make data sets incomparable. By designing sampling in household surveys, large biases are introduced through under-representation of “invisible” or marginal groups (migrants, homeless, domestic servants). Another shortcoming is a concentration on private consumption: public expenditure and public goods also affect the standard of living.

<sup>3</sup> This approach, denoted the “capabilities” approach, was introduced by Amartya Sen, and is described Drèze and Sen (1995, 1997).

UNDP, is an example of this indicator; it is used in this report to check the evidence from survey data.

100. *Background.* Recent studies of poverty in Turkey by Dansuk (1997), Dumanli (1996), Erdogan (1997), Erdogan (1998), Uygur and Kasnakoglu (1998)<sup>4</sup> have relied on household survey data to arrive at the picture of relative and absolute deprivation in Turkey. However, with the exception of Erdogan (1997, 1998), none of these studies have used data for the whole country from both recent household surveys. In a different approach, Akder (1999) uses aggregated geographical data at the level of administrative *districts* to arrive at a “poverty map” of Turkey based on the Human Development Index.<sup>5</sup>

101. *Data.* As our source of data, we use primarily unit record data from two nationwide household surveys, conducted respectively in 1987 and 1994.<sup>6</sup> The 1994 survey is the most recent nationally representative household survey in Turkey. Since 1994 was a crisis year, poverty headcounts and other poverty indicators are likely to overstate what we would find if data for 1998 were available. GDP per capita in 1998 was about 20% higher than in 1994, which should have a clear impact on poverty. In addition to the 1994 data, we use the 1987 survey to show the dynamic nature of the living standards profile, and to analyze the link between living standards and macroeconomic developments. We supplement this primary source with a wealth of demographic, economic and social indicators.

102. *Welfare indicator.* A comprehensive measure of monthly current *consumption* was used as the *primary welfare indicator*. There are three reasons why consumption is preferred over income. First, current consumption is often taken to be a better indicator of the standard of living, since a household’s utility level depends primarily on actual consumption of goods and services. Second, current consumption may also be a best possible approximation to long-term average well-being, because consumption tends to fluctuate much less than incomes. Third, experience shows that data on consumption are more accurately collectable. Respondents in agricultural and informal sectors may have difficulties in recalling correctly all kinds of income they receive?

103. This chapter focuses on living standards of Turkish *households*. To obtain a level of effective consumption by household members we divide current consumption of a household by

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<sup>4</sup> R. Dumanli (1996) Poverty and its dimensions in Turkey, Ankara, SPO (in Turkish), 1996; G. Erdogan (1997) Poverty definitions and poverty in Turkey. Ankara, SIS; G. Erdogan (1998) Poverty in Turkey: Level and Profile. SIS (in Turkish), Ankara, SIS; S. Uygur and Z. Kasanokoglu (1998) Estimation of poverty line: Turkey 1994. Ankara, SIS.

<sup>5</sup> See Akder H., “Dimensions of Rural Poverty in Turkey”. Background paper available upon request.

<sup>6</sup> The Household Income and Consumption Expenditure Survey (HICES) the Household Income Distribution Survey were conducted by the Household Surveys Department of the State Institute of Statistics (SIS) of the Prime Ministry of Turkey in 1994-95. The 1994 survey collected information on consumption and income during the survey month. In addition, in 1995 the same households were visited to collect the information on income for the whole past year (1994); this is what is called the Household Income Distribution Survey. The design and organization of the survey are fully described in SIS publications. Note that the data for both surveys became available for users after cleaning and consistency checks only in mid-1996, and the first official results published by mid 1997. There were no other surveys implemented for the entire country since the 1994 surveys. The 1987 HICES has a similar structure of the instrument and sampling to that of the 1994 HICES; it differs, however, in its coverage of consumption; the 1994 Household Income Distribution Survey does not have a survey from the past that it could be compared to.

<sup>7</sup> The study of poverty by Dansuk (1997) uses 1987 HICES data for consumption expenditures. On the other hand, there is a prevailing tradition to use income rather than consumption for the analysis of living standards in Turkey (studies by Dumanli (1996), Erdogan (1997 and 1998), Uygur and Kasnagolu (1998)). Thus, we also use income as welfare indicator especially when internationally accepted methodology (for example, method recommended by OECD) specifically requires the use of income. However, this approach is not a substitute for using consumption as explained in the Technical Annex.

its effective size. *Effective household size* is obtained using an *economies of scale* adjustment and the number of *equivalent adults* in a household.<sup>8</sup>

104. *Definition of poverty lines: absolute versus relative poverty.* Certain amount of arbitrariness is unavoidable in defining any poverty or economic vulnerability line. Given this, it is clearly dangerous and misleading to focus on a single line. In this analysis we thus use *four* lines. The methodologies developed in the World Bank (and described in Ravallion (1994)) were chosen to set: (a) a *internationally comparable absolute poverty line* (the “One-Dollar-A-Day” per capita line); (b) an *absolute poverty line based on a minimum food basket*; and (c) an *economic vulnerability line*. In addition, (d) a *relative line* was set according to one of the variants of methodology developed by OECD.

105. The “One-Dollar-A-Day” *per capita poverty line* adjusted for purchasing power parity (in 1985 prices)<sup>9</sup> amounted to about 450 thousand TL per month in 1994. For the *absolute poverty line* we use a *minimum food basket* composed of 19 food items which was developed by Turkish academics (Hacettepe University).<sup>10</sup> On average for the full survey period, the monthly cost of this food basket was about TL 1.1 mln. per equivalent adult (36 US dollars at average exchange rate). To the cost of this minimum food basket we add allowances for non-food items, as suggested by actual consumption patterns of the less affluent, to arrive at the *economic vulnerability line*. The vulnerability line averaged for the full survey period was TL 2.1 mln. for a single adult or TL 5.7 mln. for an average Turkish household (about 190 US dollars for household per month).<sup>11</sup> Households whose monthly consumption was below the absolute line or the economic vulnerability line were considered to be *absolutely poor* or *economically vulnerable*

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<sup>8</sup> The implicit assumption here is that all individual members of a household benefit equally (or in a constant proportion, depending on their age and gender, called equivalence scale), from the household's expenditure or income. These coefficients are based on the minimum caloric needs for different demographic groups, and all members are expressed as “equivalent adults”. In addition, there may be economies of scale in consumption, such that the per capita cost of reaching a certain welfare level is lower in large households than in small ones. For example, cost of heating might depend on dwelling characteristics, irrespective of whether the residing family is large or small. But the per capita cost of heating is, of course, lower for the large family. For OECD countries the scale parameter equal to 0.5 is often used, which implies that a family of four has to consume only twice as much as a single person living alone to achieve the same welfare level ( $4^{1/2}=2$ ). Statistical tests for Turkey (reported in the Technical Annex) arrived at an estimate of 0.75; this is the value that we use for living standards profile, unless the OECD scale is specified.

<sup>9</sup> This is not an arbitrary line: making such a conversion would give us almost exactly the poverty line developed by the Planning Commission in India.

<sup>10</sup> As shown in Yemtsov (1999), the basket is not only “generous”, but also quite distinct from the actual consumption patterns of the population. However, given the fact that it is widely accepted among experts in Turkey, we chose to rely on it. Our approach to obtain an estimate of the basket costs, however, differs from the one applied so far in Turkey. In a study by Erdogan (1997) or Dumanli (1996), for example, CPI price statistics have been used to value the cost of the Hacettepe University basket. We consider this information inappropriate for poverty measurement, since data are collected in large cities (provincial centers) and do not capture, to the full extent, the regional price differences. On average, this might be a good indicator of minimum standard, but the regional estimates may be misleading. We use price information collected in the HICES itself (unit values). For 1994, Erdogan has estimated the food poverty line at US\$31 per month per capita; our estimate on average for Turkey is very close, at US\$ 31.4; however, as we notice in para. 126, urban and rural means are very different. Dumanli (1996) uses the same approach but a slightly different composition of the minimum food basket compared to Erdogan or our approach, and arrives at an estimate of the poverty line that is 25 percent higher than the one used in this report.

<sup>11</sup> To set the non-food component of the vulnerability line, we used the approach suggested in Ravallion (1994); (details are given in the Technical Annex). We use expected non-food consumption of those who could barely meet their minimum nutritional requirements to obtain the cost of necessities. Erdogan, Uygur and Kasnakoglu have relied on average non-food expenditures for the entire population. Consequently, as we use the approach that is consistent with the spending patterns of the poorest groups of the population, we have obtained on average US\$11.2 per capita per month for the non-food component of the minimum consumption basket as opposed to US\$13 used by Erdogan (1997). Both lines, poverty line as applied by Erdogan, and vulnerability line of the report, however, are close to the internationally comparable standard in per capita terms of about 24 percent of GDP per capita in 1994. It is also not surprising, given what has been said about levels and methodologies, that we obtain very similar average poverty rates, but somewhat different profiles of poverty.

respectively. Finally, the *relative line* was set at one-half (50%) of the monthly median expenditure per equivalent adult (according to the OECD equivalence scale). Households with monthly *income* less than the corresponding relative line are called *relatively poor*. On average for the full survey period, the relative poverty line amounted to about TL 4 mln. per household (137 US dollars for an average household per month).

**Table 1. Poverty Incidence in Turkey Under Different Methodologies, 1994**

Methodology	Poverty line	Poverty incidence
Absolute poverty, int. standards	One-Dollar-a-Day per capita at 1985 PPP prices	2.5%
Absolute poverty	Local cost of minimum food basket <sup>a</sup>	7.3%
Economic vulnerability	Local cost of basic needs basket (incl. non-food) <sup>a</sup>	36.3%
Relative income poverty	One-half of national median income	15.7%

Source: calculations based on SIS HICES primary data. <sup>a</sup> Consumption per equivalent adult; economies of scale.

### 3.2 Overall Incidence of Poverty in 1994 and Reliability of Poverty Measures

106. *Absolute poverty in Turkey is low based on an international standard.* When we use the internationally comparable “One-Dollar-a-Day” line, we find an extremely low incidence of poverty. Only 2.5 percent of the population lives on less than one dollar a day at purchasing power parity (Table 1). This puts Turkey in the range of countries with small incidence of absolute deprivation (Table 2).

107. Thus, Turkey does not face an acute problem of absolute poverty by the standards of a developing economy.<sup>12</sup> But this does not mean that the problem of deprivation and economic vulnerability does not exist in Turkey. The disadvantage of applying a single international line is that we do not account for price differences within the country; between regions or between rural and urban areas. Consuming the same basket in a village may cost much less than in a capital city. Moreover, tastes and types of diets differ significantly between cultures and countries. Our absolute poverty measure based on the cost of the minimum food basket is better suited for such refined measurements.

**Table 2. International Comparisons of Absolute Poverty in Middle-Income Countries, 1990-1995**

Percentage of people living at less than one dollar a day at purchasing power parity (in 1985 prices), in percent to population

Country	Poverty incidence
Colombia	7.4
Poland	6.8
Malaysia	5.6
Tunisia	3.9
Czech Republic	3.1
Bulgaria	2.6
<b>Turkey</b>	<b>2.5</b>
Jordan	2.5
Morocco	1.1
Hungary	0.7

Source: all countries, except Turkey, World Bank, WDI (1998). Turkey: 1994 HICES. PPP: OECD.

108. Absolute poverty based on a country-specific minimum food basket is also low. Although the minimum food allowances adopted in Turkey are relatively high by international standards, only 5.7% of households and 7.2% of the population can be considered poor in an absolute sense

<sup>12</sup> However, applying a developed country standard shows that Turkey is not yet a high-income economy. Applying the United States’ absolute poverty line (equal to US\$ 14.40 per single adult at PPP) to the 1994 Turkish data, with corresponding equivalence scales to account for family size, shows that under this standard 80 percent of the population would be considered poor.



(total consumption below the cost of the minimum food basket).<sup>13</sup> But unlike absolute poverty, economic vulnerability is a widespread problem. A substantial number of households (31%) and an important fraction of the population (36%) have consumption below the economic vulnerability line.<sup>14</sup>

109. Economic vulnerability, as we have already mentioned, does not represent deprivation of basic needs and should not be compared to poverty incidence in developing countries. Those who are economically vulnerable by the Turkish standard in fact fare better than the “usual” non-poor in less developed economies. But the fact that there are a substantial number of people in Turkey who live close to an acceptable minimum standard, adequate to Turkey’s level of development, is a cause for concern.

110. *Relative poverty.* According to the relative poverty methodology (accepted in most OECD countries), some 14.7% of the Turkish population have total *annual incomes* below the relative poverty line<sup>15</sup> (while 15.7 percent are poor based on *current monthly income*). Comparing the incidence of relative poverty in Turkey with other countries as reported in the Luxembourg Income Study (LIS), we find that Turkey has higher prevalence of relative income poverty than almost any country for which such data are being published (Table 3).

111. For example, relative poverty in the United Kingdom and Germany in 1994 was close to 11 percent; in the Nordic countries it varied between 5 and 8 percent; in Italy it was about 13 percent. The highest incidence of relative poverty among developed countries was observed in US, where it reached almost 18 percent in 1994. Relative poverty is sensitive to how unequally incomes are distributed among households in the lowest part of income range. International comparisons suggest that Turkey is a high inequality country, so it is not surprising that relative poverty is high.

**Table 3. Relative Poverty: International Comparisons**

Year	Country	Percent poor
1992	Belgium	5.5
1992	Denmark	6.9
1994	Canada	10.6
1994	United Kingdom	10.6
1995	Poland	11.2
1994	Germany	11.4
1992	Israel	12.5
1995	Italy	12.8
<b>1994</b>	<b>Turkey</b>	<b>14.7</b>
1994	United States	17.9

Source: Luxembourg Income Study/ Center for the Study of Population, Poverty and Public Policy/ INSTEAD database. All poverty lines are drawn at 50% of the annual median disposable income per equivalent adult. Turkey calculations based on SIS HICES primary data.

<sup>13</sup> We use an approach to measure the absolute poverty that is applied throughout the world. In Turkey similar methodologies have been used by Dansuk (1997). In studies produced by SIS (Erdogan and Uygur and Kasnakoglu) the absolute poverty is defined by comparing household *food* expenditures (not total expenditures) to the cost of the minimum food basket. Therefore, the estimates of absolute poverty in these studies are substantially higher (in Erdogan – 15 percent of population). The reasons for using total expenditures to define absolute poverty are outlined in the Technical Annex of background paper by Yemtsov (1999) (available upon request).

<sup>14</sup> As we are using the vulnerability line that is very similar to the one applied by Dumanli and Erdogan, we obtain very similar estimates of poverty. The main difference between our approach lies in the fact that we use consumption rather than income as a welfare aggregate. We also make allowances for economies of scale, unlike studies by Turkish academics. However, since consumption and income are close enough in the HICES data, the estimates are similar. Erdogan obtains a poverty rate of 38 percent of the population by using monthly income per capita.

<sup>15</sup> Using data from Household Income Distribution Survey.

### 3.3 Trends in Living Standards, Economic Vulnerability and Poverty Between 1987 and 1994

112. During the last two decades there has been a significant improvement in Turkey's social indicators. Infant mortality rates have fallen sharply, from 156 per thousand in 1965 to 40 per thousand in 1997. Literacy rates have climbed. And in 1997, life expectancy for men reached a respectable 69 years, while that for women reached 71 years. Despite this progress, however, there remain some important gaps in Turkey's social achievements. According to 1994 household survey, *only 80 percent of adults considered themselves literate and as many as 3 percent of children between 12-15 years old are still illiterate*. There are, moreover, large gender and regional disparities: illiteracy rates for women are almost four times those for men (23 percent and 6.5 percent respectively in 1995). In some poor provinces, infant mortality rates (IMR) are still close to 100 per thousand (twice those of richer provinces), and female literacy rates are below 50 percent. According to Akder (1999), even though Turkey is a middle income country, *over 14 percent of all Turkish districts can be considered to have low human development indices*. In these areas, literacy rates are just two thirds of the average; and life expectancy is a full 10 years lower than in the high development areas. And as discussed by Filiztekin (1999), these differences are not getting smaller over time.

113. Comparison of the 1987 and 1994 surveys results suggests that during this period *there was a reduction of about 2.3 percentage points in the overall incidence of economic vulnerability* (from 38.5 to 36.2 percent of the population).<sup>16</sup> However, the relatively rapid growth of the population meant that this fall was in fact accompanied by an *increase in the number of economically vulnerable persons*, which increased by more than one million. Progress in reducing *absolute poverty* was more pronounced and actually led to *a reduction in the total number of the poor in Turkey*. Although the direction of change is unmistakable, it is also important to note that the magnitude of decline in poverty is not dramatic. Most households that left poverty between 1987 and 1994, would still be categorized as economically vulnerable in 1994

114. What contributed to this reduction in poverty? *The main factor was the large population shift between urban and rural areas*. In this regard, the facts support the view held by the respected Turkish academic, Professor Tuncer Bulutay, who advocates a faster pace of migration from rural to urban areas as the only way for the poor to enter the mainstream of Turkish life (interview reported in Lazreg, 1999). The analysis of 1987 and 1994 HICES suggests that indeed as the population in the relatively less poor urban areas has expanded with migration flows, poverty in rural areas has fallen dramatically and hence total poverty has also declined (Table 3). Demographic changes (lower fertility rates among the poor) also contributed to reducing the number of poor in the country as a whole. Almost a quarter of the overall reduction of poverty was due to these "structural" factors.

**Table 4. Decomposition of Poverty Change into Growth and Redistribution Components**

	Total change (%)	Of which		
		Growth	Redistribution	Interaction
Rural	-7.0	-8.5	-1.2	+2.7
Urban	+2.6	+4.3	+12.7	-14.4
<b>Turkey</b>	<b>-2.3</b>	<b>-2.4</b>	<b>+5.4</b>	<b>-5.2</b>

Source: Calculations based on SIS HICES primary data for 1987 and 1994.

<sup>16</sup> Erdogan obtained a similar trend while using income data. Her estimate of poverty for households was 31 percent for both 1987 and 1994, while for food poverty, she finds a reduction from 13 to 11 percent of households. Other studies have applied criteria for defining poverty that make them incomparable to our results. Thus, Dumanli reports that 15.2 percent of households had income below the cost of the minimum food basket in 1987 and 17.3 percent in 1994. Dansuk obtains poverty rate of 24.4 percent in 1987 by comparing the cost of the food basket with household consumption expenditures.

115. If we decompose the 1987-1994 change in poverty into its growth and redistribution components, we find that the impact of redistribution was negative: *i.e. distributional changes have actually slowed the fall in total poverty, particularly in urban areas*. In urban areas, in fact, both growth effects and redistribution effects have combined to create an increase in urban poverty. As a result, in 1994 we find that 55 percent of economically vulnerable population were city dwellers. Going a step further, we decompose the growth component of changes in urban poverty into a "real growth effect" and an "effect of the poverty line" (related to prices of poverty basket rising faster or slower than other prices). We find that most of the negative growth effect in urban areas is explained by a fast rise in the cost of poverty basket (probably a result of the 1994 devaluation).<sup>17</sup>

116. An important welfare aspect reflecting changes in living standards is the evolution of living arrangements, and in particular observed choices on household size and composition. Between 1987 and 1994, Turkey's population as measured by the 1994 survey) increased by 12.5 percent; the number of households expanded more rapidly, by almost 21 percent. The average Turkish household has become smaller, declining from 4.8 members in 1987 to 4.4 members by 1994. These developments are another reflection of an improvement in living conditions during the period. The extended family is a well-established coping mechanism against poverty: it pools together resources to take advantage of economies of scale and insures against unemployment and income shocks. Thus, the fact that more households are choosing to live on their own as nuclear families is, in itself, an indication of higher living standards and higher welfare in Turkish society. To support this conclusion, we also can refer to a rising ownership of consumer durables, which is also documented by the surveys. However, during the same period, the average number of employed persons per household has fallen, reflecting the general sluggishness of labor market conditions.

### **3.4 Macroeconomic Factors of Vulnerability**

117. *Is economic vulnerability related to macroeconomic factors?* The link between economic stability and poverty reduction appears to be very strong in Turkey. The 1994 HICES was conducted during a highly volatile year, characterized by a sharp devaluation of the lira and a severe economic crisis. By looking at the incidence of poverty by month within 1994 we can observe how macroeconomic turmoil impacted the living standards of the poorest segments of Turkish society. *Figure 1 below suggests that the impact was deep and negative.*

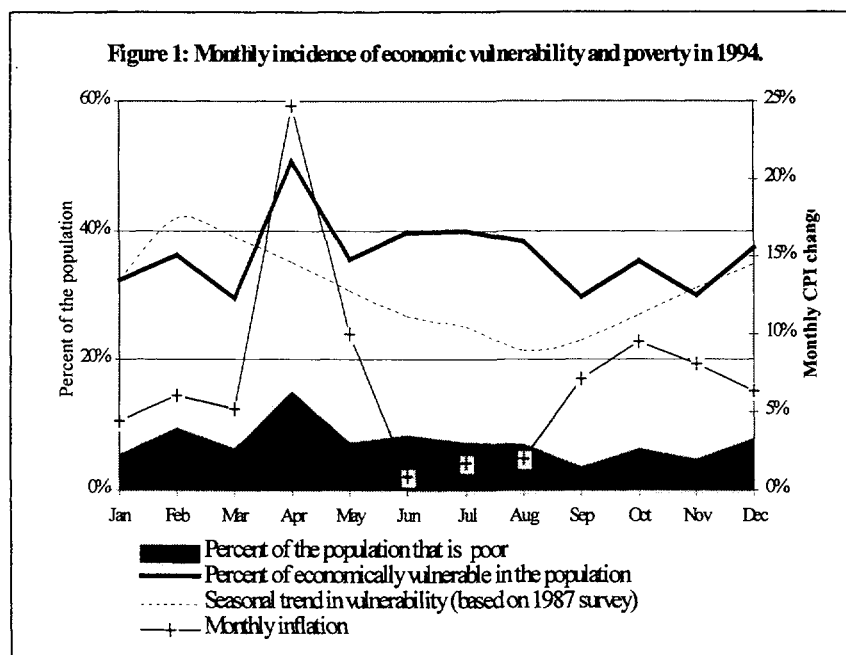
118. The surge in the poverty rate that occurred at the time of devaluation is an illustration of how macro policies impact the poor. We see that *poverty is very sensitive to economic turmoil*, and in particular to a jump in inflation. *Unanticipated inflation unambiguously hurt the poor*. However, this effect appears to have worn off over time (even for the absolute poverty rate), as households adjusted their behavior, indexation mechanisms came into play, and incomes adjusted. All in all, the added impact of the economic crisis on poverty was felt for about 5 consecutive months—during this period the percentage of people who were economically vulnerable (consumption below the vulnerability line) remained above the pre-crisis level. The absolute poverty rate showed a similar sharp increase followed by a gradual decline.

119. *Inflation has a direct negative impact on the living standards of the poor.* What is remarkable about Figure 1 is the extent to which increases in the poverty and economic

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<sup>17</sup> The finding of *growing* incidence of poverty in urban areas between 1987 and 1994 was also reported by other researchers who use household surveys, for example, Erdogan (1996), who found that poverty incidence for households has fallen in rural areas between 1987 and 1994 from 38 to 32 percent and increased in urban areas from 22 to 28 percent.

vulnerability rate track peaks in inflation. This is consistent with the analysis conducted by He (1999) which shows that during periods of accelerating inflation, food prices in Turkey (which weigh heavily in the consumption of the poor) rise faster than other prices. As a result, an unanticipated burst in inflation hurts the poor. In contrast, during periods of stable or falling inflation food prices are the first to decelerate, benefiting the poor. This points to the dominance of price effects over pure income effects as the main transmission channel through which the 1994 crisis impacted living standards. It also suggests that, contrary to what is sometimes argued in Turkey, *the pure price effects of disinflation could benefit the poor more than other income classes—i.e. disinflation could have a positive distributional impact.*<sup>18</sup>



Source: Inflation rate - SDS, Incidence of poverty - HICES, 1994.

120. *What is the potential for growth to reduce poverty?*

Sustained economic growth is the primary means to raise consumption and pull people out of poverty and vulnerability. At the same time, persistent inequalities in Turkey suggest that the potential for growth alone to reduce the number of the poor is limited.

According to the

1994 figures, increasing consumption by 1 percent would reduce the number of economic vulnerable people by 1.6 percent and that of the poor by 2.1 percent. At this rate, it would take about 6 years of steady and universal growth in per capita consumption (of about 5 percent per year) to reduce vulnerability by one half.

121. If we compare this growth elasticity to that estimated for other countries, we find that the impact of growth on poverty in Turkey is relatively low. Among other factors, this is a direct result of Turkey's high level of inequality. Think of the rate of reduction in poverty as a function of the growth rate and some measure of how the benefits of growth are distributed:

$$\text{Rate of poverty reduction} = (1 - \text{Inequality measure}) * \text{growth rate}$$

where the inequality measure is assumed to be between 0 and 1 (for example, the Gini coefficient). It is then easy to see that the higher the inequality index, the lower the impact of growth on poverty. In a recent paper, Ravallion (1997) estimates the average growth elasticity

<sup>18</sup> The general equilibrium effects of disinflation, however, are more complex and the net impact is ambiguous (see Chapter 2, Box 2). Initially, disinflation (particularly if achieved through a nominal exchange rate anchor) could lead to a short-term real exchange rate appreciation, a rise in unemployment, and/or slower job creation, all of which could have a negative impact on the poor.

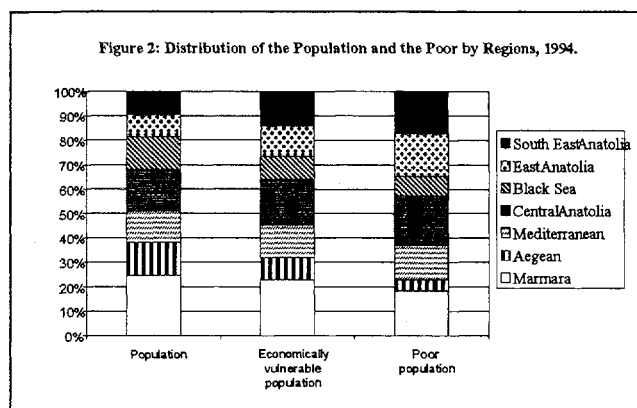
for *low-inequality* countries to be 3.3; and for *high inequality* countries to be 1.8. Our estimates for Turkey fit squarely into the high inequality category.

122. *The positive impact of growth could be swamped by small increases in inequality.* A relatively small worsening of the distribution—an increase in the consumption Gini by 0.5 to match the Gini on incomes—would increase absolute poverty by nearly 25 percent, to 9 percent of the population.

123. The relatively modest impact of growth on poverty can be linked to two factors: the sluggishness of the labor market in creating new, well-paid jobs, and the unequal distribution of income. To eliminate poverty and reduce vulnerability, Turkey will thus need to complement growth with greater efforts to: (a) remove barriers to employment generation outside of agriculture; and (b) redistribute income through taxation and targeted social transfers aimed at poor households.

### 3.5 Profile of Living Standards of Vulnerable Households

124. For a variety of reasons, the incidence of poverty and economic vulnerability is always estimated with some margin of error. Some robustness checks on our measures are reported separately by Yemtsov (1999). They show that while the overall incidence can change significantly depending on the methodology and approach used, the economic characteristics of the poor are robust to changes in measurement assumptions. These characteristics include location, employment and education. They can be used to identify groups of the population that are prone or *vulnerable* to poverty. These characteristics also allow us to examine what groups have benefited the most from the income-earning opportunities generate by economic growth. They also allow us to distinguish between groups can pull themselves out of poverty and groups which need additional assistance to do so.

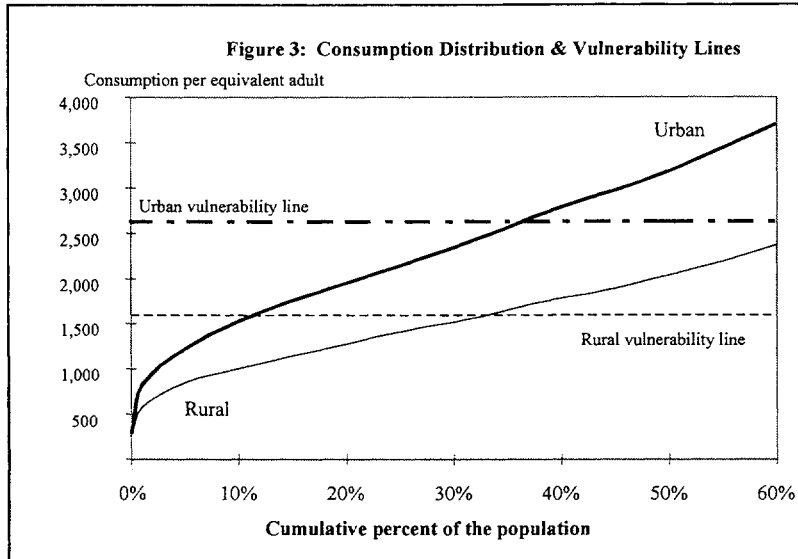


#### Regional determinants

125. There are big differences in poverty incidence between *regions* of the country. The Aegean sea region has a vulnerability risk that is only half of the national average; in contrast, East and South East Anatolia have a risk that is 50% *above* the national average. Differences in absolute poverty rates by region are even wider. But even in the richest regions we find groups that are poor (Figure 2). If we try to predict whether the household is poor or not solely based on location, only 2% of cases are predicted correctly. Location by itself is neither a cause or a correlate of poverty.

126. Migration flows have contributed to reducing poverty during 1987-94: the poorest regions (East Anatolia) experienced a net decrease in population, while the population in the richest regions grew very fast. In some relatively well-off areas, migration inflows coupled with the impact of the 1994 crisis (felt most heavily in urban areas) worked to increase vulnerability and poverty. Marmara, for example, experienced an increase in the incidence of economic vulnerability. Only two regions have managed to reduce the number of poor and economically

vulnerable people while simultaneously experiencing an increase in population: the Black Sea region and the Aegean. Overall, these developments had a weak equalizing effect on regional

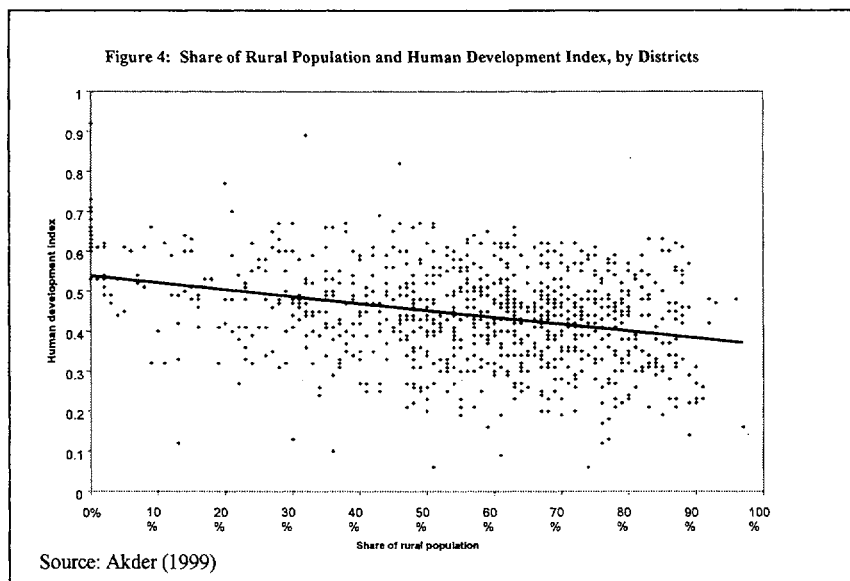


Source: HICES, 1994. Note: all values deflated to avg. 1994 prices using regional CPI indices.

poverty rates,<sup>19</sup> but the poorest regions have remained persistently much poorer than the rest of the country.

127. Unlike other studies, we find only small differences in vulnerability and poverty between urban and rural areas.<sup>20</sup> This is the result of applying different poverty lines in urban and rural areas, taking into account that prices are much lower in the

latter. Figure 3 illustrates this point. It shows two curves, for urban and rural areas respectively, representing the percentage of the population with consumption below a certain amount. The urban curve lies above the rural, which means that the urban population has higher consumption



Source: Akder (1999)

than the rural population. The figure also shows two straight lines corresponding to the poverty thresholds: the upper line is the urban vulnerability line, and the lower line the rural one. The intersection of the urban line with the consumption distribution for urban areas gives the incidence of economic vulnerability on the

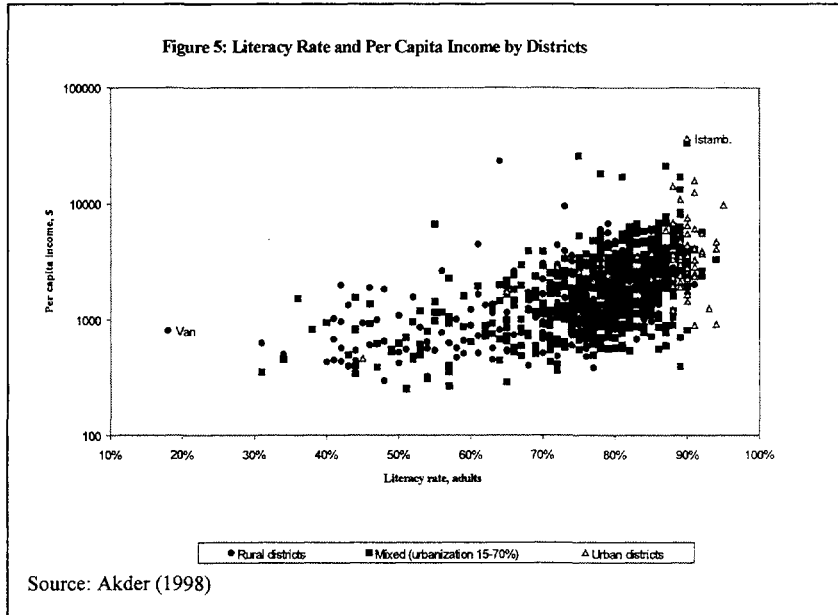
<sup>19</sup> Highest regional poverty rate to lowest was 10 in 1987 and dropped to 6 in 1994. Studies that rely on a single national poverty line (as Dansuk) or CPI price data for regional poverty lines (Erdogan, Dumanli) naturally find much larger dispersion in poverty incidence by regions: 20 times difference in poverty risk between the richest and poorest region for 1987 as reported in Dumanli, or 6.25 times difference in extreme poverty as reported in Erdogan. All studies, however, point to the same regions as poorest (East and South East Anatolia) and richest (Marmara and Aegean).

<sup>20</sup> Since all studies done by Turkish academics use CPI price data to value the poverty basket or use national mean to set the relative line (as in Dansuk), rural areas are reported to have much higher incidence of poverty; we believe this is an outcome of a wrong measurement assumption.

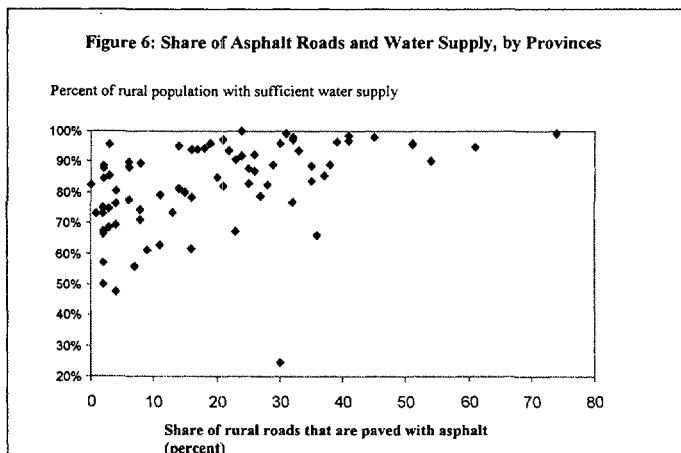
Similarly, the intersection of the rural threshold and the rural consumption curve yields the incidence of economic vulnerability in rural areas. It is evident from the figure, that if we apply different lines to urban and rural areas, the incidence of economic vulnerability is roughly the same in both. However, if we apply a single national line (as has been done in earlier studies), rural economic vulnerability would always be higher than urban.

128. Going beyond a purely commodity-based measure of living standards, and looking at geographical areas (districts) rather than households, yields evidence that rural areas are lagging behind urban areas in many measures of human development. Akder (1999), for example, finds that rural districts lag urban districts in both education and life expectancy. As shown in Figure 4 below,

there is a link between the *share of rural population* in a district and *measures of welfare* at the district level (in this case, a human development index weighing three main dimensions of well-being: incomes, literacy and life expectancy). Close to 70 percent of the population lives in “predominantly” or “significantly” rural districts.<sup>21</sup>



129. The detailed analysis by districts reveals huge differences in educational attainment: adult literacy rates (drawn from the 1990 Census) range from a low of 18 percent in Van-Bahcesaray to nearly 100 percent in Besiktas (Istanbul). Districts with low literacy rates are also the poorest in terms of per capita incomes (Figure 5). These are mostly located in East, Southeast Anatolia. But there are also poor districts (“pockets of poverty”) in Central Anatolia and in the Black Sea region.



Poor districts tend to be clustered together at the low end of the rankings regardless of social indicator (Figure 6): whether it be literacy, incomes, life expectancy or *access to infrastructure* (water and asphalt roads). In contrast, urban districts in Marmara, the Aegean and the Mediterranean regions are clustered near the top for all indicators (Akder, 1999).

130. Both Akder (1999) and Filiztekin (1999) point to low

<sup>21</sup> Akder categorizes the “rurality” of a district by its share of rural population, distinguishing then between predominantly rural districts, significantly rural districts, and predominantly urban districts.

productivity in agriculture as the main explanatory factor of poverty in rural areas. As discussed in Chapter 2, low productivity, in turn, is the result of poor endowments (less fertile land, less land per worker, and lower capital-labor ratios), lack of infrastructure and poor access to markets—all of which tend to go together and reinforce each other. To illustrate this, Figure 6 plots access to paved roads and water supply for rural areas. It shows clearly that in provinces where the rural population has few roads there is also a problem of access to water.

131. Many countries have “distressed” or economically non-viable regions. What is peculiar to Turkey is that a significant proportion of the population remains “captured” in these locations. Partly this is a result of policy interventions aimed at slowing migration flows (agricultural subsidies); partly this unwillingness to move can be traced to declining prospects and opportunities for rural migrants in urban areas.

#### Box 1: Poverty in Two Female-Headed Households

Huru Altindal, of *Mamak* gecekondu in Ankara, a woman who put her age at about forty, suffers from an eye condition. Her husband is mentally handicapped and cannot work. She is the sole breadwinner in her family and struggles to put her two sons through school. She makes lace and embroidery for her neighbors, and makes about 6 million TL per spool of thread. In *Mamak*, she lives in a dark and dank, two-bedroom apartment, for which she pays 10 million TL per month. She has a television set, a stove and a table, but her toilet is in a small fenced off courtyard where she keeps empty aluminum cans which she sells to increase her income.

Safika is a 38 year old widow and mother of eight children who also lives in the *Mamak* gecekondu. Illiterate, with no marketable skills and saddled with four children by the age of 15, she lives on her late husband's pension of 40 million TL a month. She can no longer afford the cost of books, clothes and shoes of her 13 year old daughter, who had to quit school. Her talented daughter complains of being bored caring for her younger siblings at home. Safika receives very little help from relatives. The *Muhtar* often gives her food and neighbors help her whenever they can.

From: Lazreg, M. “Rural to Urban Migrant's Women's Participation in the Labor Force in Turkey: A Qualitative Analysis”.

132. Migrants are typically concentrated in the periphery of urban centers, in self-sustaining communities inhabited by several generations and bound together by village ties. These *gecekondu*s or literally houses “built overnight”, started to appear around the main cities of Istanbul, Ankara and Izmir in the mid-1940s and provided entry points for rural migrants to adjust to life in the city. They were a stepping stone towards upward mobility. However, in the past twenty years, social mobility among migrants has become more elusive, and *gecekondu*s have become more marginalized. *Poverty rates in the gecekondu*s are much higher than in urban centers, and prospect of escaping poverty for its inhabitants are limited. Almost 70% of all the urban poor live in the *gecekondu*s.<sup>22</sup>

#### *Gender and poverty*

133. We find only a slight difference in poverty risks between the households headed by males and females. Individual poverty risks on average are the same for men and women. However, poverty of female headed households is *deeper*.

134. Two caveats should be attached to this conclusion. First, as shown in Yemtsov (1999), poverty incidence by gender is quite sensitive to measurement assumptions. Second, it is likely that these household-based measures underestimate the true extent of poverty among females

<sup>22</sup> See Lazreg (1999) for a in-depth analysis of the social and economic characteristics of *gecekondu*s.



(Haddad and Kanbur (1990)). In many traditional societies - and rural Turkey is unlikely to be an exception - household consumption is distributed very unequally among members, depending on age and gender.

135. Even though measured poverty risks for men and women appear to look the same, other indicators of well-being all point towards *the existence of severe gender gaps in human development*. According to the *1998 Human Development Report*, the female HDI in Turkey is only three-quarters the level of the male HDI. Female literacy, educational attainment and participation rates in monetarily gainful economic activities are all far below what is observed for males. According to the 1994 HICES, only 16 percent of women in rural Turkey work for pay (a much larger fraction are employed as unpaid family workers). In urban areas the proportion is barely larger, only 20 percent. Ability to work for pay has a big influence on the distribution of power and consumption within the household, and can be one factor contributing to the existence of significant intra-household inequities between men and women. In a recent survey of the *Umraniye* gecekondu, nearly 40 percent of the women who worked for pay claimed that the work enabled them to have a greater say in family decisions. There is also some indication that work outside the home brings about changes in the distribution of household tasks (see Lazreg, 1999).

### ***Education and poverty***

136. *Education is the single characteristic with the strongest correlation to poverty risk*. The education of household head plays a key role in determining whether a household is poor or not. Poverty rates for households headed by an illiterate person are 10 times those of households headed by someone with a higher education. The same magnitude of differences is observed for individuals (see Yemtsov, 1999 for details). *One half of all households headed by an illiterate person are economically vulnerable, and nearly 15 percent are poor in an absolute sense*. These households represent only 14 percent of the total population of Turkey, but account for nearly a third of all poor households (Table 5).<sup>23</sup>

137. Comparing 1987 and 1994, we find remarkable stability in the relative risks of poverty by level of education. The educational attainment of the population, however, has increased and as a result illiteracy rates among heads of household have dropped slightly. *By itself, this accounted for almost one-half of the measured reduction in economic vulnerability and poverty during that period*.

138. Investment in education is thus the number one priority in fighting poverty over the medium and long term in Turkey. No other policy measure can have an equally deep and lasting effect as eradicating illiteracy and increasing the level of education for all. In this sense, the recent extension of compulsory schooling to eight years is a very positive step. Improving the educational attainment of children is especially crucial to breaking inter-generational cycles of poverty, and to giving poor children in Turkey today the opportunities that their parents never had. However, the picture in this regard is not as positive as it should be: the data reveal that the educational attainment of children is very different by regions of the country. In the poorest regions, nearly 10 percent of all children in age groups 12-15 are illiterate. These children, deprived of even a basic education in childhood have very poor labor market prospects for the future. They, and their future children, may be already doomed to live a life in poverty.

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<sup>23</sup> Similar results are reported in Erdogan (1998).

**Table 5. Poverty Profile in 1994 by Education of Household Head**

<i>Education of household head</i>	<i>Poverty indicators</i>			<i>Structure and decomposition, percent</i>		
	Incidence of economic vulnerability	Incidence of poverty	Average shortfall of the poor	Population	Vulnerable population	Poor population
Illiterate	0.526	0.149	0.329	13.6%	19.7%	27.8%
Literate w/o diploma	0.453	0.105	0.305	7.4%	9.3%	10.7%
Primary	0.382	0.072	0.301	55.8%	58.8%	55.0%
Secondary	0.231	0.025	0.261	17.9%	11.4%	6.2%
Higher	0.056	0.003	0.159	5.3%	0.8%	0.2%
<b>Total</b>	<b>0.363</b>	<b>0.073</b>	<b>0.301</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

\*Note: average shortfall is the gap between the average consumption of the poor and the poverty line. A shortfall of 0.3 means that an average poor person has a consumption that is 30% below the poverty line. Source: Calculations based on SIS HICES primary data.

139. There is a very clear link between the poverty of family and the poor educational achievements of its children. Most of the adolescents who leave school to seek employment before or just after completing the primary level, are from poor families. About 5 percent of all children between ages 12 and 15 did not complete even primary education and are no longer in school. Some 70 percent of these children are from rural areas, and 70 percent live in economically vulnerable households.

**Box 2: Working Children**

Based on the October 1994 round of the Labor Force Survey (LFS) which contained two special modules on children, the State Institute of Statistics (SIS) estimates that about 1 million children aged 6-14 engage in some form of economic activity. Children account for one out of every 20 employed individuals over the age of 6.

As in many other countries, the vast majority of working children reside in rural areas and are primarily unpaid helpers on the family farm. Some rural households in the 1994 LFS sample report drawing on children as young as 6 years old for labor. Participation increases with age, so that by age 14 about a third of all rural children are working. Provided these children continue to attend school, participation in farm chores need not be harmful. However, the 1994 LFS, suggests that in many cases these working children do drop out of school.

In urban areas, children show up in the labor force in significant numbers starting at age 12, after completing their basic education. Participation rates are much lower than in rural areas. Most, if not all, of these working urban children drop out of school. The more educated the parents, the more likely that a working child stays in school. Conversely, the children of poor educated parents have a much lower probability of continuing their schooling once they start working. All in all, some 25% of children aged 12 to 14 are not attending school.

Source: Tunali, I. "Education and Work: Experiences of 6-14 year Old Children in Turkey", *Koc University Working Paper 1996/09*.

**Labor market status**

140. Labor market status (employment, unemployment or non-participation and type of job) is an important correlate of poverty in Turkey.<sup>24</sup> We find only small differences in the incidence of poverty between the *employed* as a whole and the *not employed*. This is because poor and non-poor alike tend to live in households where the head is gainfully employed. In other words, in the absence of unemployment insurance or a strong safety nets, most Turkish households cannot afford to have their head not working. What is quite different in Turkey compared to OECD and upper middle income countries is the low number of earners per household: in the average Turkish household there are only 1.2 monetarily gainfully employed members. *Unlike in other middle income countries, secondary earners (spouses) have little opportunities to participate in the labor market.*<sup>25</sup> Reliance on a sole earner for each household means high exposure to risks of illness or loss of employment. As a result, we find large differences in poverty risk associated with type of employment (especially for casual workers versus full time or permanent employees) The risk of poverty is much higher for households in which the head is employed in seasonal or casual<sup>26</sup> jobs than for households where he/she is a regular employee in the state or public sector, or self-employed on a full time basis. To put it simply, households whose income depends solely on casual or seasonal work are the most vulnerable and the poorest in Turkey; even more so than the unemployed. The share of this type of precarious employment is astonishingly high: every fourth wage earner in Turkey is a casual employee. Self-employment ranks second in terms of poverty risks for all the employed, and 45 percent of all poor in Turkey live in families where the head is self-employed.

**Table 6. Poverty Profile in 1994 by Employment Status of Household Head**

Employment status of household head	Poverty indicators			Structure and decomposition, percent		
	Incidence of economic vulnerability	Incidence of poverty	Avg. shortfall	Population	Vulnerable population	Poor population
<b>EMPLOYED</b>	<b>0.371</b>	<b>0.074</b>	<b>0.301</b>	<b>86.3%</b>	<b>88.3%</b>	<b>88.3%</b>
Regular employee	0.309	0.037	0.277	29.8%	25.4%	15.3%
Casual and seasonal worker	0.584	0.148	0.345	9.2%	14.8%	18.8%
Employer	0.169	0.013	0.248	6.4%	3.0%	1.1%
Self-employed	0.400	0.095	0.303	40.9%	45.1%	53.2%
Unpaid family worker	0.080	0.000	0.234	0.0%	0.0%	0.0%
<b>NOT EMPLOYED</b>	<b>0.310</b>	<b>0.062</b>	<b>0.307</b>	<b>13.7%</b>	<b>11.7%</b>	<b>11.7%</b>
Unemployed	0.521	0.167	0.371	1.3%	1.8%	2.9%
Disabled and ill	0.421	0.098	0.307	0.6%	0.7%	0.8%
Pensioners and elderly	0.256	0.035	0.259	9.2%	6.5%	4.4%
Other	0.371	0.098	0.345	2.7%	2.8%	3.6%
<b>TOTAL</b>	<b>0.363</b>	<b>0.073</b>	<b>0.301</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Calculations based on SIS HICES primary data.

<sup>24</sup> Dumanli analyses the occupation and employment status as key factors of poverty and reports the relative risks of poverty for 1987 that are close to our estimates with the highest risks for agricultural self-employed and casual workers.

<sup>25</sup> In European countries it is often found that correlation between education of household head and spouse is very close (0.6 and higher, as reported, for example in Bailey(1997)). It is almost non-existent in Turkey (0.15 for the country, 0.05 in rural areas). Schwartz (1999) provides an explanation linking this observation with the predominant marriage patterns.

<sup>26</sup> By definition casual employees are those who work seasonally, on a temporary basis or as work becomes available, without having a formal contract or a business relationship with any particular employer (cotton pickers, truck loaders etc.).

141. The risk of poverty is also high for households headed by an unemployed or by a disabled person. In contrast, the group with the lowest poverty risk among the non-employed are pension recipients, who on average seems to be relatively well hedged against the economic vulnerability.

142. Table 6 shows that regular employees have a poverty rate that is just about the national average. This points to the importance of other factors in determining the risk of poverty once you are employed, mainly those correlated to the level of earnings such as education, occupation and type of work contract. The lowest risk of poverty is associated with employment as regular employee covered by social security. Regular employees not covered by any social insurance have twice the risk of poverty than the insured. Employment in the public sector is related to a much lower (in fact, two times lower) risk of poverty than private sector employment. In this regard, public employment seems to be quite effective as an implicit safety net.

143. While group-specific poverty risks have remained remarkably stable between 1987 and 1994, we find a substantial shift in the structure of employment between 1987 and 1994. The number of wage employees has increased by 1.5 million. However, the positive effect of rising wage employment was almost entirely offset on a national level by an increase in the number of unemployed, revealing that the labor market did not serve the Turkish poor well during this period.

#### *Sector of employment*

144. There are large and persistent differences in poverty risks between the sector of employment of household heads. Table 7 below combines sector of employment and the dominant type of employment in each sector to show both across-sectors and within-sector differences in poverty risks. Highest risks are associated with work in *agriculture and construction*.

**Table 7. Poverty Profile in 1994 by the Household Heads' Employment**

Sector and dominant status of employment of household head	Incidence of economic vulnerability	Incidence of poverty	Vulnerable population	Poor population
<b>Agriculture</b>	<b>42%</b>	<b>11%</b>	<b>33.0%</b>	<b>41.8%</b>
of which: self-employed	41%	10%	30.3%	38.2%
<b>Mining</b>	<b>28%</b>	<b>3%</b>	<b>0.7%</b>	<b>0.3%</b>
of which: regular employee	22%	1%	0.4%	0.1%
<b>Manufacturing</b>	<b>36%</b>	<b>5%</b>	<b>11.9%</b>	<b>8.2%</b>
of which: regular employee	37%	5%	8.0%	5.6%
<b>Power, water etc</b>	<b>18%</b>	<b>2%</b>	<b>0.2%</b>	<b>0.1%</b>
of which: regular employee	19%	3%	0.2%	0.1%
<b>Construction</b>	<b>50%</b>	<b>12%</b>	<b>10.4%</b>	<b>12.3%</b>
of which: casual and seasonal employees	60%	16%	8.1%	10.9%
<b>Trade</b>	<b>35%</b>	<b>6%</b>	<b>15.1%</b>	<b>13.6%</b>
of which: self-employed	38%	8%	8.5%	8.4%
<b>Transport</b>	<b>37%</b>	<b>6%</b>	<b>5.9%</b>	<b>5.0%</b>
of which: regular employee	34%	4%	2.3%	1.4%
<b>Finance &amp; banking</b>	<b>19%</b>	<b>0%</b>	<b>0.3%</b>	<b>0.0%</b>
of which: regular employee	19%	0%	0.3%	0.0%
<b>Other services</b>	<b>27%</b>	<b>3%</b>	<b>10.7%</b>	<b>6.9%</b>
of which: regular employee	25%	2%	8.3%	3.5%
<b>NOT EMPLOYED</b>	<b>31%</b>	<b>6%</b>	<b>11.7%</b>	<b>11.7%</b>
<b>TOTAL</b>	<b>36%</b>	<b>7%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Calculations based on SIS HICES primary data.

145. Relative poverty rates across sectors have remained roughly unchanged since 1987, with all sectors registering a slight decline in the incidence of poverty and vulnerability. Progress was fastest in services and infrastructure, and slowest in trade and construction. However, unlike in other partitions discussed earlier (such as education), the change in the structure (i.e. reallocation of labor between sectors) was a minor phenomenon, accounting for less than 10 percent in the change in poverty between 1987 and 1994. This highlights the relatively slow change in the structure of employment. (see Chapter 1)

146. In terms of sheer magnitudes, the bulk of the poor are found to be self-employed in agriculture. Casual employees in construction rank as the second largest group, closely followed by regular employees in manufacturing and self-employed in trade. Together these four groups account for 55 percent of the economically vulnerable, 56 percent of the poverty gap for the country as a whole and 63 percent of the poor population in Turkey. Poverty and economic vulnerability are thus very concentrated in specific sectoral groups.

147. The more detailed analysis presented in Yemtsov (1999) reveals more subtle links between sectoral poverty rates and type of employment. It shows that households headed by regular employees tend to have a high dependency rate (almost 2/3 of their members are not working) than other households. That might partly explain why poverty rates among regular employees in manufacturing, for example, are relatively high. Interestingly, manufacturing is the predominant sector of *regular employment contracts* in *new industrial centers* that attract migrants from rural areas. Usually these families are characterized by a very low female participation rate, and a large number of dependents living on one earners' salary. Thus, the poverty is high for the group of regular employees partly because of these "within"-family factors.

148. The picture is different for the households headed by the self-employed. Here the dependency rate is low, but there is in fact more *unpaid family workers* in this families than self-employed. Thus the reason for high poverty risks in this group is relatively low productivity of employment in their occupation and lack of other earning opportunities except the work on family shop of farm.

### ***3.6 Living Arrangements of the Poor and Economically Vulnerable***

149. *The poor in Turkey tend to have quite different living conditions than the non-poor.* Large multigenerational households traditionally are home to the majority of the Turkish population. These households also exhibit the highest risk of poverty. This is why most of the poor live in large extended households. Nuclear families with three or more children are also at a high risk of poverty.

150. The presence of children in a household does increase the risk of poverty substantially. Children under 10 years old have the highest poverty risk among all age groups. Most of these poor children live in large extended families that have many other dependents. Single parents are also a highly risky category, but they are not important in terms of number of people. The elderly appear to be mostly integrated within large families. Only those who can afford to live alone.

151. The considerable population shift that is occurring in Turkey affects the demographic profile of the vulnerable population. There has been a dramatic fall in the average number of children per family. As children, especially in large families, tend to increase their vulnerability to poverty, *reduction in fertility rates has acted as poverty alleviation mechanism.* *Declining fertility rates alone account for more than half of the overall reduction of poverty and economic vulnerability risks in Turkey between 1987 and 1994.*

152. The poor have worse housing conditions than the non-poor, and they own substantially fewer durable goods. We do not differentiate between domestically produced and imported durables, or between new and old goods, but even this simplest approach reveals quite striking differences. A miniscule fraction of the poor own an automobile, or report having central heating, a water heater or hot water supply. Between two thirds and three quarters have piped water, a bathroom, a refrigerator or a TV. Almost 40 percent of the poor live in gecekondus or undeveloped areas often with poor infrastructure and poor access to basic services.

### 3.7 Income and Employment Opportunities

153. The living standards of a household depend primarily the on the income-earning opportunities of its members. Table 8 shows that the most important source of income for the typical Turkish household is labor. The *poor* depend on labor income even to a greater extent than the *non-poor*: almost 80% of the total income of the poor comes from labor. On in other words, labor is the main income-generating asset of the poor.

154. Not surprisingly, there is a large discrepancy between the labor incomes of the poor and the non-poor. Wages for the working poor are on average 44% less than the wages of the non-poor. Self-employment income of the poor is 47% less than the self-employment income of the non-poor.<sup>27</sup>

**Table 8. Income Structure of the Poor and the Non-Poor**

<i>Source of income</i>	<i>Non poor:</i> structure of household incomes, percent	<i>Vulnerable to poverty:</i> structure of household incomes, percent	<i>All households:</i> structure of incomes, percent
<b>Total labor income</b>	<b>72.2%</b>	<b>80.8%</b>	<b>73.7%</b>
Wage earnings	34.6%	40.0%	35.6%
Income from self-employment	37.6%	40.7%	38.1%
<b>Total capital and property income</b>	<b>6.0%</b>	<b>2.1%</b>	<b>5.3%</b>
Interest and income from securities	2.7%	0.7%	2.4%
Rent and other property income	3.3%	1.4%	3.0%
<b>Total transfers</b>	<b>10.1%</b>	<b>7.2%</b>	<b>9.5%</b>
State transfers	7.9%	5.8%	7.5%
Private transfers	2.2%	1.4%	2.1%
<b>Other income (imputed rent etc.)</b>	<b>11.7%</b>	<b>9.9%</b>	<b>11.4%</b>
<b>Total household income</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<i>Total monthly household income, TL</i>	<i>13,895,078</i>	<i>6,853,319</i>	<i>11,696,462</i>

Note: incomes are in average 1994 Central Anatolia prices. Source: Calculations based on SIS HICES primary data.

155. A large part of the difference in labor incomes for the poor and the non-poor can be explained by differences in the endowments, and especially by differences in human capital. *Almost 80 percent of economically vulnerable wage earners are illiterate or have completed only primary education.* In contrast, among the non-poor, only 30 percent have primary education or less. Part of the differences in pay between poor and non-poor may also be related to discrimination. Extending this argument further, we can try to see to what all other personal and job characteristics explain differences in wages between the poor and non-poor. In a framework of earning functions we can predict what would be the level of earnings of the poor if they had the same returns on their human capital (education, experience, qualification, controlling for occupation and location) as the non-poor. This *predicted wage* outcome does show a very big

<sup>27</sup> Note that this is not as tautological as it may seem, since we are defining the poor on the basis of *consumption* not income. But obviously the *consumption* poor are largely poor because their *incomes* are low.

discrepancy between the poor and non-poor in wage levels, all of which is tied to differences in endowments. Similarly, if we assume that the non-poor have the same return as poor on their skills, we obtain a predicted wage for the non-poor that is not very much below the actually observed wage outcome. In other words, *most of the differences between labor incomes of poor and non-poor is explained by differences in endowments not returns: the poor tend to have lower education, occupy lower-paid positions, and are more likely to have casual low-productive jobs* (Table 9).

156. If we look at changes between 1987 and 1994, we find that on average, the wage gap between poor and non-poor workers shrunk by 5 percent. Most of this can be attributed to changes in endowments, and specifically to the decrease in illiteracy. However, we also find evidence that relative returns may be turning against the poor: the relative wage of workers with less than primary education, for example, fell between 1987 and 1994. This was particularly true for women.

Table 9. Blinder-Oaxaca Wage Gap Decomposition Between the Poor and the Non-Poor

Decomposition Approach	Wage gap between poor & non-poor,		
	Log points	of which:	
		difference in endowments	difference in treatment
Crude (observed) wage gap	.458		
Returns for non-poor applied to characteristics of the poor	.481	.414	.067
Returns of the poor applied to characteristics of non-poor	.115	.071	.044

Note: regressions used are earning functions with log of monthly wages in 1994 average Central Anatolia prices as dependent variable, regressed to a potential experience (and squared experience), education, gender, location, type of contract, ownership, industry and occupation dummies, run separately for poor and non-poor workers. Source: Calculations based on SIS HICES primary data.

### 3.8 Transfers and Social Safety Nets

157. The structure of incomes is different for the poor and the non-poor, and transfers are part of this difference. As shown in Table 8, *transfers from the State* constitute a relatively small part of the income of Turkish households. *And they constitute a smaller proportion of incomes for the poor than they do for the non-poor.*

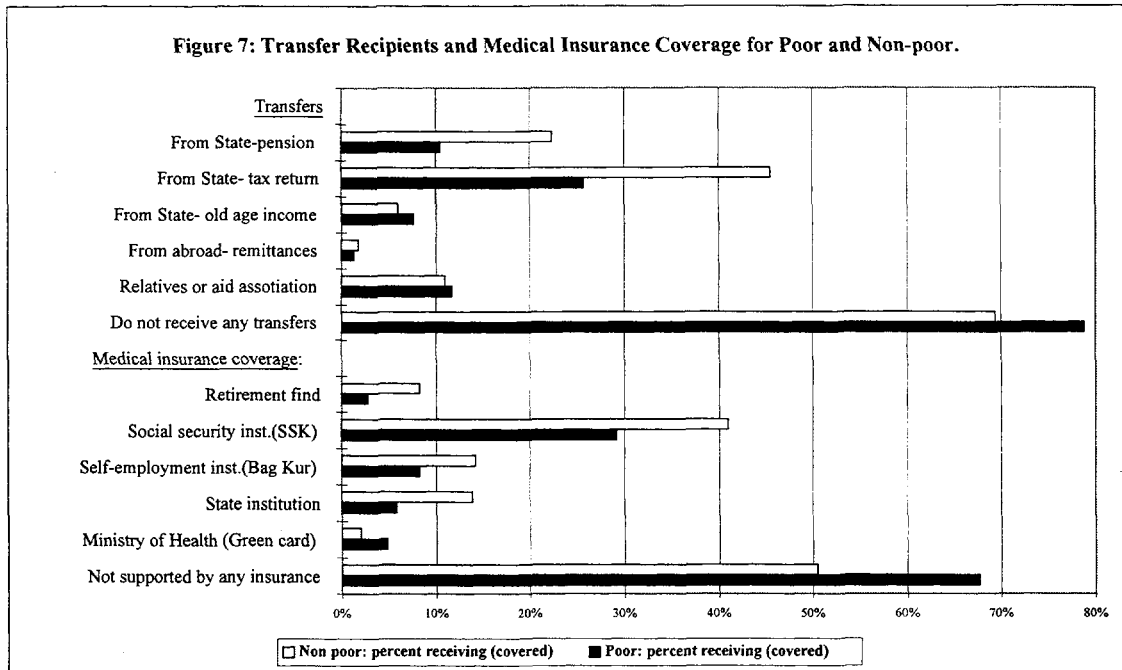
158. The main Government transfer program, at least in terms of magnitude, is the pension system. However, the majority of the poor do not receive pensions (see Figure 7 and Chapter 2).<sup>28</sup> The other key state social protection program, medical insurance, also tends to “miss” the poor: in fact, we find that close to 70 percent of the poor are not covered by any type of medical insurance at all. Both of these programs are tied, to a large extent, to holding a “regular” or formal sector job. It is thus not surprising that they may miss many poor individuals, since these are more likely to hold informal or casual jobs, with no associated contributions to the social insurance system.

159. Figure 7 shows that there are two small-scale Government programs that do favor the poor more than the rich: old age assistance and the “Green Card” program run by the Ministry of Health. However, these two are very modest in size and have a minimal impact on the living standards of the poor (see Chapter 4).

<sup>28</sup> Pensions may be effective in preventing certain groups (e.g. the elderly) from becoming poor. However, the comparison of results pre and post transfers suggests that even pre-transfer, many pension recipients are not poor.

160. The relative share of private transfers in the household budgets is small for both the poor and non-poor. However, aid from relatives and aid associations do appear to be better targeted towards the poor than any government program. However, the share of the poor covered by these private transfers is also small; just above 10 percent.

161. These findings suggest that neither the State, nor civil society or inter-family relationships play an important role as a safety net in Turkey. In combination with the evidence presented on the predominance of extended families, this suggests that *intra*-family ties play a much more predominant role as a safety net. This system makes those who can no longer rely on their relatives particularly vulnerable (see Lazreg, 1999).



Source: Annual Income data for 1994, drawn from the Income Distribution Survey.

### 3.9 Bringing All Factors Together

162. The ultimate objective of poverty analysis is not to count the number of people who fall below a certain line, but to find reasons of why some groups of the population do not benefit fully from the economic opportunities or are more vulnerable to shocks. What we have discovered in this profile is that human capital and employment are the key determinants of living standards of a Turkish household. This finding is robust and holds across many modifications of the methodology. The key forces behind changes in poverty and vulnerability were macroeconomic and demographic factors. They were working in opposite directions: while inflation and the rise in unemployment were pushing poverty rates up, the fall in fertility, rising educational attainment (especially the drop in illiteracy) and migration flows were operating towards reducing poverty.

163. From a policy point of view, it is often useful to know whether we can predict the likelihood of a household being poor or vulnerable based on its observable characteristics, such as location, employment and education profile. If this is the case, then it is easier to design programs that are targeted specifically to help the poor. To answer this question, we combine all easily observable factors together and partition the population into 340 groups defined by the combination of region, rurality, education, and employment status. We then categorize groups



that have a high average risk of poverty as “highly vulnerable” groups (e.g. headcount of poverty is more than twice the national average).

164. How many poor people are concentrated in such groups? In 1987, 35 percent of all *the poor* in Turkey were concentrated in such groups (as compared to only 10 percent of the population). By 1994 the share of the poor concentrated in these “vulnerable” groups had dropped slightly to 29%, but this corresponded to only 5 percent of Turkish population.<sup>29</sup> This suggests that the risk of poverty for these pre-identified vulnerable groups has risen. At the same time, poverty has become less concentrated in these pre-determined vulnerable groups. Nevertheless, international comparisons (for example, with Chile during the same period) reveal that poverty in Turkey is very concentrated among particular groups of households.

165. Given the characteristics of the poor in Turkey, policy prescriptions to alleviate poverty match the main thrusts of the strategy developed in the 1990 World Development Report: support growth and macroeconomic stability, while equipping the poor and the vulnerable with the right tools for participating in economic life, and design a strategy for assisting those who clearly fall behind. On the whole, it is very encouraging to see that during 1987-1994, despite the volatile macroeconomic performance, many households were able to find a road out of poverty. On the other hand, those who remain poor have very distinct characteristics that should allow policymakers to design specific interventions targeted at them.

166. However, there are three caveats to this rosy scenario. First, the elasticity of poverty with respect to growth is low: in other words, it will take a lot of growth and a long time to have a significant impact on poverty. Second, inequality is very high in Turkey and this lowers the impact of growth on poverty. Moreover, if inequality were to grow, its effect could easily swamp the positive impact of growth. Third, the current framework for pro-poor state interventions (mainly through transfers) appears to have only limited success in reaching the poor.

167. If the Government is to succeed in widely alleviating poverty it must take decisive actions on all these fronts. Not only must it provide the right macroeconomic and microeconomic environment to support growth, it must also provide the foundations for long-term improvement in the distribution of income. First, through investments in human capital and basic social services for the poor. Second, by eliminating any labor market constraints that may directly or indirectly hurt the poor. And third, by improving the framework for social assistance and social insurance, with a view to systematizing anti-poverty interventions and improving their targeting.

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<sup>29</sup> A comparison with Chile is revealing. Between 1987 and 1994 the share of population in highly vulnerable groups (defined in a similar way) in Chile declined from 28 to 4 percent.

## Chapter 4: The Impact of Government Expenditures<sup>1</sup>

*The social protection system in Turkey is one of the most extensive in the region. However, it faces some significant problems, which if not addressed could undermine its effectiveness in the future. Social assistance schemes are dispersed and disjointed, and lack a unifying targeting framework. Social insurance remains the main channel for state interventions, but risks excluding many of the poor, who are not employed in the formal sector. The social security system is financially unsustainable and runs large current deficits, which have to be financed out of budget revenues—drawing on budget resources that could otherwise be redirected towards the poor. Several other components of Government spending are explicitly or implicitly aimed at improving the living standards of the population: agricultural subsidies; benefits associated with public employment; and educational spending. The first two tend to benefit the middle class and the rich more than the poor; while the educational system—although comprehensive—does not provide enough access for the poorest segments of society. Steps are underway to revise the existing social insurance and assistance framework, with a view to increasing its fairness, effectiveness and financial sustainability. These efforts must be continued, with further attention devoted to ensuring that reforms do not exclude or hurt the poor.*

### 4.1 How has Turkey's Social Protection System Helped to Improve Living Standards?

168. A key role of the Government in any society is to combat market failure—which includes the inability of purely private endeavor to provide adequate sustenance for everyone in the population. The elderly, the disabled and children cannot (or, for children, should not) work. Many others, as we saw in Chapter 3, are employed, but unable to earn enough to sustain themselves and their family—the so-called “working poor”. In each case, the Government has a role in helping to provide for their needs. Moreover, the Government’s responsibility is not only to provide for the current well being of the population (through direct or indirect income transfers) but also to provide for their future welfare (through furnishing education and an environment conducive to employment generation).

169. How has Turkey’s social protection system risen to these challenges? *In many ways, the social protection system in Turkey is one of the most extensive in the region.* This represents a major achievement compared to other countries of a similar income level. In terms of current transfers, the social insurance system now theoretically covers more than four out of five Turkish citizens (as direct recipients or family members), and provides for pension payments as well as health care, disability, maternity and occupational injury. The Government also provides subsidies to agriculture, but it is not clear whether these transfers contribute effectively to raising living standards. More directly, for those employed in the civil service, or, until recently, in State-owned enterprises, the Government provided an array of wage and non-wage benefits to increase their living standards. Moreover, the ability of Turkish children to increase their earnings ability has been enhanced by the system of compulsory primary education for five years—recently increased to eight.

While extensive, the Turkish Government’s social protection framework is plagued by several problems:

- *Social assistance schemes are dispersed and disjointed.* The level of benefits is very small, and biased towards certain categories of the population. Some accrue equally to the poor and non-poor (e.g. old age income assistance). The best-covered groups are the elderly and the disabled, while the worse off are the working poor and the unemployed. There is a need to

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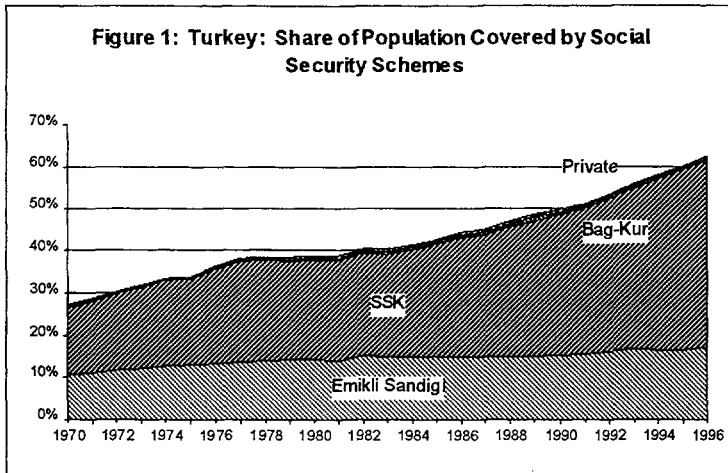
<sup>1</sup> This Chapter draws heavily from the two background papers by Arup Banerji and Guven Sak (available upon request).

consolidate these disparate efforts, and develop a comprehensive and more uniform social assistance program that adequately targets the poor.

- *Despite the wide coverage of the system, social insurance (and especially the pension system) fails to reach the most vulnerable households.* To the extent that the social security system is primarily linked to holding a formal-sector job, it may fail to reach the poorest individuals. While this is not a failure of the social insurance system per se, the lack of systematic anti-poverty interventions that fall outside of the insurance framework raises concerns for the future. If future social protection efforts are channeled exclusively through social insurance mechanisms, they are likely to keep excluding the poorest of the poor. Hence, in parallel to the continued development and improvement of its social insurance system, Turkey also needs to focus on systematic interventions aimed at those who cannot be reached through such formal mechanisms. Moreover, given the present scarcity of redistributive instruments in Turkey, the Government may want to assess the need for introducing a well-distinguished redistributive component within the social insurance system over the medium term.
- *The social insurance system is fiscally unsustainable, and is generating large deficits that need to be covered by the State budget.* By absorbing a large and growing fraction of state revenues, these deficits may crowd out any additional resources that would be directed towards the poorest in society. Moreover, the deficits in the general budget are a major contributor to inflation, which acts as a regressive tax. Efforts to place the system on a financially sustainable path are already underway with the new pension reform law approved in August 1999. However, the system will continue to require significant subsidies through the medium term.
- *The system of agricultural subsidies represents a significant drain on the budget, and is biased towards richer regions and larger farmers.* Agricultural support policies accentuate rather than mitigate the existing regional disparities. The system needs to be revisited, and consolidated into a limited lump-sum transfer, and targeted towards poorer farmers and poor regions.
- *The educational system, while comprehensive, does not provide enough access for the poorest.* The problem of access is particularly critical for secondary education. There also needs to be a greater push towards ensuring that *rural girls* have improved entry into schooling. The existing distributional gap between urbanized and rural Turkey, and between men and women, will not be eradicated unless there is truly equal educational opportunity for all Turkish children.

#### **4.2 Are Government Social Transfers Efficient and Effective?**

170. In modern Turkey, the Government recognizes its responsibility to provide social security. In fact, the Turkish Constitution states that “Every individual is entitled to social security. The state is charged with the duty of establishing or assisting in the establishment of social welfare organizations.” Early interventions were aimed mainly at protecting orphans and destitute children. In the early Republican period, the emphasis shifted to protecting Government workers, with the establishment of the Emekli Sandığı (ES), which provided the civil service with pensions and benefits. Over the last half-century, social security coverage has increased greatly, rising from about 3.9 percent of the population in 1950 to over 83 percent in 1996 (Figure 1). The system is mainly conceived as an insurance scheme, and geared towards maintaining the living standards of the population rather than reducing inequalities or assisting the poor.



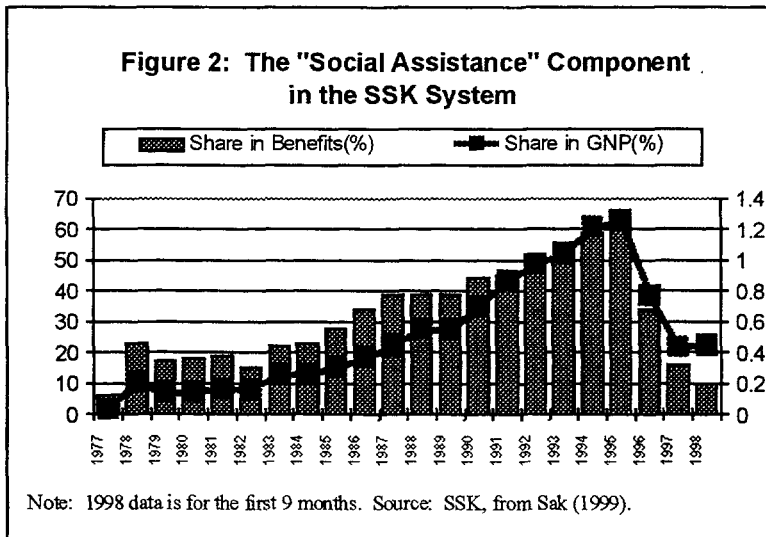
Source: Emekli Sandığı, SSK, Bağ-Kur, SPO.

**Social Insurance**

171. *Who Benefits from Turkey's Social Insurance Schemes?* Until the 1960s, the Emekli Sandığı (ES), covering only civil servants, was the only formal social protection mechanism. Social insurance coverage was extended in the mid-1960s by the creation of the Sosyal Sigortalar Kurumu (SSK). Formal sector wage workers (including casual

employees) became eligible to participate in the SSK scheme. The SSK scheme is the largest single social protection organization in terms of its coverage. The final piece of the social insurance mosaic was the Bağ-Kur, which offered benefits to the self-employed from 1972 and to agricultural workers from 1984.

172. These schemes were originally created as pension insurance schemes (to cover old-age, disability and survivorship). Only later, health care, maternity and occupational injury were added to their responsibilities. Although the pension schemes were originally established as



Note: 1998 data is for the first 9 months. Source: SSK, from Sak (1999).

funded defined-benefit schemes, *de facto* they have operated as a pay-as-you-go, where current contributors pay for pensions of current pensioners. Since many of the beneficiaries retire early, it is unclear whether even the retirement payments component can be properly called an "old-age" insurance system.<sup>2</sup> The low age of retirees resulted from the absence of a minimum retirement age and a short minimum contribution period. In practice, the

average retiree spends more time receiving benefits than contributing to the system.<sup>3</sup>

173. From 1977, the beneficiaries from Bağ-Kur and SSK also receive so-called "social assistance supplements". This payment bears little relation, in actuality, to social assistance as technically defined—being untargeted to vulnerable groups, and unfunded by the State budget.

<sup>2</sup> In 1997, the average age of new "old-age" male pensioners in SSK and ES was 47.1 and 48.5, respectively. De facto, male and female participants could start to retire as early as 43 and 38, respectively.

<sup>3</sup> Life expectancy at the average retirement age is 27 years compared an average contribution period of 19 years for SSK retirees

When introduced, it was called “fuel support”, but later, it was turned to a compensation for inflation. As Figure 2 shows, for the SSK, this unfunded component rose from 6 percent of total pension benefits in 1977 to 63 percent in 1995. Its share of GNP was also significant—rising to around 1.2 percent of GNP by 1994-1995. After 1995, this component was frozen and, as its real value dropped, its share in pension benefits has also declined steeply.

174. *A clear feature of the Turkish social insurance system is that it mostly covers the middle class.* Most of those eligible have held well-paying jobs (with the possible exception of a section of beneficiaries in the Bağ-Kur system) in the formal sector. Most of them have been able to earn enough, in a wage-earning job, to contribute towards their eventual retirement. This is confirmed by data from the 1994 Household Survey: in 1994, only 10.6 percent of the poor received State pensions, as opposed to 22.3 percent of the non-poor. Given that the system’s stated objective is to provide insurance not redistribute incomes, the finding that the benefits go disproportionately to the non-poor is not surprising. And it need not indicate that something is wrong with the system. However, the lack of systematic anti-poverty interventions that fall outside of the insurance framework raises concerns for the future. If future social protection efforts are channeled exclusively through social insurance mechanisms, they are likely to keep excluding the poorest of the poor.<sup>4</sup> Hence, in parallel to the continued development and improvement of its social insurance system, Turkey also needs to focus on systematic interventions aimed at those who cannot be reached through such formal mechanisms. Moreover, given the present scarcity of redistributive instruments in Turkey, the Government may want to assess the need for introducing a well-distinguished redistributive component within the social insurance system over the medium term.

175. *Averting a fiscal crisis.* Turkey’s social insurance system has been receiving large transfers from the State. The deficit of the combined system, beginning with just 0.5 percent of GDP in 1992, reached 2.8 percent of GDP in 1998. Without reform, the deficit was projected to grow rapidly surpassing 4% of GDP by 2010. Pension programs have been the primary source of the financial difficulties, whereas deficits in the health insurance programs have only started to emerge recently, most notably in Bağ-Kur. In fact, the lack of clear separation between health and pension accounting systems has allowed important cross-subsidies from health to pensions, particularly in SSK. The deficits are driven by a combination of two problems: a high replacement rate (pension benefits/insurable income), and a high dependency ratio (beneficiaries/active contributors) as a result of the low retirement age (Table 1). Over coming decades, the aging demographics would have severely aggravated the system dependency ratio, leading to explosive fiscal deficits (16% of GDP in 2050). As a result, the financial imbalances of the pension insurance system had become the most pressing fiscal problem.

176. Facing an imminent fiscal crisis, the new government that took office in May 1999 moved quickly to prepare a pension reform proposal. The new law was approved in August 1999 and become effective in September 1999. Pension reform was accompanied by the introduction of unemployment insurance.<sup>5</sup>

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<sup>4</sup> On the positive side, contribution coverage is increasing, raising hopes that the system will be better able to reach the poor in the future. At present, 75% of all males aged 30-42 are actively contributing to the system and will be entitled to receiving a pension. Female contributions, however, are still low.

<sup>5</sup> Minor amendments were also introduced to health insurance programs.

Table 1. Population Covered by Major Pension Programs, 1994

Institution	Eligibility	Contributors (thousands)	Total beneficiaries (thousands)	Old-age pensioners (thousands)	Dependency Ratio (Total beneficiaries/ contributors)	Dependency Ratio (Old-age pensioners/ contributors)	Avg. Replacement Rate All Beneficiaries (*)	Avg. Replacement Rate Existing Old-age Pensioners (*)
ES	Civil servants	1981.982	1114.42	678.689	0.56227554	0.342429447	79.8	91.9
SSK	Private sector employees and public sector workers except civil servants	6183.647062	2519.373	1718.087	0.407425096	0.277843639	78.3	90.6
Bag-Kur	Self employed urban workers and farmers	2712.352562	997.6909971	573.5191176	0.367832343	0.211447113	59.8	80.5
Total		10877.98162	4631.483997	2970.295118	0.425766852	0.273055721		

Note: \* average benefit as a percent of average covered wage. Source: SSK, ES, BK and World Bank estimates

177. The reform introduces a minimum retirement age of 58 and 60 respectively for females and males entering the reformed system, and complements a higher retirement age with increases in the minimum contribution period. Current contributors are allowed a gradual transition period, starting with a minimum retirement age of 38/43 for female/male for those who are less than two years away from retirement, and increasing to 52/56 for those who are more than 10 years away from retirement. The benefit formula was modified for SSK and BK participants, reducing the income replacement rate per years of contributions. Contributions and benefits were harmonized across SSK and BK, eliminating former inequities that had favored SSK participants. Contributions and benefits will continue to differ for ES participants. In BK, onerous penalties were introduced on contribution arrears, which should improve its low collection yield and financial performance. On aggregate, the reform will lead to a remarkable reduction in the projected deficits to 1.8% (1.1%) of GDP by 2005 (2010) compared with more than 3% (4%) of GDP in the old system.

178. Despite these achievements, the pension system will continue to require subsidies in the medium-term, and its deficits will start growing by the mid-2010s, surpassing 5% of GDP by 2050.<sup>6</sup> The continued medium-term deficits result from the gradual transition granted to current contributors. In the longer-term, the retirement age of new entrants will not be sufficiently high to compensate for the worsening demographics. Albeit reduced, the income replacement remains high relative to contribution periods and affordable rates.

179. The high projected deficits for the long-term will seriously impair the pension system's credibility and will encourage evasion, particularly among younger cohorts. The continued fragmented structure of the pension scheme will be poorly suited to the future needs of a more mobile and integrated labor market. Separate pension schemes create greater opportunities for granting privileges to special interest groups and create inequities among participants of the social

<sup>6</sup> Results from Treasury projections differ from World Bank figures. Based on Treasury projections, deficits decline at a lower pace but the system's long-term deficit falls below 1% of GDP. The World Bank has based its projections on PROST model (version 8) and the Treasury on an ILO actuarial model adapted to Turkey's pension system. Besides differences in the models' methodologies, projection results differ due to different assumptions on critical macroeconomic variables, coverage expansion, and life expectancy. In particular, Treasury's assumptions for macroeconomic growth are more optimistic, and life expectancy projections more pessimistic and assume no increases after mid-2020s.

insurance system. Maintaining distinct pension schemes for different economic sectors will also impair opportunities for redistributing resources within the system towards low-income workers.<sup>7</sup>

180. The newly introduced unemployment insurance scheme will cover SSK workers. The system will become effective as of June 2000, but no payments will be made before February 2002. The system will be financed with contributions from employers, employees and a government subsidy (equivalent to 3%, 2%, and 2% of the covered wage). It will not imply an increase in the overall contribution rate since it will replace contributions currently paid to the compulsory savings scheme. Nonetheless, the 7% overall contribution rate to finance the scheme is high compared to international experience, and the government subsidy will only add to the redistribution of fiscal resources towards the social security system. Benefits levels are adequate (50% of insurable salary), but benefits will be provided for long periods up to 10 months. Moreover, unemployment insurance will not replace the mandatory severance payments scheme as former proposals had recommended creating a redundancy between the two programs.<sup>8</sup> As with other interventions that operate exclusively through employee/employer contributions, the introduction of unemployment insurance risks increasing the differential treatment between formal and informal sector workers. Since there is a government subsidy component, it also represents a reallocation of fiscal resources towards workers in the formal sector, who for the most part receive higher wages than those in the informal sector, and are less likely to be poor.

181. *Future steps.* Government plans call for additional reforms to the pension system. The reform plan includes (i) improved efficiency of the three social security agencies and strengthened accountability of the three agencies to a single government institution, the Ministry of Labor, and (iii) development of voluntary private pension plans. A pension reform committee, under the leadership of the Ministry of Labor, is already drafting proposals. The financial and structural weaknesses pointed out earlier indicate that the objectives of the second reform phase need to be broadened if a sound retirement income system is to be established. Future reforms will need to address the persistent financial problems while guaranteeing adequate income security to the elderly. To achieve these objectives, the Government will be confronted with a series of trade-offs. Financial viability will require further reductions in the replacement rate and/or in the number of beneficiaries (through an increase in the minimum retirement age). Compared to international experience, replacement rates remain high and minimum retirement age remains low leaving room for introducing further adjustments to both. Further reforms should also affect current contributors to achieve medium-term viability and diminish inter-generational transfers.

182. The reform should assess the need for further protection of low-income workers who form part of the system, and evaluate the social and economic impact of introducing a well-distinguished redistributive component within the system. Other countries provide this protection through the broader social safety net financed from general tax revenues. But existing demands on the social safety net and partial coverage of the system may favor redistribution within the social insurance system. Fragmentation of the social insurance system across economic sectors will impair redistribution both within the pension and health insurance system. This could be addressed in several steps, starting with further harmonization that would lead to its eventual unification.

183. A sounder mandatory pension system could be built on the basis of the existing PAYG scheme, but alternative models for retirement income provision could be explored, for example a

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<sup>7</sup> Consistent with findings in the earlier parts of the Report, average earnings of SSK and ES participants are higher than those of BK participants. We also know that the self-employed and agricultural workers are more likely to be poor.

<sup>8</sup> Severance payment benefits are equivalent to a month per year of work up to 12 months.

rationalization of the PAYG accompanied by the establishment of funded pillar serviced by the private sector. This model would allow a diversification of risks between the public and private sector pillars. Other OECD and non-OECD countries (including middle income countries) have already implemented funded pillar reforms with positive results. Finally, the framework of the newly introduced unemployment insurance scheme could also benefit from policy revision to prevent additional fiscal costs and find a better balance between risk reduction and moral hazard. The justification for a government mandates severance payments scheme is no longer present. In the presence of unemployment insurance, private firms and workers should be freely allowed to negotiate severance payments

### *Social Assistance*

184. *Social assistance payments are typically those paid from the general budget to sections of the population that are deemed particularly vulnerable, and are the most direct ways of compensating for the market's failure to provide people with adequate living standards.* They are distinct from the "social insurance" payments discussed above, which are funded from contributions by employers or employees through payroll taxes or contributions.

185. How effective are Turkey's social assistance schemes? Groups outside the defined benefit social insurance mechanisms in Turkey are served by several schemes, but the total amount of assistance is relatively small. The schemes are uncoordinated or, at best, loosely coordinated. The most important of them are the following:

- i. The Social Assistance and Solidarity Encouragement Fund (SSF) was established in March 1986 under Law No. 3294. It is an umbrella organization financed by earmarked taxes and administered by the Prime Ministry. It allocates resources to 934 regional affiliate foundations in every province, and provides assistance to needy people, chosen at the discretion of the foundations. Benefits in-kind include food, clothing, fuel, medicine, and a variety of small business/self-employment activities. It is the largest program of pure social assistance in Turkey, having reached some 4.2 million beneficiaries through March, 1999.
- ii. The Old Age and Disability Assistance Scheme is administered by the ES and local authorities. This was established in 1977 under Law 2022, and provides benefits for those over 65 and those more than 40 percent disabled. From 343,250 beneficiaries in 1977, it had grown to have 908,619 participants by September 1998, with 81 percent of them receiving old age support and the remaining 19 percent being compensated for their disabilities.
- iii. Green Card scheme, begun in 1992—for health care to those with monthly income less than one-third of the minimum wage. Possible beneficiaries include some in the rural population, employees unregistered with any social security system or the urban unemployed. In 1995, there were 5.5 million cardholders, with less than 20 percent getting free treatment in state hospitals and health centers in 1994.
- iv. Social Services and Child Protection Agency (SSPCA), begun in 1983, runs orphanages and old people's homes, and is staffed by professional social service workers. Its target group is children that require protection, the elderly and the disabled, to whom it provides small amounts of assistance. Over 17,500 children were under its direct protection in 1998, of whom about 10,400 were in orphanages; 5,500 elderly people were in homes for their care, and 4,500 disabled people were treated at the agency's centers.

186. In the 1990s, two other bodies were formed to help provide social assistance. One is the newly established Administration for the Disabled, which is still under organization. The second is the General Directorate for the Enhancement of the Status of Woman. Both are tied to the Prime Ministry and are basically advisory bodies.



187. *The level of benefits disbursed is very small.* For example, for the Law 2022 Scheme, the level of social assistance benefit as of July 1998 was TL 3,886,500 for an individual, while if a family is applying for both elderly and disability allowance, the amount was TL 5,779,750. In real terms, this corresponded to just TL 7,582 in 1987 prices—a steep decline from the real value of TL 37,935 in 1977—and clearly insufficient to be the principal means of sustenance for a family. This is borne out from the analysis of the 1994 HICES, which showed that only 7.9 percent of the incomes of the non-poor and just 5.8 percent of those of the poor came from State transfers. Since the average income of the poor in 1994 was just 49.3 percent of the average income of the non-poor, these transfers represented only a minute contribution to the welfare of needy households.

188. While the Social Solidarity Fund is the largest supplier of social assistance, most of its support is provided not as cash transfers but in kind support for health care and fuel consumption needs.<sup>9</sup> Overall, this points out an innate contradiction in the system, underlined by the data in Table 3 below. Although the Social Solidarity Fund allocates funds in a discretionary and somewhat *ad hoc* manner, the volume of funds transferred by this poorly targeted system is greater by far than the relatively organized and more systematic 2022 scheme.

189. The Green Card system is supposed to be most directly aimed towards the poorest in society. However, the 1995 Annual Income Survey found that, although 4.7 percent of the poor receive Green Card transfers, 2.1 percent of the non-poor also received such benefits. More significantly, despite the existence of the Green Card scheme, two-thirds of the poor were uncovered by medical insurance in 1994.

190. The SSPCA provides the most generous level of support to those under its protective care. For children in “protected families”, i.e., where they are regarded as poor, the monthly payment ranged from TL 16,200,000 to 27,500,000 in 1998—a large multiple of the benefit under the Law 2022 scheme. The benefit formula is also indexed to inflation through a link to the government employee salary formula, updated every six months. As a result, the help provided by this fund, the smallest of the schemes, probably is most cost-effective in achieving its goals.

191. *Clearly, the best covered of the groups are the elderly and the disabled, while the worse off are those of working age, and the unemployed.* The elderly are covered either under the three main social insurance schemes, or under the 2022, SSPCA and Green Card schemes, with other discretionary assistance also possible from the Solidarity Fund and other foundations. The unemployed, on the other hand, are not covered by any defined benefit schemes, and have to rely on being identified and assisted by social workers who administer the discretionary schemes. This situation is bound to improve once the newly-adopted unemployment insurance scheme becomes active. However, the new scheme will apply only to workers within the SSK system, and will thus not reach unemployed workers from the informal or agricultural sectors. The existing categorization also excludes the “working poor”, who are the least eligible for Government transfers. These failings point to the need to introduce a more systematic, means tested social assistance program aimed at the poor-independent of age, employment status, or disability.

192. *Fiscal costs of the social assistance programs.* These social assistance schemes, while providing relatively insignificant assistance to families, do have a budgetary impact, but one that

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<sup>9</sup> The only consolidated source of information for this is a 1996 study by the State Institute of Statistics, which reported that only 20.3 percent of support was for periodic payments. 19.6 percent was for educational assistance, 13.2 percent was for food and clothing, and 12.2 percent was for fuel. Case studies, of particular foundations, by the ILO have confirmed this general picture.

is smaller than that of the social insurance system. The Social Assistance and Solidarity Scheme is the largest scheme of pure social assistance in Turkey, with disbursements were about 0.11 percent of GNP in 1997. The Old Age and Disability Assistance scheme, administered by the ES and local authorities, had disbursements of just 0.06 percent of GNP in 1997. The Green Card scheme disbursed benefits worth 0.07 percent of GNP in 1996. While the Social Services and Child Protection Agency (SSPCA), which is funded by allocations from the State budget and a share of revenues from municipalities, provincial administrations, the National Lottery, etc., disbursed 0.04 percent of GNP in 1996. *As Table 2 shows, the inflation compensation paid by the SSK, wrongly classified as "social assistance", alone was significantly larger than the combined disbursements of all the assistance schemes.*

**Table 2. Size of Social Assistance Schemes in Turkey: Share of Allocated Funds in GNP**

Years	2022 Scheme	Solidarity Fund	Green Card	SSCPA	Total Public Social Assistance Expenditure	Inflation Compensation Payments of SSK
1993	0,12	0,11	0,03	0,05	0,31	1,05
1994	0,09	0,14	0,06	0,04	0,33	1,22
1995	0,06	0,08	0,08	0,04	0,26	1,26
1996	0,05	0,06	0,07	0,04	0,22	0,77
1997	0,06	0,11	n.a.	n.a.	n.a.	0,44

Source: Sak (1999)

193. *There are perceptible overlaps between the coverage of the various social assistance schemes, thus making the set of social assistance schemes relatively inefficient at achieving its goals at minimum cost.* Since the disbursements are mostly discretionary, there is no centralized coordination among the schemes, as a result of which some individuals may get disbursements from all schemes, or from none. As an example, Table 3 examines the eligibility for social assistance of five selected groups that are not covered by public social insurance. In the table, "yes" denotes that a member of the group is covered by the corresponding social assistance scheme, "no" that it is not. "Possible" denotes that it is feasible for a member of the group to receive support, given the discretionary powers of the operators of the scheme. This, for example, is particularly the case for the Social Solidarity Fund, which has no strict regulations to dispense funds, but depends on the judgement of the local government official, or *kaymakamlık*. The *kaymakamlık*'s office also determines who benefits from the Green Card health care scheme, under fairly loose eligibility criteria. Only the SSPCA has a defined group of beneficiaries (the elderly and poor children), and is staffed by qualified social workers, who are required to be graduates of the School of Social Services of Hacettepe University. Moreover, in the absence of a unique personal identifier system, it is theoretically possible to receive benefits from one of the three public social security systems, and also get one or more of the social assistance benefits. For example, Sak (1999) quotes anecdotal evidence to suggest that 30 percent of the beneficiaries of Law No. 2022 may not be eligible for social assistance support.

**Table 3. Target Groups of Social Assistance Schemes in Turkey**

Participant	2022 Scheme	Solidarity Fund	Green Card	SSCPA	Other (private foundations etc.)
Children (0-20 years of age)	NO	POSSIBLE	YES	YES	POSSIBLE
Elderly (65+)	YES	POSSIBLE	YES	YES, from 60+	POSSIBLE
Women (before 65)	NO	POSSIBLE	YES	YES	POSSIBLE
Disabled	YES	POSSIBLE	YES	YES	POSSIBLE
Unemployed	NO	POSSIBLE	YES	YES	POSSIBLE

Source: Sak (1999)

194. *Private and local government sources of social assistance are not adequate to fully compensate for the gaps in the public program.* There are additional schemes operated by municipalities, who provide social assistance services including healthcare, kitchens for the poor, subsidized bread and basic food, and operate residential centers for the elderly and the children. Some of these services are also provided by special provincial administrations (*İl Özel İdaresi*) and village administrations (*muhtarlık*). Leaving out the investment expenditures, the municipalities' social transfers amounted to about TL 4,316 billion in 1996. This compares with the TL 9,710 billion spent in that year under the Green Card scheme, and the TL 8,864 billion spent by the Social Solidarity Fund.

195. Private associations, such as Red Crescent (*Kızılay*) and the Social Welfare Society, also provide both cash and kind benefits for the individuals in need. However, the distribution of assistance is still discretionary, and there is still no coordination of the social assistance benefits. And the volume of social assistance expenditures remains to be too low despite the existence of these latter schemes—in 1996, the Red Crescent's total expenditure was just TL 166 billion, and that of the Social Welfare Society a minuscule TL 12.8 billion.

196. *Proposals for reform.* There are efforts underway to unite the eligibility criteria of some of the social assistance schemes, and to professionalize the distribution system.<sup>10</sup> *But there are additional steps that should be taken in order to improve the efficiency and equity of the system.* These comprise mainly efforts at consolidation and coordination within the system, and better identification of beneficiaries. As already discussed, the social assistance system relies on a multiplicity of providers, and the discretion of often untrained local government officials to determine eligibility. This may give rise to two types of errors—those who are less needy may get benefits (or those who are needy may get benefits from many sources); and those who are needy may be overlooked by the system.

197. There is first the need for consolidating the myriad system of social assistance providers. *Turkey's Seventh Plan has already proposed the creation of a Social Aid and Service Institution, in charge of administering all types of social aid.* This should be instituted as soon as is feasible, in order to coordinate various schemes run by the central government and local authorities. It would also serve as a liaison with services offered by private and voluntary institutions, and encourage private sector funding. Such an agency would take over from the current SSPCA, but with a broader mandate. Like the SSPCA, it should be organized with personnel of trained social workers.

<sup>10</sup> Specifically, the State Minister responsible for SSPCA and the Social Solidarity Fund, has proposed that the vice governor responsible for the fund and social services to be the same person; that application processing be done by social workers of SSPCA; and that the Fund administrators employ social workers directly.

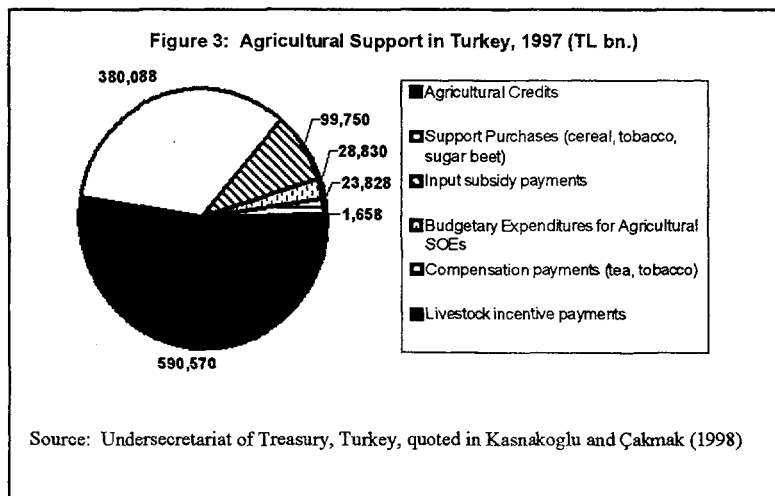
198. It would also need to provide for a more standard system of deciding eligibility. Here, the discretionary powers of the government officials needs to be limited by providing clear and unambiguous guidelines, with an uniform procedure for measuring declared wealth and/or income. This should be supplemented by observational inputs from trained social workers working in the locality, who could supplement the wage data with observable indicators of resources, such as telephones, cars and the like (see Chapter 3). Simultaneously, in order to enhance coordination within the system and coordinate with the social insurance system (which is, after all, by far the largest providers of transfers to the population), *there is the need to develop a unique identifier system.* This would help to effectively prevent an individual to get support from more than one scheme that is in place. Currently, there are three such efforts under way. The Internal Revenue Office has begun distributing an unique tax number for each individual. Moreover, the MERNIS project at the Interior Ministry is developing citizenship numbers. A third project is already under way to survey the possibilities of instituting a unique identifier system for the three social security institutions. These efforts are redundant, in a way, and would also greatly benefit from consolidation.

199. Turkey could experiment with the *introduction of a single targeted cash benefit*, to gradually replace the myriad of existing schemes. Cash transfers are more efficient than in-kind help, less costly to administer, and preferred by the poor. Targeting could be based on some form of means-testing, although for this to work efficiently requires a strong culture of income declarations and sharp correlates of poverty. An alternative to a means-tested minimum income supplement would be to introduce a simple cash benefit that is either flat or graduated for a few income classes or groups of beneficiaries.

200. Regardless of the ultimate approach chosen, such a benefit would have to be introduced gradually. A national system for targeting the poor is not available and would have to be developed and tested. Turkey has little experience with income testing programs, and would need to build this expertise. Social assistance to date has been provided essentially only in kind, and institutional capacity to manage a targeted cash benefit is weak. In such circumstances, a logical way to move forward would be to set a medium-term goal of a national poverty benefit while piloting approaches in two or three poor regions.

#### 4.3 Are Turkey's Agricultural Support Policies Equitable?

201. Turkey's agricultural subsidy program has multiple objectives, one of which is to improve living standards. Beginning with wheat price supports in 1932, subsidies and support to agriculture in Turkey are now provided through a variety of instruments. These include output price support (currently for grains, tobacco, tea, and sugar-beets), fertilizers and credit subsidies, price controls and market interventions to protect consumers, and irrigation investments.



202. *The Fiscal Cost of Agricultural Subsidies.* Agricultural subsidies in Turkey have a significant fiscal cost. In 1997, data from the Treasury indicated that direct payments to the

agricultural sector totaled TL 5.3 trillion, mostly from support purchases, while agricultural credits worth a further TL 5.9 trillion (Figure 3).

203. In 1996 (the most recent year for which an official analysis is available from the OECD), total transfers to the agricultural sector, including from taxpayers and consumers, were estimated to be around \$US13.8 billion (well over half of agricultural GDP).<sup>11</sup> Of this, 56 percent, or almost US\$7.8 billion, came from direct budgetary outlays. The rest was due to the implicit taxation of consumers, as a result of higher domestic prices caused by the subsidies. As shown by Table 4, these transfers are not only high in absolute terms, but are also much higher than the relative transfers in OECD countries. Thus, these substantial transfers need to be examined to see whether they are efficient and equitable.

**Table 4. Total Transfers to Agriculture in Turkey and OECD Countries (percent of GDP)**

	1986-88	1990-92	1993-95	1994	1995	1996
TURKEY	6.4	8.4	6.5	6.0	7.6	7.8
OECD	2.5	2.1	1.6	1.6	1.5	1.3

Source: Kasnakoglu and Çakmak (1998), from OECD sources

204. *Regional distribution of the subsidies.* At first sight, the subsidies appear to benefit all farmers. In 1996, for example, agricultural subsidies provided roughly one-fourth of the incomes of individuals in agricultural households.<sup>12</sup> But overall, the system seems clearly regressive—first, because it puts a fiscal burden on the budget that may crowd out resources for other pro-poor policies, but also more directly, since it benefits relatively better-off farmers, and raises urban consumer prices.

205. *The evidence suggests that farm subsidies do not promote equity, being biased towards richer regions, and larger farmers.* This is principally because the access to subsidies does depend on the farmers' agricultural output and input. As a result, only about one-fifth of total agricultural subsidies go to the relatively poor east and southeast Anatolia regions. On the other hand, the west and south coastal regions, the wealthiest regions in Turkey, produce about half of the value of agricultural production, and hence receive about half of the subsidies. In terms of output, livestock, which has relatively higher subsidies, presents an interesting case. The east and southeast Anatolia regions are specialized in livestock, and thus can be expected to benefit disproportionately from at least this form of subsidy. Nevertheless, this is mitigated by the fact that central Anatolia has a herd composition favoring cattle, and Aegean and Thrace are specialized in the processing of animal products, especially milk. Moreover, although farmers in the Aegean, Thrace and Mediterranean regions have just a third of the livestock, they own more than half of the culture breed cattle, which are more heavily subsidized. Thus, agricultural support policies tend to accentuate rather than mitigate the current regional income disparities.

206. This general finding is underlined by the fact that farmers in the poorer regions are relatively less intensive in the use of subsidized inputs. The poor north-eastern and south-eastern Anatolia regions have, by far, the lowest share of settlements using chemical fertilizer (about 77

<sup>11</sup> The OECD estimate is derived using a consistent methodology for all OECD countries by taking the actual transfers for 13 crops and livestock, which are the same across all OECD countries, and then "grossing up" the figures to derive estimates for agriculture as a whole. While the grossing up procedure may raise the estimate of the transfer, the OECD methodology understates the true figure to the extent that it does not include transfers to State Enterprises through government bonds and writeoffs.

<sup>12</sup> This is a rough calculation, from Kasnakoglu and Çakmak (1998) "The Fiscal Burden and Distribution of Costs and Benefits of Agricultural Support Policies in Turkey", mimeo., January 1998: In Turkey, the per capita income of the 3.5 million agricultural households (consisting of approximately 17 million members) was around \$2000 in 1996. The per capita subsidy in agricultural households amounted to about \$500. For a full-time farmer this amount, on average, doubles to \$1,000—or 50 percent of the farm income.

percent, versus over 98 percent for all other regions).<sup>13</sup> Similarly, these poor regions also own much less agricultural machinery, and hence benefit less from the related input subsidies such as those on fuel and electricity (see Akder, 1999).

207. *Distribution of the subsidies by size of farms.* In Turkey, two-third of farmers own and cultivate small land holdings, of 5 hectares or less. These small farmers are typically less efficient than larger farmers, and on average poorer. However, the evidence suggests that they benefit less from the system of agricultural subsidies than larger farmers. The reason is simple: large farmers have both better access to, and more intensive use of, subsidized resources such as water, machinery, fertilizers and chemicals—and hence benefit more from existing input subsidies. The fertilizer subsidy provides an example. Farmers' benefit from the subsidy is roughly proportional to their fertilizer use, which in turn is roughly proportional to the area they farm.

208. Estimating benefit distribution by using the distribution of land as proxy, 37 percent of the overall subsidy goes to the 5 percent of farmers with the largest farms, while only 22 percent goes to the two-third of farmers with less than 5 hectares. It should be mentioned that, rough as it is, this method overestimates the receipt of subsidies by small farmers. Smaller farmers tend to use less fertilizer per hectare (for example, about 89 percent of the smallest wheat farmers use fertilizer, compared to almost all of the largest ones) and some may not even bother to claim the subsidy on the small amounts they use.

209. The major users of credit subsidies are also not poor farmers. Credit subsidies are provided through Ziraat Bank, which has 1,250 branches nationwide, and through agricultural credit co-operatives, with 2,526 branches and 1.6 million members, most of whom are small farmers. In 1997, on average lending rate was over 66 percent—which implied an average interest subsidy of around 74 percent. While this provides poor farmers with cheap credit, they are not the primary beneficiaries. Since richer farmers generally borrow more, they reap more of the interest subsidies. Non-farmers also benefit. In fact, the Farmers' Association (TZOB) claimed in 1997 that between a quarter to a third of borrowers may not even be farmers at all. Thus the pro-equity impact of the credit subsidy may be negligible at best.

210. *Proposals for reform.* To the extent that agricultural subsidies are aimed to improve the earning ability, and hence living standards, of poorer farmers, they should be consolidated into a "capped", or limited, lump-sum transfer. Capping the total amount of the subsidy per individual farmer would help to promote equity, by proportionately reducing the subsidy received by larger (and richer) farmers, and eliminating the direct burden on consumers. It would also help the poor farmers who grow their produce mainly for own consumption—and thus do not benefit from agricultural support prices—and those who are too poor to use purchased inputs such as chemical fertilizers. Finally, to the extent desirable (and politically feasible), the amount of the lump-sum subsidy could be varied across regions, with farmers in poorer regions receiving a larger amount.

211. *A lump-sum, capped subsidy would also help the Treasury by making the transfers both lower and more predictable.* To the extent that it is feasible to target the subsidy to the poorest farmers, the fiscal costs to the Treasury would be reduced. In addition, it would promote better budget planning and execution—unlike the current system, where budgetary outlays inherently depend on individual farmers' decisions on the use of inputs, and the vagaries of crop cycles for output. At the same time, the better planning will enable the Treasury to make payments more promptly—and thus effectively meet farmers' peak seasonal needs for cash. The transparency and ease of the system would also increase the efficiency of the subsidies, by making the system less subject to fraud.

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<sup>13</sup> Kasnokoglu and Çakmak (1998), Table 16.

212. *Lump-sum subsidies will also help farmers as a group.* On-time, regular payments will help with farmer's cash-flow problems. In addition, it would make the farmers' income stream more predictable as a whole, allowing for planning and helping them to obtain credit (in fact, the transfers can themselves be used as collateral for loans). By removing the incentive to overuse under-priced inputs, farmers will make their input decisions more efficiently, based on their true cost.

213. *Consumers would be helped as well, with the reduction in prices of agricultural products.* This is particularly true for urban consumers, and for those rural who are net consumers of food, who would benefit from the elimination of support prices that are higher than world market prices.

#### **4.4 Is Public Employment in Turkey a Social Protection Mechanism?**

214. *Public employees in Turkey, as a whole, have distinctively better living standards than their counterparts in the private sector* (Table 5). For example, although one-third of all employees declared themselves to be in the public sector in 1994, only 19 percent of the economically vulnerable were in public employment, and only about 8.5 percent of the absolute poor employees were in the public sector.

**Table 5. Public Employment and Poverty**

	Population	Regular and Casual Employees
Share of public employees in whole group	4.8	33.0
Share of public employees among <b>economically vulnerable</b>	2.3	19.0
Share of public employees among <b>absolute poor</b>	0.9	8.5

Source: Calculations from 1994 household survey

215. This may be due to a host of reasons. One, of course, is that public employees tend to be better educated as a group, and thus capable of higher earnings in absolute terms. But other factors contribute to the higher living standards as well. Public employees were the first to be provided with social insurance and health benefits through the Emekli Sandığı, enjoy a range of other non-wage benefits including job security (marked, in the data, by a much greater length of tenure), and have, until recently, enjoyed a higher wage as well. *Is, therefore, public employment an indirect way for the Government to provide the population with social protection?* And, if so, is this the most efficient way to do this?

#### **Employment in the public sector as a means of social protection**

216. The share of public sector employment in Turkey's economy rose rapidly in the late 1960s and early 1970s, with the average annual growth in public administration employment reaching an amazing 11 percent in 1970. SOE employment grew by 4.7 percent on average between 1980 and 1984, at a time when annual private employment growth was relatively stagnant at 1.4 percent.<sup>14</sup> By 1988, fully three percent of the population, and over 17 percent of non-agricultural employees, were public *administrative* employees (Table 6), with total public employment (including in State-owned enterprises) being about one-and-a-half times that number. The enormous share of public employment has fallen—to just over 10 percent of employment by 1994—but remains very high by international standards. As a result, the Government was spending nearly 8 percent of GNP in 1995 on personnel costs alone. By 1998, driven by significant increases in real wages post-1996, the wage bill for the consolidated budget had risen to a non-negligible 9.5 percent of GNP!

<sup>14</sup> Banerji and Sabot (1996).

**Table 6. Public Administration Employment Indicators, 1960-1994**

Year	Percent of Public Administration in Non-Agri. Administration Employment	Number of Public Employees	Average annual rate of growth of Public Administration Employment
1960	10.6	317,362	7.50
1970	10.0	493,191	10.97
1980	18.4	1,381,431	2.38
1988	17.2	1,667,141	1.21
1990	-	1,112,263	-
1994	-	1,412,225	6.74

Source: Tansel (1999)

217. *In the relatively stagnant economy of the 1980s, increasing public employment was clearly a demonstration of the Government's desire to protect the earnings capacity of the workforce—that is, the Government was using employment as a tool of social protection.* The rise in public employment was naturally associated with an increase in overstaffing, with additional employment generating little in the way of extra output or quality of service.

218. There are many examples of such overemployment in SOEs. In 1993, the World Bank estimated overemployment in all SOEs as 33 percent of the labor force; in TCDD (the railways) overstaffing was 40 percent, and in each of the Coal, Iron & Steel and Fertilizer SOEs, the overstaffing was over 33 percent.<sup>15</sup> In the agricultural SOE Tekel, the cigarette division alone has 5,000 employees estimated to be redundant and the Seker factories employ one-third more staff than private sector plants of similar capacity and technology.<sup>16</sup>

**Table 7. Percentage Distribution of Public Employees by Organization and Contractual Status in 1990, 1994**

	1990			1994		
	Budgetary <sup>a</sup>	State Owned Enterprises	Municipalities	Budgetary <sup>a</sup>	State Owned Enterprises	Municipalities
Admin. Employee <sup>a</sup>	81.2	7.0	29.9	93.4	9.8	56.2
Contracted Personnel	0.8	35.1	0.1	0.7	36.6	1.4
Regular Worker	14.3	55.0	56.1	5.6	51.9	41.1
Casual Worker	3.7	3.0	13.9	0.3	1.6	1.2
<b>Total (percent)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Total (in thousands)</b>	<b>1,146.0</b>	<b>695,430</b>	<b>60,384</b>	<b>1,433.4</b>	<b>653,045</b>	<b>17,382</b>

Note: <sup>a</sup> includes General Budget, Annexed Budget and Special Fund. Source: Tansel (1999)

219. In the 1990s, employment in State-owned enterprises (SOEs) and municipalities has fallen sharply (Table 7). In the four years to 1994 alone, overall SOE employment fell by over 42,000. But the employment loss was not uniform—43,500 regular workers lost their jobs, but 15,300 administrative workers were added. There was a sharp rise in the proportion of administration workers in both budgetary and municipal employment as well—although the absolute number of municipal administrative employees were halved during these years. *The fact that this drastic fall in employment, in both SOEs and in municipalities, occurred without a correspondingly large drop in the output of either goods or public services, is another indicator of the extent of overemployment that existed in these institutions.*

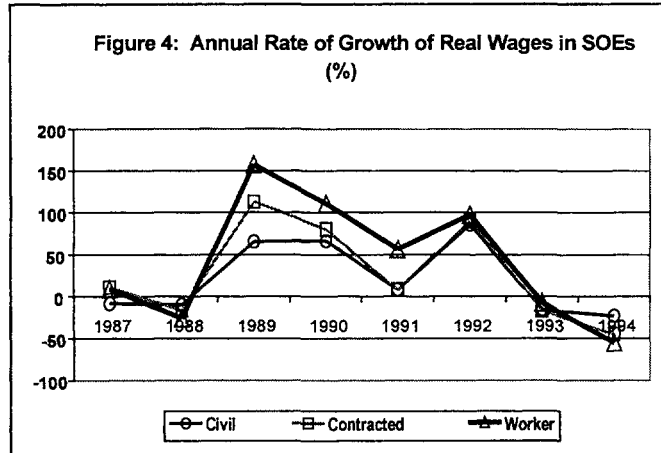
<sup>15</sup> Banerji and Sabot (1996).

<sup>16</sup> Coopers and Lybrand (1995, 1996).



**Relative earnings as an indicator of social protection**

220. The existence of overemployment alone, of course, is not a clear indication of the use of public employment as for social protection. The Government would be providing a transfer to ameliorate market failure only to the extent that the market (that is, private sector enterprises) was not providing the employee with adequate earnings. *Are, then, total public earnings in Turkey significantly higher than private earnings?*



Source: Tansel (1999)

221. *When wages alone are considered, it is not clear that public employment comes with a “rent” that was aimed to provide social protection.* This has been particularly true since the 1980s, which saw substantial wage erosion in the public and private sectors alike with possibly a larger erosion in the public than in the private sector. As a result, moonlighting by public sector workers increased.<sup>17</sup> Both the public and private sector workers made up the loss in wages after the general election of 1989, partly because of the increased power of the trade unions. The 1991 round of the collective bargaining process led to further wage gains. These gains, however, disappeared with the 1994 crisis and the public sector has seen its wages erode considerably (Table 8). While, in 1998, the real take-home pay for civil servants is still greater than the level in 1991, neither public nor private sector workers have been able to win back the real wage gains of 1991.

**Table 8. Developments in Net Take Home Pay for Civil Servants, Public Sector and Private Sector Workers, 1989-1998**

Year	Index of Take Home Pay			Real Percentage Change		
	Civil Servant	Public Sector Worker	Private Sector Worker	Civil Servant	Public Sector Worker	Private Sector Worker
1989	100	100	100	-	-	-
1990	115	116	116	15.0	18.4	16.3
1991	123	170	160	7.2	43.6	37.1
1992	140	180	169	13.8	6.0	6.0
1993	143	195	172	2.1	8.0	1.7
1994	112	195	141	-21.9	0.0	-18.2
1995	107	160	129	-4.7	-17.1	-8.3
1996	115	121	132	7.6	-25.0	1.9
1997	134	144	128	16.5	19.2	-3.0
1998	133	145	141	-0.7	0.2	10.3

Source: Tansel (1999), from State Planning Organization (1999), Table 11.6: 53

222. The apparent trends in Table 8 are corroborated by a recent study, using 1994 data, which establishes (after controlling for sample selection and characteristics) that *SOE wages are higher than wages in the covered private sector wages (except for those with university education), and those in turn are at parity or higher than public administration wages.*<sup>18</sup> The “rents”, in the form of higher wages for comparable characteristics, in SOEs may be due to several factors, such as unionization or monopoly power—but may be purely due to the “social protection” motivation.

<sup>17</sup> Tansel (1996).

<sup>18</sup> Tansel (1999a). “Covered private sector” indicates those wage earners in the private sector who are covered by social security.

223. However, the study also finds that public administration wages for women are higher than covered private sector wages. The reason for this is interesting—in 1994, while the public sector maintained parity between men's and women's wages, men's wages were considerably higher than those for women in the covered private sector. *The social protection element may thus be the strongest for women in the public sector—with the Government compensating for the failure of the market to be non-discriminatory by providing women with equal pay for equal work.*

224. *While the wage differentials in the public sector indicate some advantages to public sector employment, the greatest benefits may be non-pecuniary.* A great advantage of being employed in the public sector (or having a family member be a public employee) are the pension and health benefits that come from the Emekli Sandığı. In addition, public sector workers may enjoy job security, better working hours and other fringe benefits, including paid vacations, paid leaves and subsidized lunches. Some public employees may also enjoy free transportation and subsidized housing. Despite the layoffs in SOEs in the 1990s, public sector workers also enjoy effective job tenure, with extremely low quit rates compared to private sector workers.<sup>19</sup>

225. Finally, the best evidence of the desirability of SOE jobs may be journalistic rather than analytical. It is well-known that whenever a public job opening is announced, there are an extremely large numbers of applicants. Several years ago, the SSK administration announced a few openings, which drew several thousand applicants. More recently, in early January 1999, the Ministry of Village Affairs announced about a thousand openings all over the country. There were about fifty thousand qualified applicants.<sup>20</sup>

#### ***4.5 Will Turkey's Education Policies Improve Living Standards of Future Generations?***

226. In any market economy, one of the most important roles of Government is to ensure that households invest sufficiently in human capital. As seen in Chapter 3, this is particularly critical in Turkey, as there is strong evidence that inequality in educational attainment is one of the main forces behind poverty and income disparities. The Government in Turkey has made education reform a pillar of its policy agenda. *But to what extent are Government policies in education succeeding in reaching their stated objective: to provide equal opportunity to all, and underpin growth and sustained improvement in living standards.*

##### ***An overview of the educational system***

227. The modern education system in Turkey has its origins at the beginning of the Republican period, when religious schools were abolished. The first law on education was passed in 1924—The Law on Unification of Education, which affiliated all schools to the Ministry of National Education (MoNE). The general outline of the system was laid down under basic Law No. 1739 on National Education: optional pre-schools for children age 4-5; free public primary education (for ages 6-10); middle schools (public and private, for ages 11-13); secondary education (including general high schools, vocational and technical education, for ages 14-16, or until 17-18 for technical schools); and higher education (including universities, faculties, institutes and research centers).

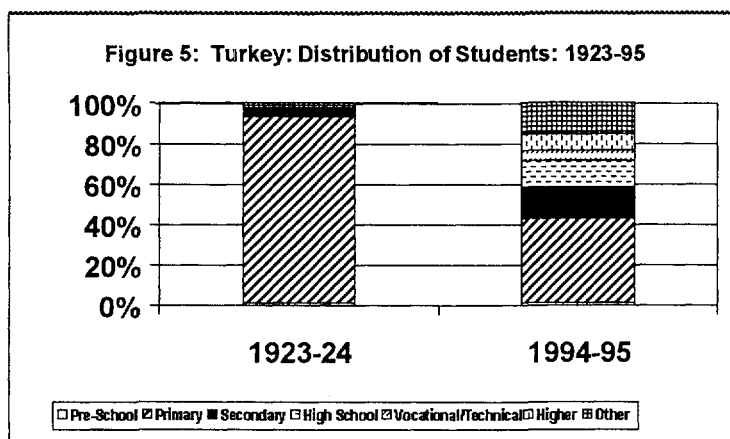
228. As Figure 5 shows, the distribution of students has become much more even since the early Republican days, when most students were in primary education. Today, while primary students are more than two-fifths of the total student body, secondary and higher education occupies another 40 percent of students. But the education system in Turkey still has a long way to go to arm all its citizens with the ability to increase their earnings. In 1998, only 7.4 percent of the labor force in Turkey had a university degree; and just 15.5 percent completed high school, with

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<sup>19</sup> OECD (1996).

<sup>20</sup> Cumhuriyet, 1999.

another 10 percent having completed middle school (including religious schools). The remaining 67.1 percent of the labor force had only a primary education or less, and is tied to the low living standard that this brings them.



Source: DGPI (1995)

rising levels of income and increasing urbanization, and the MoNE aims to follow up this initiative with a program to expand capacity at the secondary level, to make it possible for virtually all children to complete secondary schooling. *This policy, if it is successful in achieving universal schooling through the eighth grade, will help to spread the benefits of education more widely throughout the country and throughout society.*

**The fiscal costs of providing education**

230. By law, education in public schools is free, and the Government bears the cost of this education. Students are expected to provide their own textbooks and personal school supplies (notebooks, pencils, etc.), as well as a school uniform in primary and secondary school. *The Government, therefore, bears the largest share, by far, of the financial burden for education in Turkey, and manages it through the MoNE, which is responsible for managing public education programs, and approving private education programs, at primary and secondary levels.*

**Table 9. Consolidated Budget Expenditures on Education**

	Percent of Total Budget	Percent of GNP
1992	19.7	4.02
1993	16.5	4.21
1994	13.3	3.01
1995	12.2	2.75
1996	10.5	2.50
1997	10.1	2.21

231. *It is a matter of concern, therefore, that educational outlays in the Government budget are declining steadily. As Table 9 shows, the share of education expenditures in the budget has almost halved between 1992 and 1997, to just 10.1 percent of budgetary expenditures in 1997. This is low by the standards of countries with of a comparable income and a corresponding high public role in education.<sup>21</sup> This has resulted in a decreased ability of the system to meet its expenses, particularly in terms of ancillary supplies (chalk, textbooks and the like) and especially in rural schools.*

<sup>21</sup> In the 1991-95 period, education expenditures were, on average, 16.1 percent of State budgetary expenditures. For the same period, the corresponding figure for Thailand was 21.3 percent, and for Panama 18.4 percent.

229. *The new basic education policy.* New legislation, adopted in August 1997, extends the duration of compulsory schooling to eight years, and combines the five-year primary cycle and the three-year middle-school cycle into a single eight-year basic education cycle. This accelerates the normal process by which schooling levels gradually increase with

232. *The public/private mix in education.* Turkey's educational system is mostly public, and thus it is infeasible for the lower public spending on education to be compensated by correspondingly higher private expenditures. Private programs of formal schooling are very limited in coverage, accounting for only one percent of primary enrollments, two percent of middle-school enrollments, and two percent of secondary enrollments. Private education, however, has a larger presence in the form of private tutorial instruction academies which provide intensive, remedial instruction to secondary graduates seeking to improve their performance in the national university entrance examination.

233. At the primary and secondary levels, only around one percent of schools are private. At the primary level, the private schools are almost all in urban areas (in 1994-95, only 9 out of 233 private primary schools were in rural areas). At the secondary level, the proportion of private schools is slightly larger—with a steady increase occurring in the 1990s. In 1994-95, there were 278 private secondary schools, out of a total of 4,713. The private schools were, however, better staffed—with 6 pupils per teacher, on average, compared with 15 per teacher for public secondary schools.

234. The private presence is higher for high schools and universities, and thus better-off students are able to find more opportunities to receive an education that is less constrained by the decline in Government education expenditures. At the high school level, private schools represented 12 percent of the total 2,137 schools in 1994-95. As in secondary education, the pupil teacher ratio was about a third better than in public high schools. There has been a very vibrant growth of private universities during the past eight years, typically involving major financing from wealthy business patrons. These universities do still receive Government grants, and thus are partially dependent on the State's largesse.

#### *Effectiveness of the education system in increasing future living standards*

235. *Education is highly correlated with increasing living standards, with literacy a key determinant of the ability to escape poverty.* The 1994 Household Survey shows that, while 52.6 percent of the illiterate were poor, only 38.2 percent of those with primary education are poor, 23.1 percent of those with secondary education, and just 5.6 percent of those with higher education. Other studies for Turkey have established, similarly, rapidly increasing private returns to education with schooling.<sup>22</sup>

236. But these general results can hide the fact that the system is not necessarily conducive to all Turkish children obtaining the best education possible. There are numerous obstacles to obtaining the best possible education, many of which are particular to children, and especially girls, from poor and rural families. In today's Turkey, the symptoms of this problem are: poor choices in education made by children and their parents; the persistence of low school attendance; and relatively low literacy and enrollment rates among poor households and in the poor regions.

237. *Educational choices.* The educational system in Turkey is sometimes unable to provide the means for children in the system to make the best and most informed choices for their future. In particular, the failings of the system cause a high proportion of drop-outs from the system, while other children follow educational streams that may not offer them the best returns.

238. *In the period 1990-95, three out of ten primary school students, on average—and over half of the girls—did not move on to secondary school.* As can be seen in Table 10, the drop-off in enrollments is clear at higher levels as well. This results in a clear bias in educational attendance

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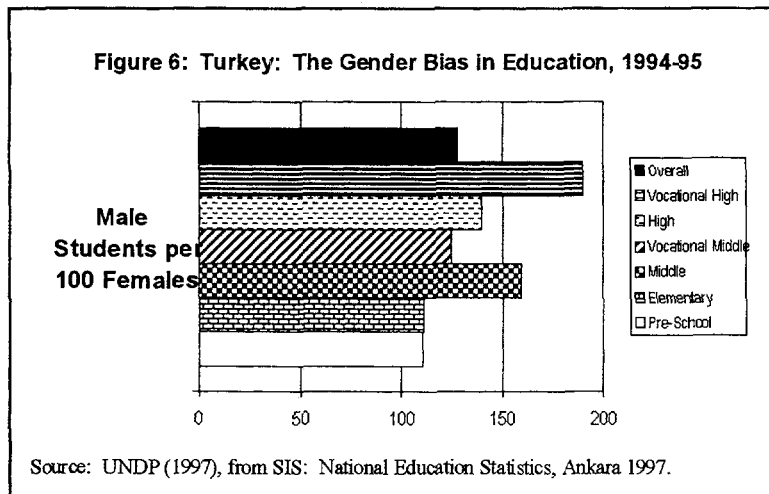
<sup>22</sup> See, for example, Tansel (1996).

in schools, as shown in Figure 6, with almost twice as many boys as girls attending vocational schools, and 20 percent more boys attending schools at all levels.

**Table 10. Schooling Ratios by Educational Levels (percent)**

	1990-91	1994-95
<b>Primary</b>	<b>89</b>	<b>91</b>
<b>Male</b>	92	93
<b>Female</b>	86	89
<b>Secondary (junior high)</b>	<b>60</b>	<b>66</b>
<b>Male</b>	71	76
<b>Female</b>	47	54
<b>High School</b>	<b>37</b>	<b>50</b>
<b>Male</b>	45	59
<b>Female</b>	29	39
<b>University and other higher education</b>	<b>12</b>	<b>18</b>
<b>Male</b>	6	21
<b>Female</b>	8	14

239. The drop-outs may be because the costs of school attendance are higher, and the perceived benefits smaller, for some. For example, most of the 30,000 villages of Turkey have a five-year primary school, but no schools beyond that level. For children from these communities, school attendance beyond the fifth grade entails higher costs—because it involves either commuting to a school in a neighboring town, or going to a boarding school. Alternatively, dropping out of school may reflect a rational response to parents’ perception that their village schools are of such inferior quality that their children’s chances of success at higher levels of education are minimal. In a beneficiary assessment which was carried out in Eastern and Southeastern Turkey in 1990, many parents reported that they took their children out of school for this reason.



240. *Even when the children go on for higher education, their choices may be clouded by imperfect information about available options.* In Turkey, as in most countries, general secondary education tends to be the preferred form of secondary education, reflecting the fact that it is the normal route to higher education and higher-level jobs. But although general education attracts the best

students completing basic education, many students opt for vocational or technical education in the belief that it will improve their chances of getting a job after secondary schooling. In reality, vocational school graduates have the highest rate of unemployment of any category of school leavers. In 1995, 14 percent of graduates of secondary vocational schools and general lycees were unemployed, versus 12 percent for graduates of vocational and technical middle schools (grade 8), 10 percent for graduates of general middle schools, and 6 percent for primary-school graduates and university graduates.

241. *Access to education/School attendance. Obtaining the returns to education will be difficult for children from groups where circumstances conspire to lower their school attendance.* Non-attendance in school takes various forms. A small number of children—some in urban areas, but more often in rural areas—never start school at all. More commonly, children may start school but not stay in school through the end of the compulsory cycle. In the recent past, parents in some areas would often withdraw their daughters from school when they reached puberty. Because girls often started school late in these areas (after the age of 7 years) and often repeated at least one grade, this often meant that they did not complete even the former, five-year compulsory cycle.<sup>23</sup> In many rural areas, children who are enrolled in school miss a crucial part of the school year at the beginning and end of the school year because of the need for children to help in the autumn harvest or spring planting.<sup>24</sup>

242. *To the extent that education is seen as an investment, non-attendance may reflect a market failure*—because families lack information about the returns to education, or lack access to credit which would enable them to trade expected future earnings for current income foregone. The Government's role, once again, needs to be to address this market failure, by making schools more accessible, more available, and more flexible to meet the needs of children and their parents.

243. *Barriers to educational access for low-income children. The continuing problems in Turkish education are the clearest when one recognizes that educational achievement for the poorest regions were the lowest by far.* As Table 11 shows, while the Marmara, Aegean and Central Anatolia regions have a little over 10 percent of the population illiterate, almost 30 percent of the population of East and South-East Anatolia were illiterate. The problem is particularly severe for women—the rate of illiteracy among East and South-East Anatolian women is 48.4 percent. There is a clear correlation with incomes in the present, as shown by the “income index” in Table 11. There is also a clear correlation with poverty and economic vulnerability rates, as discussed in Chapter 3. But, more troubling is the fact that, with continuing inequalities of educational attainment, this inequality of incomes and welfare is likely to persist across generations as well.

**Table 11. Regional Distribution of Education Outcomes**

Region	HH Population Share (percent) 1994	HH Income Share (percent) 1994	Income Index (Income Share/ Pop. Share)	Literacy Rate (percent) 1997	Enrollment Rate (percent) 1997
Aegean-Marmara	42.2	52.5	1.24	89.9	65.8
Mediterranean	12.5	11.1	0.89	84.3	57.4
Central Anatolia	17.9	15.4	0.86	87.5	65.8
Black Sea	12.8	10.8	0.84	82.5	56.8
East/South-East Anatolia	14.6	10.2	0.70	70.1	49.3
All TURKEY	100.0	100.0	-	84.3	59.8

Source: Calculated from UNDP (1997)

244. *In Turkey as in most countries, limited school attendance among lower-income households reflect the fact that they cannot afford the foregone income which their children's school attendance entails—a particular problem for households in rural areas.* In these areas, incomes are low to begin with, and schools are generally of inferior quality. Moreover, school attendance beyond the fifth grade usually requires either an extended school day (because of the need to

<sup>23</sup> Some parents in the 1990 beneficiary assessment also reported that they sent their daughters to school only for two or three years because they felt that this was all that was required for them to learn to read and write. These parents reported that they valued literacy for their daughters, but not the other levels of learning that schools offered.

<sup>24</sup> In October, 1997, a mission for the World Bank's Basic Education Pilot Project visited five village primary schools in Sanliurfa province in which an average of one-third of the students were absent to participate in the lentil harvest.

commute to a school outside the village) or removal from the household to attend boarding school. This is compounded by the reluctance of some rural families—particularly in the East and Southeast—to send their daughters outside the village to continue their education in any form.

245. But many other rural parents actually prefer boarding schools over either schools in their own village or commuting schools in adjacent villages, because boarding schools lower the direct costs of education: children in boarding schools receive free school uniforms, textbooks, and meals, as well as a stipend which many children share with their families. Thus, boarding schools are widely preferred because they are a low cost option for families, although they are a very high-cost option for the Government.

246. *Surveys have found that the low quality of education in rural schools is a major factor which motivates migration to urban areas by the poor.* The low quality reflects these schools' lack of the right materials and support for functioning more effectively. For instance, rural schools attract the least experienced teachers, but the challenges of teaching in these schools call for the skills of the most experienced teachers in the system. About 80 percent of the 30,000 rural school in Turkey have enrollments which are too small to justify having a single teacher for each grade, and offer some classes in which a single teacher teaches more than one grade in the same classroom. These "multigrade schools" are seen by many people in Turkey as inferior to conventional schools. They often are, when teachers receive no training in how to teach effectively in these circumstances, and lack the special study materials which are needed to make it work. But international experience and the experience of some multigrade schools in Turkey have shown that, with the right inputs, they can provide education which is cost effective and of high quality—even superior to that in conventional, single-grade classes.

247. Often, the ones left behind in the rural areas are those least able to migrate because of lack of resources or contacts. They, and their children, end up suffering from the inadequacies of the underfunded, underinvested rural schools, perpetuating the poverty in their families. *The need, therefore, is for the Government to invest more in raising rural school quality, and not to let the fact of rural out-migration reduce its willingness to invest in raising the quality of rural schools.*

#### ***Towards greater access to education for all***

248. The success of the Government's new education policy depends both upon the effectiveness of the current investment program to expand capacity and improve quality of basic education, and upon public compliance with the policy. Much of the distributional effect of the new policy will depend upon patterns of public compliance. If, as intended, all parents comply with the policy, it will make a major contribution to inclusion of groups which were formerly excluded from the benefits of modernization and growth. But the policy could have unintended perverse effects if there is significant non compliance—for example if some parents who are strongly opposed to having their daughters attend coeducational schools or schools outside their villages decide not to enroll them in school at all, rather than face the prospect of being required to keep them in school against their will. The success of the investment program could also affect the public's willingness to comply with the new policy. Compliance could suffer, for example, if children face excessively overcrowded classrooms because of delays in implementation of the school construction program. Care needs to be taken to ensure that the outcome of the policy conforms to its aims—of providing, through education, better future living standards to the Turkish population.

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## **TECHNICAL ANNEX**

### **Measuring Living Standards in Turkey: Data and Methodologies**

1. This annex describes the main data sources and methodological approaches used to analyze economic vulnerability and poverty in Turkey. We first refer to the sources of information we use, including all published and primary sources. Second, we present how the analysis of primary records from household survey has been carried out to obtain measures of welfare.

#### **Published Sources of Information and Data**

2. The study relies on a wide range of publicly available data for Turkey. One of the main sources of published information on living standards (employment and unemployment) is a semi-annual Labor Force Survey, conducted since 1988 by the State Institute of Statistics (SIS)<sup>1</sup>. The study also used other sources of employment and earnings information, such as the Annual Industrial Survey and the Census of the Population (the latest available is 1990 but data for 1990-1997 is available based on official estimates).

3. Turkey also has a relatively long series (over 10 years) of provincial-level national accounts data. These data have been paired with available information on other indicators at the provincial level, published by SIS or assembled by authors of background papers (e.g., data on agriculture by districts as assembled by H. Akder).

4. Most of the information on fiscal expenditures and revenues (including information on social sector spending, transfers, subsidies etc.) is available only at the national level from official sources. In addition to the fiscal information, the study relied on national accounts data, and on the macroeconomic series prepared and published by the State Planning Organization (SPO)<sup>2</sup>.

5. The study also used some of the qualitative information collected in a number of social assessments recently carried in Turkey (for example, the Social Assessment of Girls' Education carried out as part of the preparation of the Primary Education Project). In addition, the study commissioned a qualitative study on the changing status of women migrants to urban areas (in terms of their labor force status and their status within the household).

6. The study also drew heavily on the substantial existing body of literature and research on labor force participation, labor market segmentation, and educational attainment in Turkey. In addition, some unpublished data have been used by the authors of background papers (for example, sub-sector level data on manufacturing as used by E. Taymaz).

#### **Household Survey Primary Records Data**

7. The main source of data for the analysis of poverty and inequality were the primary records from two recent household surveys carried out by SIS. These two surveys, the 1987 and 1994 Household Income and Consumption Expenditure Surveys (HICES), were analyzed by a joint team of experts from the World Bank and SIS. The analysis was carried out on the premises of SIS and the data were not released to the World Bank or third parties.

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<sup>1</sup> Also available at the official SIS site at [www.die.gov.tr](http://www.die.gov.tr)

<sup>2</sup> Available at SPO site at [www.dpt.gov.tr](http://www.dpt.gov.tr)

8. The 1994 HICES 1994 is the most recent nationally representative household survey in Turkey, and the results of the survey offer a solid base for analyzing living standards and poverty in Turkey. In both 1987 and 1994, the surveys collected data on income, consumption and basic demographic and labor market characteristics of individuals from a regionally representative sample of households (26,400 in 1987 and 26,256 in 1994). The basic design of the instrument was similar in 1987 and 1994 (main sections, combination of diary and questionnaire for collecting expenditure data), allowing comparisons between these two surveys. There were discrepancies in the definitions of a small number of concepts and classifications, some of which are discussed below.

9. Data in both surveys were collected monthly throughout the year. In 1994, the annual inflation rate was 106% (prices roughly doubled), in 1987, the annual inflation was about 40%. Prices rose at a different pace in different regions of the country and very unevenly throughout the year. Thus, using the nominal income values would lead to erroneous conclusions. One has to deflate monthly figures using the inflation rate. We have used the CPI price index by regions of Turkey. However, price data on rural areas are somewhat fragmentary and less reliable than urban prices; the data on price levels for the goods in CPI basket by regions of the country are available only for 1994. Therefore, the use of *nominal values* was chosen for poverty analysis. To take into account inflation, we have used *nominal poverty lines* that were valued at monthly local (region plus urban/rural areas) prices.

### **Main Definitions Used in the Analysis of Poverty**

10. In the broadest definition, poverty is the status of a person who falls short of a level of economic welfare deemed to constitute a reasonable minimum, either in some *absolute* sense or *relative* to the standards of a specific society. General concepts of (i) *measuring the well-being* (using income, expenditure or consumption), (ii) *choosing the unit of analysis* (individuals or households), and (iii) *setting the poverty line* (defining the minimum threshold below which the household is deemed to be poor) are discussed below.

#### **(i) Measuring well-being**

11. The data collected in both 1987 and 1994 seem to address adequately most of the problems in measuring well-being. As a result, *consumption* aggregate based on household data offers quite a reliable base. It includes:

- monetary non-business and non-investment expenditures (1987 and 1994);
- gifts, earnings and transfers in-kind (1987 and 1994);
- consumption from stocks (1994, but not in 1987);
- consumption from own production (1987 and 1994); and
- imputed rents from owner-occupied housing (1987 and 1994)

12. There are three sources of bias in this indicator for Turkey. First, the expenditures on all durables (except cars) are *included* in current monetary consumption expenditures of households. This tends to overestimate the current consumption of some households. Second, the consumption aggregate does *not include* imputed flow of services from all durable goods that household owns. As a result consumption for many households may be underestimated. Third, the imputation of market value of subsidized goods and services was impossible. To partly remedy to the situation, whenever feasible, one has to include subsidized goods in the poverty

basket. We have done so by including the municipal bread in the minimum food basket of urban population.

**(ii) Unit of analysis**

13. The analysis in the profile focuses on poverty among Turkish *households*; if household is deemed to be poor, all its members are counted as poor. The implicit assumption here is that all individual members of a household benefit equally (or in a constant proportion, depending on their age and gender, called *equivalence scale*), from the household's expenditure or income.

14. The minimum food standard used to set the poverty line in Turkey dictated the use of a caloric scale to count the number of equivalent adults (E) in the household. These coefficients are based on the minimum caloric needs for different demographic groups, as presented, for example, in FAO(1994):

Small Children (under 5)	0.64
Children (5-11)	1.00
Male adolescent (12-17)	1.00
Female adolescent (12-17)	0.84
Prime working age male (18-39)	1.00
Prime working age female (18-39)	0.84
Retirement age male (40+)	0.88
Retirement age female (40+)	0.76

15. *Per capita* cost of reaching a certain welfare level is lower in large households than in small ones. For example, cost of heating might depend on dwelling characteristics, irrespective of whether the residing family is large or small. But the per capita cost of heating is, of course, lower for the large family. To measure such *economies of scale* one uses a special parameter  $\theta$ . It is assumed that the effective number of household members that share a certain welfare should be adjusted using this economies of scale parameter, that is welfare per member ( $w$ ) in a household with  $n$  members equals total household welfare ( $W$ ) divided by  $n\theta$ . When  $\theta$  equal to .5, it means that a family of *three* will have to spend only 1.73 units (30.5) more than a *single* person.

16. In Turkey, where joint multigenerational families are not rare (in fact, 63% of the population live in such families), taking into account the economies of scale is crucial. So far, there has been no attempts to estimate it empirically on Turkish data. The framework is taken from Lanjouw and Ravallion (1995) and based on Engel curves. To summarize it in simplest form, the share of spending devoted to food is taken as an inverse wealth indicator. The food share is regressed on the log of expenditures per person and a set of demographic variables. The estimated values of  $\theta$  for 1994 HICES data lies in the 95% confidence interval between 0.746 and 0.873 and is different from one. Therefore, per capita measures are inappropriate for measuring welfare in Turkey. We use 0.75 as a baseline estimate. The example below shows the effective household size for different types of Turkish families.

	Number of members	Number of equivalent adults	Effective size with economies of scale adjustment
Single male living alone	1	1	1
Married couple of working age with 2 small children	4	3.12	2.35
Married couple with 2 small children and 2 elderly parents	6	4.76	3.22
Married couple+ 4 (2small, 2 school age) children + 2 elderly parents	8	6.76	4.19

17. Setting economies of scale is a very approximate science. It relies heavily on normative assumptions that are accepted in a society. Within the tradition that exists in Turkey, there is a strong preference for using per capita measures, as in many developing countries. OECD equivalence scales, where the number of equivalent adults is set at  $n0.5$  seems too heavy for Turkey. We use a measure that lies between these two extremes and check results for the robustness.

**(iii) Definition of the poverty line**

18. There are two approaches to setting the poverty line. One relies on using an *absolute* poverty line; the other on using a relative poverty line. Both are valid methods, and they give different results.

**(a) setting the absolute line**

19. The minimum food bundle anchored to the nutritional requirement and consistent with local tastes of the poor was developed by the Hacateppe university in Turkey. Unfortunately, quantities of food in the basket are defined in broad *product groups* (vegetables, fruits etc.). The use of average “group” prices could lead to an overestimate of the minimum food basket cost. To solve this problem, we have selected 19 most important food items consumed predominantly also by the poor. The nutrient analysis shows that the diet proposed exceeds minimum requirements for many major nutrients. Thus, the food line that is used for Turkey is relatively “generous”.

20. Computing average prices from the survey data for these items by months of the survey (12), by regions (7) and urban/rural areas within regions, we have obtained a set of 168 locality and time-specific food lines. If total household consumption divided by its effective size is less than the cost of the minimum food basket, one classifies the household as poor. But minimum food basket is not a fully comprehensive measure of living standards. One has to take into account non-food basic needs. The full line that includes minimum food basket costs and basic non-food spending is called “vulnerability line”.

21. To set the non-food component of the poverty line we estimate the expected non-food spending of those who are just capable of reaching the cost of minimum food basket. One assumes that these households really choose necessities in their non-food spending. Such a regression on 1994 HICES gives a satisfactory fit. The full poverty line or “vulnerability line” is approximately double the food line for urban areas and 1.75 of the cost of minimum food basket in rural areas. This gives us a relatively high poverty line by international standards: both the food basket and non-food allowances are much higher than in an average developing country.

For that reason we have decided to call this line a “vulnerability”, rather than “poverty” line and consider households below this line as economically vulnerable.

#	Produce	Grams (per day, per equivalent adult)
1	Rice (common variety)	60
2	Beans	50
3	White flour, normal grade, in packets	60
4	White bread (normal grade)*	350
5	Mutton	120
6	Yogurt	350
7	Feta cheese	30
8	Eggs	50
9	Oil	30
10	Apples	100
11	Watermelons	200
12	Tomatoes	150
13	Carrots	100
14	Jam	30
15	Black olives	20
16	Onions	50
17	Potatoes	150
18	Sugar	60
	<b>KCAL</b>	<b>2450</b>
	<b>Protein (% RDA)</b>	<b>137%</b>
	<b>Vitamin A (% RDA)</b>	<b>135%</b>
	<b>Vitamin C (% RDA)</b>	<b>108%</b>
	<b>Iron (%RDA)</b>	<b>193%</b>
	<b>Calcium (%RDA)</b>	<b>137%</b>

\* In urban areas - 200g of municipal and 150 g common

22. The poverty line is held constant in real terms (same basket estimated at current nominal prices with same non-food share) to allow comparisons between 1987 and 1994.

**(b) setting the relative line**

23. According to the variant of OECD methodology (proposed by LIS), the relative line equals ½ (50%) of the monthly median expenditure per equivalent adult defined according to OECD equivalence scale (for any given month of the survey). There are, subsequently 12 poverty lines – one for each month.

24. We can summarize the approaches used to measure poverty in Turkey in the following table:

	Welfare aggregate	Welfare measure per household member	Poverty line
<b>Poverty</b>	Current consumption	Household consumption/(E).75	Local cost of minimum food basket
<b>Economic vulnerability</b>	Current consumption	Household consumption/(E).75	Local poverty line=local cost of minimum food basket+ local non-food share
<b>Relative poverty</b>	Total income	Household income/(n).5	National: one half of the median income per equivalent adult in the corresponding month

### **Main Definitions and Procedures used in the Analysis of Inequality**

25. Main issue in measuring both poverty and inequality is to select an appropriate household welfare indicator. Typical measures of well-being are income and consumption. In the poverty analysis we use consumption as a main indicator of household living standard. However, here is a prevailing tradition in Turkey to use income rather than consumption for the analysis of living standards. For each household income and consumption may differ quite dramatically. Fortunately, in the case of both 1987 and 1994 surveys there are relatively small differences between ranking of households by income versus consumption. Thus, one could also use income as welfare indicator especially when using an internationally accepted methodology (for example, method recommended by Luxembourg Income Study) that specifically requires the use of money disposable income to compare inequality internationally<sup>3</sup>.

26. We have used the CPI price index by regions of Turkey to take into account inflation. In addition for 1994 we also computed the price level index. For comparisons between 1987 and 1994 we used deflated consumption and income for 1994 (in 1987 prices) without regional price level correction (not available for 1987).

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<sup>3</sup> To get the details of the definition of income used in LIS that we have replicated for Turkey, go to <http://lissy.ceps.lu/>. In all cases when we make comparisons to LIS data for other countries, we use annual income as reported for 1994 in income supplement to the questionnaire fielded in 1995.