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Former Yugoslav Republic of Macedonia Focusing on the Poor

(In Two Volumes) Volume II: Statistical Annex

June 11, 1999

Human Development Sector Unit
Country Department IV
Europe and Central Asia Region

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CURRENCY EQUIVALENTS
(as of June, 1999)

Currency Unit = Denars
US$1 = 56.94 Denars

AVERAGE EXCHANGE RATES
Denars per US$1
(Period Average)

1996	1997	1998
39.9	49.7	54.5

WEIGHTS AND MEASURES
Metric System

FORMER YUGOSLAV REPUBLIC OF MACEDONIA FISCAL YEAR

January 1-December 31

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FORMER YUGOSLAV REPUBLIC OF MACEDONIA

FOCUSING ON THE POOR

(In Two Volumes)

Volume II: Statistical Annex

June 1999

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Country Department VI
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VOLUME II: STATISTICAL ANNEX

ANNEX I
DATA AND MEASUREMENT

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ANNEX 1: DATA AND MEASUREMENT

A. DATA

1.01 **Longitudinal Data: 1990-1995** The analysis in this paper is based on results from the Household Budget Surveys (HBS) which is conducted annually by the Statistical Office of Macedonia. The HBS was designed to represent the entire population of the Republic, except for collective households (monasteries, hospitals, prisons, etc.) and people in military service. The sample selection was a two-stage stratified design.

The sample sizes were as follows:

1990	679 households
1991	640 households
1992	675 households
1993	655 households
1994	677 households
1995	680 households

1.02 Given the total population size of Macedonia (about 2 million people), the sample sizes are adequate to calculate precise means of household expenditure and income at the national level, but they limit the extent of sub-national disaggregation that can be undertaken with the data. Precision of sub-national estimates is low and even fairly large year-to-year changes in means and ratios need not be statistically significant.

1.03 The Statistical Office claims that the HBS questionnaire and data collection methodology have been kept constant from year to year so that the data are comparable over the period. While we have accepted this proposition without a formal examination, at least one significant change did occur in 1995, which was that the sampling frame was updated based on results from the 1994 Population Census. As was noted by Braber (1995), the earlier frame did not fully cover the Albanian population in Macedonia. The improved coverage for 1995 may well have affected results, although the direction of such effect is not clear a priori since no breakdown of income and expenditure figures by ethnic groups is available.

1.04 The period 1990-95 was characterized by high inflation rates. Table 1 shows the consumer price index (CPI) for these years. This immediately raises the issue of expressing the expenditure and income data in real terms. Ideally, in a situation of high inflation one would like to have monthly (or even weekly) income and expenditure figures and a monthly (or weekly) inflation index. Neither were available for this analysis. The Household Budget Survey collects data only on a quarterly basis, and the

Table 1: Consumer Price Index, 1990-95.

	Consumer Price Index		
	Previous Year = 100	1990 = 100	1995 = 100
1990	696.6	100.0	0.2413
1991	210.8	210.8	0.5086
1992	1611.3	3,396.6	8.194
1993	462.0	15,692.4	37.86
1994	228.3	35,825.7	86.43
1995	115.7	41,450.3	100.0

data provided by the Statistical Office were aggregated to annual figures. This imposes the use of an annualized consumer price index (constructed as an arithmetic average of monthly indexes). The extent to which this procedure introduces errors in the conversion of nominal to real incomes depends upon the pattern of the rate of inflation within the year and the lag between increases in the CPI and increases in nominal incomes.

1.05 Table 2 illustrates the problem by showing two hypothetical scenarios under the assumption of a constant 10% monthly rate of inflation. The first scenario assumes that there is no adjustment in nominal incomes. The use of an average inflation index leads to an underestimation of real incomes. In scenario two it is assumed that nominal incomes catch up immediately with inflation. Under that assumption, the use of an average inflation index is accurate. The real situation is likely to be somewhere between the two scenarios. Thus, the possibility exists that the use of annualized income and expenditures figures and an annualized CPI has led to some underestimation of real incomes and expenditure and hence some overestimation of poverty figures relative to what would result from the use of monthly figures.

1.06 In addition to adjusting the data for over-time price changes, the question arises as to whether urban/rural price differences need to be taken into account. The results in this paper do not include such adjustment, because there exists no separate rural CPI for Macedonia. However, given that it is a small country, urban/rural price differences are expected to be small. Braber (1996) has calculated implicit food prices from the 1995 HBS results and found these to be only slightly lower in rural areas than in urban areas.

1.07 **Cross-Section Data: 1996** The 1996 Household Budget Survey (HBS) is different from the 1990-1995 HBS series in two ways. First, the sample was increased from the 640-680 range to 1,000 households. Second, at the request of the World Bank, the Statistical Office of Macedonia added a supplementary sample of about 1,000 households in the third and fourth quarters of data collection. (Additional questions on health, education and social transfers were also added). This supplementary sample was designed to be drawn half from the existing HBS clusters and half from the registers of social assistance recipients. The first half of the supplementary sample is representative

Table 2. Simulation Results: Annual versus Monthly Consumer Price Index.

		Scenario 1		Scenario 2	
Month	Consumer Price Index	Nominal Income	Real Income	Nominal Income	Real Income
1	1.100000	100	90.91	110.0000	100
2	1.210000	100	82.64	121.0000	100
3	1.331000	100	75.13	133.1000	100
4	1.464100	100	68.30	146.4100	100
5	1.610510	100	62.09	161.0510	100
6	1.771561	100	56.45	177.1561	100
7	1.948717	100	51.32	194.8717	100
8	2.143589	100	46.65	214.3589	100
9	2.357948	100	42.41	235.7948	100
10	2.593742	100	38.55	259.3742	100
11	2.853117	100	35.05	285.3117	100
12	3.138428	100	31.86	313.8428	100
Total		1,200	681.37	2,352.0000	1200
12th month	3.138428		382.36		749.51
6th month	1.771561		677.37		1327.80
Average	1.960226		612.17		1200.00

of the entire population in the same way as the main sample and can be merged with it for analysis. The results in this annex are based on this combined sample of 1,514 households. However, the "social assistance sample" is by design not representative of the Republic's population and must be analyzed separately (it is akin to a tracer survey).

1.08 The merging of the supplementary sample drawn from the regular HBS clusters with the main sample should in principle have been straightforward and require no more than a simple merge operation of two data files. In practice, the supplementary sample was not correctly drawn and revealed fairly severe under sampling of rural areas relative to the main sample. The table below shows that only 24% of the supplementary sample came from rural areas as opposed to 41% in the main sample. The problem is especially acute in the capital zone. The rural capital zone represents 5.8% of the main sample but only 1% of the supplementary sample. This is problematic because in absolute terms, this sample contains only 5 households.

1.09 This situation necessitates the construction of weights for the supplementary sample to correct its distribution and to make it match the main sample. The normal way to do this would be to take as weights the inverse of the population proportions of the supplementary sample strata over those of the reference population, i.e. the main sample in this case (which is assumed to represent the Republic's population correctly). The table below shows such "direct weights." As a rule of thumb, the ratio between the

Table 3 Main Sample.

	Urban	Rural	Total
Capital	200 (19.2%)	60 (5.8%)	260 (25.0%)
Other	415 (39.9%)	365 (35.1%)	780 (75.0%)
Total	615 (59.1%)	425 (40.9%)	1,040 (100.0%)
Supplementary Sample			
	Urban	Rural	Total
Capital	190 (40.1%)	5 (1.0%)	195 (41.1%)
Other	170 (35.9%)	109 (23.0%)	279 (58.9%)
Total	360 (76.0%)	114 (24.0%)	474 (100.0%)

lowest and highest corrective sample weight should not exceed five. As the table shows in this case it is more than 10. This is a result of course of the fact that the rural capital zone in the supplementary sample contains only 5 households. An alternative iterative procedure was therefore used to construct corrective weights which rely on column and row totals only. The supplementary sample was first adjusted using the "capital city/other" distribution of the main sample. The thus re-weighted supplementary sample was adjusted again in a second step using the "urban/rural" distribution. In a third step, the "capital city/other" distribution was again used for a further adjustment, at which point convergence occurred. The resulting iterative weights are also shown below.

1.10 There are clear trade-offs between these two procedures. The direct weights are preferred if the objective is to get national-level figures correct. The iterative procedure maintains the internal distribution of the sample better, but at a cost of lost precision at the aggregate level. Application of both sets of weights to the 1996 HBS data clearly showed this. For example, the headcount ratio implied by the supplementary sample weighted with direct weights was 16.9% -- quite close to the main sample's 16.5%. The iterative weights lead to a head count ratio of 13.0%. Hence, they have a bias towards underestimating poverty. However, the direct weights led to severe anomalies in the profile of poverty, e.g. more than doubling the poverty rate in the capital city and

Table 4. Sample Weights.

	Direct Weights	Iterative Weights
Capital City/Urban	0.48	0.60
Capital City/Rural	5.49	0.97
Other/Urban	1.11	1.03
Other/Rural	1.53	1.66

quadrupling the poverty rate for households with 3 persons. This happens because of the extremely high weight given to the five households in the rural capital city subsample (two of which happen to be three-person households). Given that the analysis of the HBS data is primarily geared towards constructing a poverty profile, the distortions introduced by the direct weights are unacceptable, and hence the analysis has relied on the iterative weights.

1.11 The supplementary sample was only applied in the third and fourth quarters of 1996. Hence, in order to merge the supplementary sample with the main sample, it is necessary to extrapolate all income and expenditure data in the supplementary sample to an annual basis. Values for the first and second quarter are to be imputed. The basic procedure to achieve this is

$$\hat{Y}_{SS,1/2} = Y_{SS,3/4} \frac{\overline{Y}_{MS,1/2}}{\overline{Y}_{MS,3/4}}$$

where
Y = all income and expenditure variables
MS = main sample
SS = supplementary sample
1/2 = first and second quarter
3/4 = third and fourth quarter
$\overline{Y}$ = mean of Y.

1.12 We estimated a regression to determine whether the extrapolation ratio (really a seasonality factor) is the same for the entire sample or differs by location, household size, etc.[1] We found significant differences between the capital city and the rest of Macedonia, between urban and rural areas, and by household size. Hence, we divided the sample in 8 cells (2 locations x 2 urban/rural x 2 household size categories (≤ 4 and >4)) and calculated a separate extrapolation ratio for each cell.

1.13 A comparison of imputed with original values in the supplementary sample showed that means and standard deviations were quite close, and that no anomalies were introduced in the pattern of expenditure. The imputed values were then added to the recorded third and fourth quarter values to provide the annual total for the supplementary sample. The latter was then weighted with the iterative weights and merged with the main sample.

[1] It is possible to use predicted values from such regressions to impute values. Due to a fairly low R-square, this method leads to a severe reduction in the variance, with major downward biases in estimated poverty rates.

B. MEASUREMENT OF WELFARE

1.14 The use of a household budget survey for the analysis of poverty requires four prior decisions:

(1) the measure of household welfare (income or consumption);
(2) the selection of an equivalence scale;
(3) the selection of a poverty line; and
(4) the selection of a poverty measure.

1.15 **The measure of household welfare** An individual is poor if their welfare falls below some defined level. To arrive at a working definition of poverty, suitable for empirical analysis, choices must be made. How is well-being measured? What level for the chosen welfare indicator is used to distinguish the poor from the non-poor? There is extensive literature on these issues so they will only be discussed briefly here.[2]

1.16 Typical measures of welfare are income and consumption. Certainly, these measures do not capture such aspects of the quality of life as freedom of speech, national security, or even police protection, but they serve as useful indicators nonetheless. Other non-monetary aspects of welfare such as health status, life expectancy, and access to clean water and sanitation are important in assessing living standards, and are addressed as data permits.

1.17 In theory, the best indicator of welfare to compare against a poverty line is the actual consumption of the individual. In practice, however, this is often not available[3], leading to income or expenditure being used as a proxy for the level of consumption enjoyed. The choice between income and expenditure as measures of welfare can lead to different conclusions regarding the poverty status of a particular household. There are arguments for preferring one indicator over another. First, expenditure may be preferred since a household might be able to attain a level of expenditure above that dictated by its income by dissaving or borrowing. That is, the time profiles of expenditure and income may differ where families can save or borrow, so if a snapshot of well-being is taken, the poverty status of some households will diverge according to the two measures. If it is thought that the true profile of consumption is smoother than income which can fluctuate strongly over short time periods, expenditure is a better static indicator (Deaton and Muellbauer, 1980). On the other hand, a rich family with inexpensive tastes may appear poor if expenditure is used to define poverty (although this is likely to be a minor problem). In the absence of well-functioning credit markets, the distinction between expenditure and income is limited, and both measures would yield similar results. However, income data are often subject to under reporting, particularly for income from the private and informal sectors. This is a strong concern for economies in transition due to the growing importance of private work and self-employment following the adoption of market reforms. In addition, expenditures reflect the heterogeneous tastes and constraints not reflected by income.

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[2]Ravallion (1994) has a useful survey. See also Atkinson (1975), Deaton (1980), Sen (1984), and Hagenaars (1986).

[3]This would require quite detailed data on which individuals within a household consumed which portion of reported expenditures, on public and private goods.

1.18 **Unit of Analysis** This study considers the household as the basic economic unit for assessing poverty and inequality. A household is defined as a group of individuals living together and sharing income and expenditures. However, the poverty and inequality measures presented below pertain to *individuals* within the population. This is achieved by attributing a household's expenditure per equivalent adult to each of its members for the purposes of calculating poverty and inequality statistics. Given the absence of information on the intra-household distribution of consumption, an assumption maintained throughout the analysis is income or expenditure pooling within a household. That is, it is implicitly assumed that income and the benefits derived from expenditures are shared equally within a household. In practice, however, it is possible that certain members within the household such as women or children enjoy a lower standard of living than other members. If there is an unequal distribution of resources within the household, it may be that a household determined to be non-poor does have poor persons living within it (and vice versa). In constructing an estimated distribution of individual consumption, a common assumption is that resources are distributed uniformly within a household. This may lead however to an underestimation of poverty among individuals, the magnitude of which need not be negligible (Haddad and Kanbur, 1990). Consequently, the lack of information on the intra-household allocation of resources precludes adequate investigation of this issue.

1.19 The analysis in this paper is based on household consumption. This decision is made both on theoretical and pragmatic grounds. On theoretical grounds, household consumption is a better approximation of permanent income, particularly in situations where income is volatile or, in the case of Macedonia, has been subject to declines over a number of years. On pragmatic grounds, the evidence from many transitional economies suggests that consumption is better recorded in household budget surveys than income. This is particularly the case for income from the private sector, especially self-employment income. There is no direct evidence available of the extent to which incomes might be underreported in the Macedonia household budget surveys. The figures in Table 3 suggest that average incomes and expenditures are relatively close together, but these figures have been subjected to an adjustment algorithm as part of the data cleaning procedures of the Statistical Office.

1.20 The validity of household budget survey results can sometimes be checked by comparing them with the private consumption figures from the national accounts (although it is not always obvious that the latter is a superior or an independent estimate). Braber (1995) has undertaken such an exercise for 1990-93, and found underestimation by the survey results in the order of 4-16%. Given the under coverage of the Albanian

Table 5: Average Real Household Expenditure and Income per Equivalent Adult.
(in 1995 Denars)

	1990	1991	1992	1993	1994	1995
Household Distribution						
Expenditure	86,671	79,163	60,878	69,145	66,131	62,300
Income	94,085	82,086	60,992	71,705	67,849	61,099
Individual Distribution						
Expenditure	78,437	72,486	59,224	67,194	63,791	58,573
Income	86,594	75,027	58,380	70,117	64,949	57,624

population in Macedonia by the budget survey, it was concluded that no correction to the survey results was necessary; though a further update of this analysis is in order.

1.21 Table 5 shows average real household expenditure and income per equivalent adult between 1990-95. Both income and expenditure display the same pattern of significant decline between 1990-92, an upward jump in 1993, and followed again by decline until 1995. The upward jump in 1993 is likely to be a statistical artifact resulting from the fact that inflation in 1992 was exceptionally high (the consumer price index for that year was 1,611), and from the fact that the currency was re-denominated in 1993 (scaled down by a factor of 100). The possible error introduced from using annualized expenditure data and an annual CPI may therefore be particularly severe in 1992 and we suspect that the 1992 real income and expenditure figures represent a severe underestimation. The true figures for 1992 are likely to fall somewhere between the 1991 and 1993 averages. For that reason, the analysis of this report ignores the 1992 figures and results are described for the two sub-periods of 1990-91 and 1993-95.

1.22 **The selection of an equivalence scale** Households differ in size and demographic composition making simple comparisons of aggregate household income or expenditure possibly misleading about the relative standard of living. Economies of scale and equivalence scales are used to adjust household incomes for differences in household size and composition, so that income (or expenditure) distributions present a more accurate picture of relative well-being within an economy. The common practice of utilizing household per capita income gives equal weight to all members of a household and does not account for either differences in needs arising from various compositions,

nor economies of scale in consumption (e.g., housing). A widely used method for determining equivalent income (Singh, 1972; Buhmann, et al., 1988; Coulter, et al., 1992) is the following:

$$Y_e = Y/n^{\theta}$$

where Y_e is household equivalent income, Y is total household (disposable) income, n is household size, and θ is the elasticity of household needs with respect to household size. The denominator, n^{θ}, can be interpreted as the equivalent number of adults. For example, the OECD equivalence scale which gives a weight of 1 to the first adult in a household, 0.7 to other adults, and 0.5 to children under 14, corresponds to a value of θ roughly equal to 0.7. That is, a doubling of household size, in terms of equivalent adults, leads to only a 70% increase in household needs.

1.23 The equivalence elasticity θ lies in the range [0,1] inclusive. At one extreme, θ = 0, no attempt is made to adjust household income for household size, implicitly assuming infinite economies of scale (i.e., an increase in household size has no effect on the household's needs). The other extreme, θ = 1, corresponds to household per capita income and, as mentioned, does not allow for economies of scale in consumption. To illustrate the impact of alternative equivalence scale assumptions on assessments about poverty, suppose a family of two parents and two children has total disposable income of 1,000 denars. With θ = 1, Y_e = 250; if θ = 0, Y_e = 1,000; and the OECD scale would yield $Y_e \approx 379$. This simple example indicates the importance of equivalence scale choice: the assessed poverty status of the same household depends critically on the size elasticity, θ.

1.24 The choice of equivalence scale reflects judgment about technical issues such as economies of scale in consumption as well as value judgments about the priority assigned to the needs of different groups, such as children and the elderly. For example, some scales take more account of household composition than others by making an individual's needs vary with his or her age and activity level, in addition to the standard adult/child distinction. Policymakers in different countries utilize a wide variety of scales along the [0,1] interval; there is no concentrated range of conventional equivalence scales. Furthermore, the analysis ignores the existence of economies of scale in household consumption. These may arise when certain goods such as housing, water, and clothing, can be shared so that the cost per person at a given standard of living is lower when individuals live together compared to when they live apart.

1.25 Poverty analysis calls for the use of an adult equivalence scale because expenditure needs of different household members are not the same and because large households benefit from economies of scale in consumption. The Statistical Office and the Ministry of Labor and Social Policy, decided to use the standard OECD equivalence scale which equals 1 for the first adult, 0.7 for other adults, and 0.5 for children aged below 14. The differences in the distribution of consumption that result in using an adult expenditure equivalent and a per capita scale are highlighted in Table 6.

1.26 **Measures of Inequality** In addition to measures of poverty, we also examine the distribution of expenditure in order to assess the extent of inequality in the population.[4] Although poverty and inequality are related, it is important to note that an increase in inequality does not necessarily mean that poverty increases. For example, if the expenditure of the richest household doubles, inequality increases by definition; however, under an absolute poverty line, the headcount, poverty gap index, and P_2 measures of poverty would remain unchanged. A common summary measure used in distributional analysis is the Gini coefficient. It is a measure of the concentration of the distribution and may be interpreted in two ways. First, it can be defined geometrically as the ratio of the area between a Lorenz curve and the diagonal to the total area under the diagonal. The Gini coefficient ranges in percentage terms from 0, when all incomes are equal, to 100, when all incomes accrue to a single individual, and the Lorenz curve traces out an inverse-L shape.

1.27 Alternatively, suppose two households are chosen at random from the population. The expected value of the difference between their incomes, as a proportion of the average income equals twice the Gini coefficient. For example, a Gini of 40 percent means that the expected difference between the incomes of two randomly chosen households is 80 percent of the mean income (Atkinson, 1983). Table 6 compares the distribution of expenditures under different equivalence scale assumptions.

Table 6: Expenditure Inequality.

Statistics	Total Expenditure ($\theta = 0$)	Expenditure Per Equivalent Adult ($\theta \approx .67$)	Expenditure Per Capita ($\theta = 1$)
Gini Coefficient	31.5	29.6	31.4
Median	156,602	55,103	42,293
Mean	184,018	65,026	50,287
CV	0.68	0.67	0.72

* Based on expenditure in 1996 denars and calculated over individuals by attributing the measure of household expenditure to each individual member of the household.
CV = Coefficient of Variation = standard deviation/ mean.

1.28 **Poverty Line** In 1996, the Government of Macedonia established an urban and rural absolute poverty line. The calculations which underlined the determination of these poverty lines can be found in Braber (1995) and Hutton (1995). The value of these poverty lines corresponded to approximately 60% of average household income, but, due to budgetary constraints, the administration of social assistance has relied on half the value of the officially legislated lines.

1.29 In 1997, the government selected a single national relative poverty line equal to 60% of the median adult equivalent consumption of the population. One reason for the selection of the poverty line by a relative method is that the calculation of an absolute line

[4]Income has not been imputed for the additional households.

based on minimum caloric requirements or an otherwise determined minimum consumption basket proves to be very sensitive to the built-in assumptions, and it is not always clear which are the preferred assumptions. A relative poverty line, while arbitrary, has the advantage of being transparent in its derivation and comparing the poor

Table 7. Alternate Poverty Lines.

Method/Assumptions	Poverty Line (Denars per adult equivalent per year)		Poverty Head Count
Food energy intake method			
-- Base case	42,997		23%
-- Minimum caloric intake + 300	46,836		30%
-- Minimum caloric intake - 300	40,213		16%
Ravallion method			
-- Base case	24,703 (urban)	23,435 (rural)	2%
-- Replace implicit prices with CPI prices	27,245	20,094	3%
-- Minimum caloric intake + 300	30,521	28,958	6%
-- Alternative method for non-food basket	37,734	33,846	11%
P.M.: "official" social assistance poverty lines	21,744	17,784	--*

*According to the Ministry of Labor, about 50,000 households or 10% of the population "qualify" for social assistance based on these lines. The 1994 HBS results suggest that it should be less than 2%. The alternative explanations are that social assistance applicants understate their income or that the HBS undercounts the poor (or both).

directly with a simple national norm (the average or the median). In contrast, the calculations underlying many basket-based poverty lines are complex and non-transparent. It is somewhat ironic that in the end many absolute poverty lines are "validated" by indicating what percentage of the mean or median they represent. In the case of Macedonia, Braber (1996) has undertaken a series of computations of absolute poverty lines based on the 1994 HBS using alternative assumptions. His results are summarized in Table 7 and show the high sensitivity of the calculations to changes in some of the assumptions.

1.30 For this report, the official poverty line of 60% 1996 adult equivalent consumption is used for poverty analysis. For the over time analysis, three alternative relative poverty lines were selected, namely, 50%, 60%, and 70% of median household expenditure per equivalent adult. These lines were selected for 1995 as this was the most recent data set available at the time which the analysis was conducted. And, since the entire data base has been expressed in 1995 denars, the same lines were used for the other

years. This means that while we initially (for 1995) select the poverty lines by a relative method, the over-time comparison treats them as absolute lines by holding the purchasing power of the lines constant over time. However, changes in the composition of poverty at provided at the higher 70% poverty line. This is because, given the small sample of households at the 50/60% poverty lines, it was difficult to construct robust trends of changes in poverty rates for sub-sectors.

1.31 The following sections provide an analysis of the sensitivity of the choice of the poverty results to alternate specification of the relative poverty lines.

Table 8. Sensitivity Analysis of Poverty Measures (percentages).

Measure	60% Median Expenditure	10% Higher	20% Higher
Headcount	18.1	21.8	27.7
Poverty Gap Index	3.9	5.4	7.0
Poverty Severity Index	1.3	1.9	2.6
		10% Lower	20% Lower
Headcount		12.7	8.0
Poverty Gap Index		2.6	1.7
Poverty Severity Index		0.9	0.5

1.32 **Sensitivity Analysis** Estimation of the incidence of poverty necessarily depends on the method used to construct the measure of welfare as well as the particular poverty line adopted Table 8. The robustness of results depend *inter alia* on the sensitivity of measured poverty to a change in the poverty line. Therefore, while we do not pursue alternative methodologies for constructing a poverty line, we do examine the sensitivity of poverty measures by adjusting the chosen threshold. While real income and expenditure have decreased during the transition, there does appear to be significant bunching around the poverty line. Decreasing the poverty line by 10 percent would decrease the headcount from 18.1 percent to 12.7 percent, approximately a 30 percent decline. Conversely, raising the line by 10 percent causes the incidence of poverty to rise by about 20 percent. Such disproportionate changes indicate that many households had equivalent expenditure relatively close to 55,103 Denars in 1996, the poverty line. Twenty percent changes in the line yield similar results. Since small increases or decreases in the poverty line (or equivalently in real income or expenditure) have a strong impact on poverty, the number of poor could decline relatively quickly if economic growth generates rising real incomes.

Table 9 Sensitivity Analysis of Poverty Measures (percentages).

Measure	60% Median Agr Mixed Non-Agr			10% Higher Agr. Mixed Non-Ag			20% Higher Agr. Mixed Non-Ag		
Headcount	25.3	15.2	17.2	25.3	18.1	21.7	36.1	23.0	29.6
Poverty Gap Index	4.1	4.3	3.4	6.0	5.5	4.9	8.1	6.7	6.5
Poverty Severity Index	1.0	1.6	1.1	1.7	2.2	1.6	2.6	2.8	2.3
				10% Lower Agr. Mixed Non-Ag			20% Lower Agr. Mixed Non-Ag		
Headcount				16.3	12.7	11.2	6.3	9.4	6.7
Poverty Gap Index				2.2	3.2	2.2	1.2	2.3	1.4
Poverty Severity Index				0.5	1.1	0.7	0.3	0.7	0.5

1.33 **Poverty Measure.** In line with much recent work on poverty, the analysis below utilizes the so-called P-alpha class of poverty measures developed by Foster, Greer and Thorbecke (1984). The general formula is:

$$P_\alpha = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right)^\alpha$$

where n = number of people
q = number of poor people
z = poverty line
y_i = expenditure per capita of individual i
α = poverty aversion parameter

1.34 The poverty aversion parameter can take any positive value or zero. The higher the value, the more the index "weighs" the situation of the very poor, i.e., the people farthest below the poverty line. Of specific interest are the cases where α = o and α = 1.

If α = o, the index becomes

$$P_o = \frac{q}{n}$$

which is the simple head count ratio of poverty, i.e. the number of poor people as a percentage of the total population. While this is a useful first indicator, it fails to pay attention to the depth of poverty. To do so one also needs to look at the extent to which the expenditures of poor people fall below the poverty line. This is customarily

expressed as the "income gap ratio" or "expenditure gap ratio" which expresses the average shortfall as a fraction of the poverty line itself

$$\frac{z-\overline{y_i}}{z}$$

where $\overline{y_i}$ is the average income or expenditure of the poor.

1.35 A useful index is obtained when the head count ratio of poverty is multiplied with the income or expenditure gap ratio. This corresponds to

$$P_1 = \frac{q}{n}\left(\frac{z-\overline{y_t}}{z}\right)$$

which reflects both the incidence and depth of poverty. This measure has a particularly useful interpretation because it indicates what fraction of the poverty line would have to be contributed by every individual to eradicate poverty through transfers, under the assumption of perfect targeting. Since this assumption is not likely to apply in practice, this can be considered as the minimum amount of resources needed to eradicate poverty. In the tables in the report, P_0, P_1 and the ratio P_1/P_0, i.e. the expenditure gap ratio. Are used extensively The latter is called the "poverty gap" (PG) to highlight that it is a measure of the average depth of poverty calculated over the poor only. In contrast, P_0 and P_1 are ratios which are calculated over the entire population (for a further discussion of these measures, see Ravallion, 1993).

Decomposing Poverty Trends: Growth and Distribution

1.36 The changes in poverty which occurred in Macedonia between 1990 and 1995 are the net result of two effects: a fall in the mean level of household expenditure and a change in the distribution. It may be useful to separate out the two effects, in order to focused. Following Ravallion and Datt (1991), the change in P_α can be written as the properly assess the policies of the period and in order to see where future policy needs to be sum of a growth component, a redistribution component and a residual. Let

$$P_\alpha = P_\alpha\left(z / M_t, D_t\right)$$

where z is the poverty line, M_t is mean expenditure per equivalent adult and D_t is the distribution of expenditure per equivalent adult in year t. The change in P_α between 1990 and 1995 can then be written as

$$P_{\alpha,95} - P_{\alpha,90} = \underset{\text{Growth Component}}{G(90, 95; r)} + \underset{\text{Redistribution component}}{D(90, 95; r)} + \underset{\text{Residual}}{R(90, 95; r)}$$

where r refers to the reference point. If we select the initial year as the (logical) reference point, the components are defined as follows:

$$G\ (90, 95; 90) \equiv P_\alpha\ (z/M_{95}, D_{90}) - P_\alpha\ (z/M_{90}, D_{90})$$

$$D\ (90, 95; 90) \equiv P_\alpha\ (z/M_{90}, D_{95}) - P_\alpha\ (z/M_{90}, D_{90})$$

1.37 The growth component thus captures the effect of the changing level of mean expenditure between 1990 and 1995, while maintaining the 1990 distribution. The redistribution component shows the effect of the changes in distribution between 1990 and 1995, while maintaining mean expenditure at its 1990 value. The residual reflects the interaction between changes in the mean and the distribution. (The residual exists because the decomposition is sensitive to the choice of reference year.)

1.38 The highest poverty rates are not always observed in the groups with the lowest mean household expenditure per equivalent adult. This is due to pronounced differences in the distribution of expenditure within different categories of households. Similarly, a trend of falling mean expenditure does not always imply a rising poverty incidence, due to shifts in the distribution over time. All this suggests that an exercise to decompose the observed differences in poverty across categories and over time would be quite useful. Since this decomposition is very sensitive to small sample size, the results are shown at the national level and at the urban/rural level.

1.39 Table 10A-C shows the decomposition at the national level for three alternative poverty lines, for the entire period 1990-95 as well as for the two sub-periods 1990-91 and 1993-95. The main observation is that the redistribution component is negative for the entire period, meaning that the changes which occurred in the distribution tended to reduce poverty and were of an equalizing nature. This is true of all three poverty lines, and for the head count ratio as well as for the P_1 measure. This confirms in a general way what we have illustrated at a few places earlier, namely, that the distribution of expenditures in Macedonia became more equal as the economy declined. However, if one looks at two sub-periods, it becomes clear that this overall effect is solely due to the 1990-91 sub-period. In the most recent three years (1993-95), the overall decline in income and expenditure levels and the changes in the distribution both contributed to increase poverty. In other words, in recent years the beneficial effects from redistribution have been lost.

1.40 The analysis was not repeated for 1995-96. However, it should be noted that there was a slight increase in mean consumption for this period. This is a combination of the fact that while consumption declined for the bottom deciles, it actually increased at the higher end of the distribution. Therefore the entire increase in poverty at the national level might be attributed mainly to a growing inequality in the distribution of consumption. accentuates a trend observed since 1993. The urban/rural decomposition suggests that the unequalizing change in the distribution was concentrated in rural areas -- a reversal from the years before Table 31B..

1.41 Table 12A-B further identifies the role of changes in distribution which occurred within the urban and rural areas. Looking first at the early period 1990-91, the redistribution component is only negative for urban areas, indicating that only in urban areas an improvement in distribution occurred. In rural areas, both the mean and the distribution effects contributed to increases in poverty. In the more recent period 1993-95, growth and redistribution components were positive in both urban and rural areas. This suggests that the earlier favorable evolution was completely offset in the last three years of the period under study. The decomposition of the poverty changes into growth and redistribution components for 1996 are shown in Table A4 (above) that replicates Table 30; and Table A5 that updates. The main implication from extending the observation period to 1996 is that the redistribution component has become smaller (although still negative). This means that the pro-poor shift in distribution over the entire period has become less pronounced. This is a reflection of the earlier table in this annex which indicated a pro-rich tilt in the distribution between 1995 and 1996, which in turn

Table 10A: Decomposition of Change in Poverty into Growth and Redistribution Components

(Poverty line = 70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
1990-91	0.011	-0.006	0.006	0.011
1993-95	0.065	0.024	0.007	0.096
1990-95	0.092	-0.088	0.027	0.031
	P1			
1990-91	0.006	-0.008	0.001	-0.001
1993-95	0.009	0.003	0.003	0.015
1990-95	0.026	-0.019	-0.007	0.000

Table 10B: Decomposition of Annual Change in Poverty into Growth and Redistribution Components

(Poverty line = 60% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
1990-91	0.010	-0.028	0.025	0.007
1993-95	0.049	0.026	-0.009	0.066
1990-95	0.071	-0.084	0.003	-0.010
	P1			
1990-91	0.005	-0.007	-0.001	-0.003
1993-95	0.004	0.001	0.002	0.007
1990-95	0.021	-0.012	-0.012	-0.003

Table 10C: Decomposition of Annual Change in Poverty into Growth and Redistribution Components

(Poverty line = 50% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
1990-91	0.018	-0.027	-0.002	-0.011
1993-95	0.007	0.002	0.015	0.024
1990-95	0.072	-0.050	-0.038	-0.016
	P1			
1990-91	0.003	-0.004	-0.001	-0.002
1993-95	0.002	0.000	0.001	0.003
1990-95	0.016	-0.005	-0.012	-0.001

Table 11A: Decomposition of Change in Poverty (1990-1991) into Growth and Redistribution Components, by Urban/Rural

(Poverty line = 70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
Urban	0.002	-0.024	0.006	-0.016
Rural	0.024	0.032	0.008	0.064
Total	0.011	-0.006	0.006	0.011
	P1			
Urban	0.004	-0.007	0.000	-0.003
Rural	0.009	-0.008	0.002	0.003
Total	0.006	-0.008	0.001	-0.000

Table 11B: Decomposition of Change in Poverty (1993-1995) into Growth and Redistribution Components, by Urban/Rural

(Poverty line = 70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
Urban	0.072	0.029	-0.022	0.079
Rural	0.053	0.005	0.051	0.109
Total	0.065	0.024	0.007	0.096
	P1			
Urban	0.008	0.004	0.000	0.012
Rural	0.012	0.001	0.004	0.017
Total	0.009	0.003	0.003	0.015

Table 11C: Decomposition of Change in Poverty (1990-1995) into Growth and Redistribution Components, by Urban/Rural

(Poverty line = 70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
	P0			
Urban	0.062	-0.058	0.029	0.033
Rural	0.135	-0.135	0.024	0.024
Total	0.092	-0.088	0.027	0.031
	P1			
Urban	0.017	-0.012	-0.003	0.002
Rural	0.039	-0.030	-0.013	-0.004
Total	0.026	-0.019	-0.007	0.000

Table 12A: Decomposition of Change in Poverty into Growth and Redistribution Components

Poverty Line = 70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
		P0		
1990-91	0.011	-0.006	0.006	0.011
1993-96	0.064	0.080	-0.006	0.138
1990-96	0.092	-0.059	0.040	0.073
		P1		
1990-91	0.006	-0.008	0.001	-0.001
1993-96	0.009	0.013	0.005	0.027
1990-96	0.026	-0.013	-0.000	0.012

Table 12B: Decomposition of Change in Poverty (1993-1996) into Growth and Redistribution Components, by Urban/Rural

Poverty Line=70% of median adult equivalent consumption

	Growth Component	Redistribution Component	Residual	Total Change
		P0		
Urban	0.072	0.040	-0.027	0.085
Rural	0.050	0.129	0.006	0.185
Total	0.064	0.080	-0.006	0.138
		P1		
Urban	0.007	0.005	0.003	0.015
Rural	0.012	0.022	-0.011	0.023
Total	0.009	0.013	0.005	0.027

1.42 **Dominance Analysis** The cumulative distributions of household expenditure per equivalent adult for three separate periods 1990-1991; 1993-1995; and 1995-96; are shown in Figures 1-9 below. For the first two years, Figures 1-3, the distribution curves intersect in the bottom 20% of the distribution, indicating that conclusions about poverty incidence will depend upon where exactly one sets the poverty line. The poorest among the population (roughly, the lowest decile) will show a poverty reduction between 1990 and 1991, while higher poverty lines will show an increase in poverty. This occurs because changes in the distribution favored the lower end of the distribution. The cross-over point is higher for rural than urban areas, so that poverty increase holds over a larger range of the lower end of the distribution.

Figure 1: Cumulative Distribution of Household Expenditures Per Adult Equivalent, Macedonia 1990 and 1991.

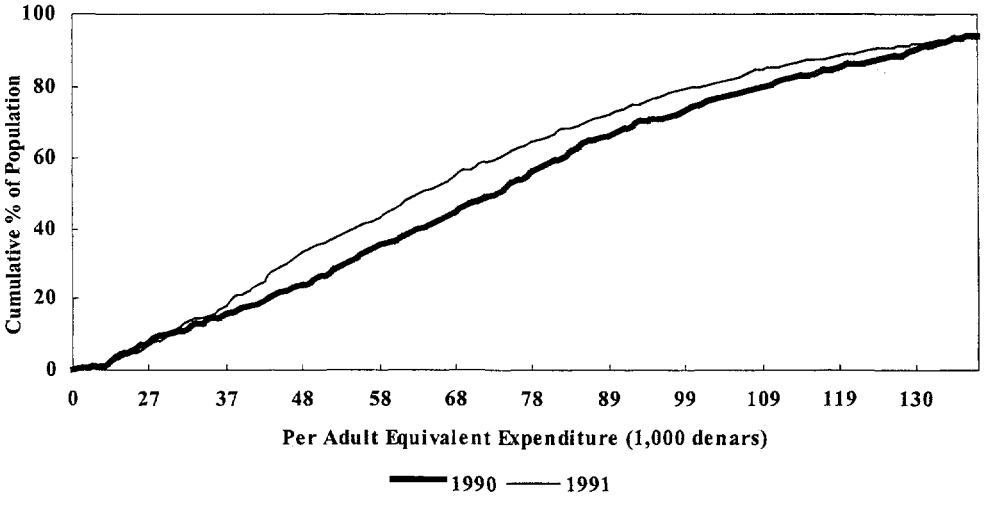


Figure 2: Cumulative Distribution of Household Expenditures Per Adult Equivalent, Urban Macedonia 1990 and 1991

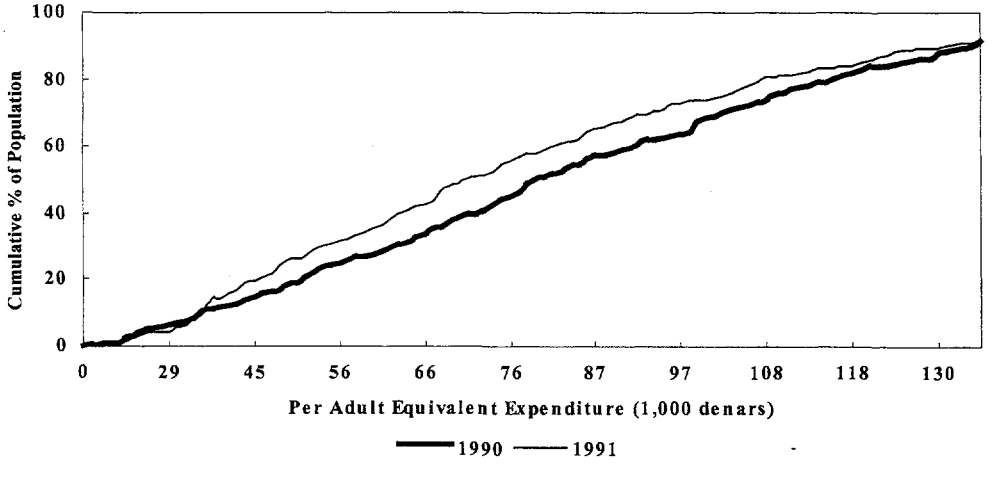
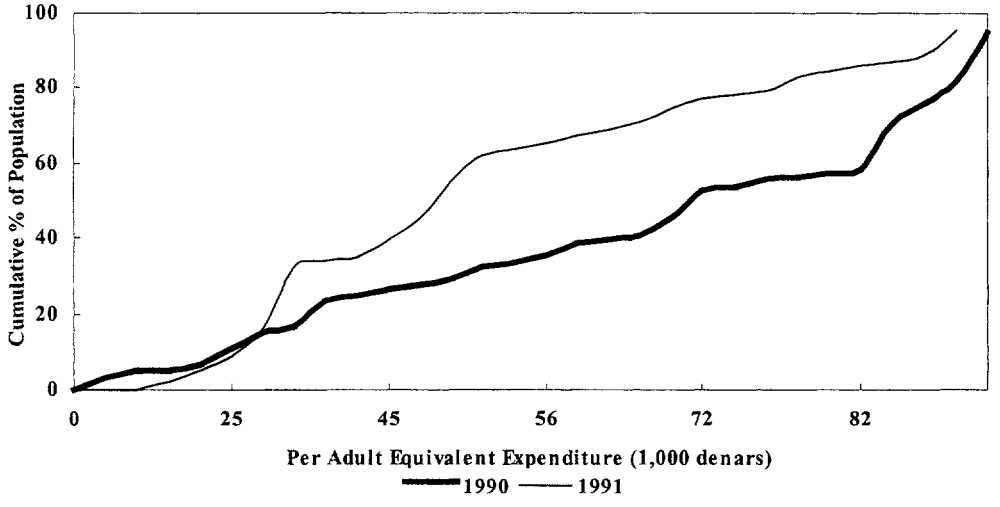


Figure 3: Cumulative Distribution of Household Expenditures Per Adult Equivalent, Rural Macedonia 1990 and 1991.



For the period 1993 to 1995, the situation is more clear cut: The cumulative distribution curves do not intersect anywhere, i.e., the first order dominance condition is met (Figures 4-6). The same is true for urban and rural areas separately. The 1995 curve lies above the 1993 curve everywhere, which means that poverty increased between 1993 and 1995, regardless of where the poverty line is set. This is true nationally as well as for urban and rural areas separately.

Figure 4: Cumulative Distribution of Household Expenditures Per Adult Equivalent, Macedonia 1993 and 1995.

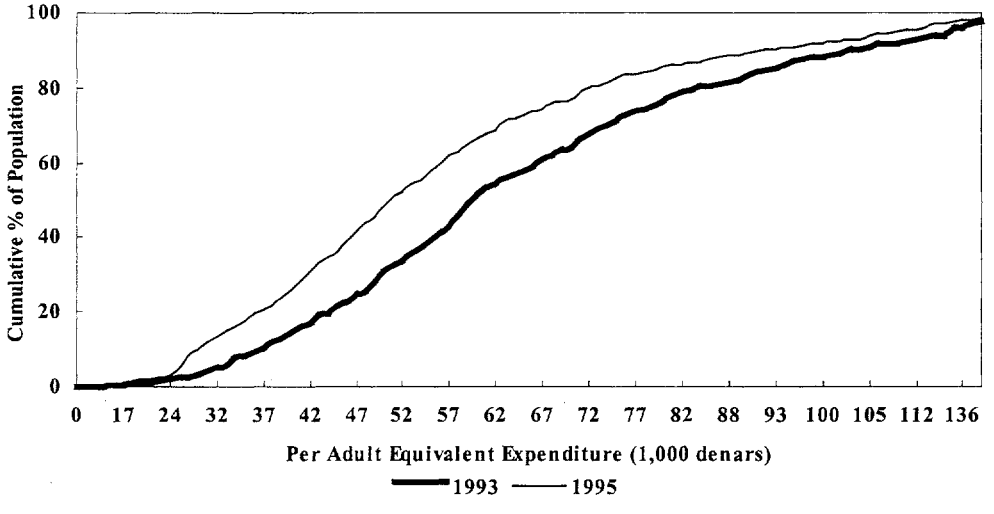


Figure 5: Cumulative Distribution of Household Expenditure Per Adult Equivalent, Urban Macedonia 1993 and 1995.

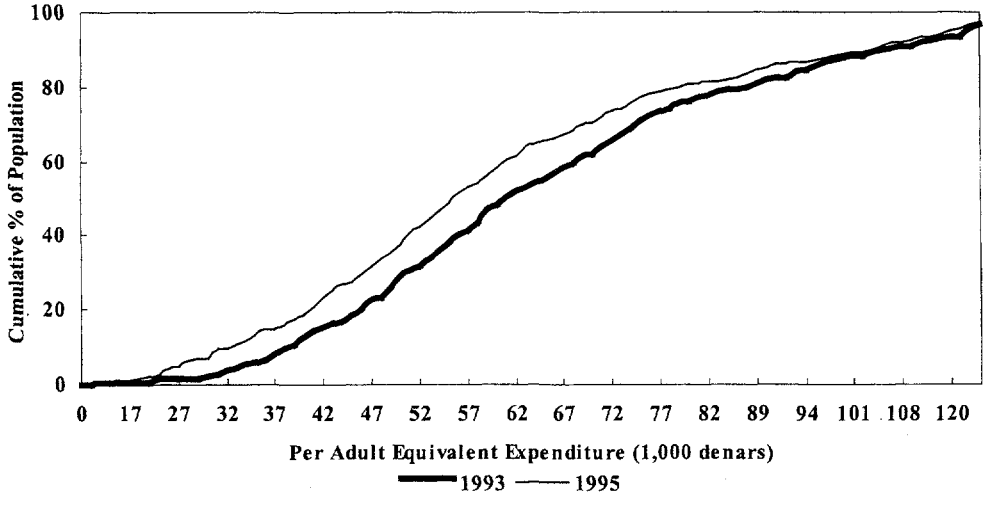
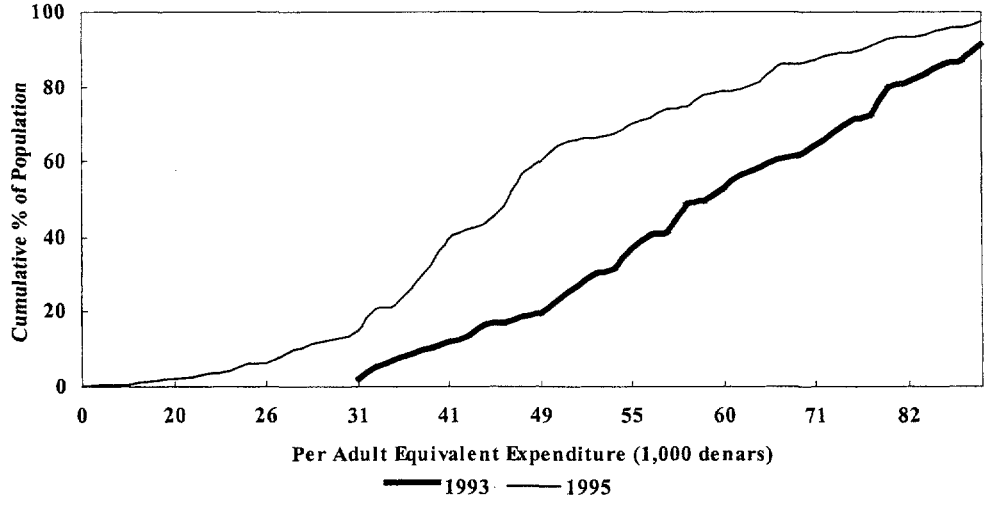


Figure 6: Cumulative Distribution of Household Expenditure Per Adult Equivalent, Rural Macedonia 1993 and 1995.



For the period 1995-96, the distribution curves intersect for the national, urban and rural data. The graphs show that the change in welfare was almost insignificant between the two periods (as compared to 1993-95). However, the change in welfare was not uniform across the range of distribution. Thus, first order dominance does not hold over the entire distribution, and the increase in poverty is sensitive to the poverty line chosen. Specifically, at the 50%, 60% and 70% median adult equivalent consumption poverty lines, and all poverty lines which define a level of consumption above that realized by 60% of the population, poverty increases. However, for poverty lines that cut off a higher proportion of the population, poverty falls.

Figure 7

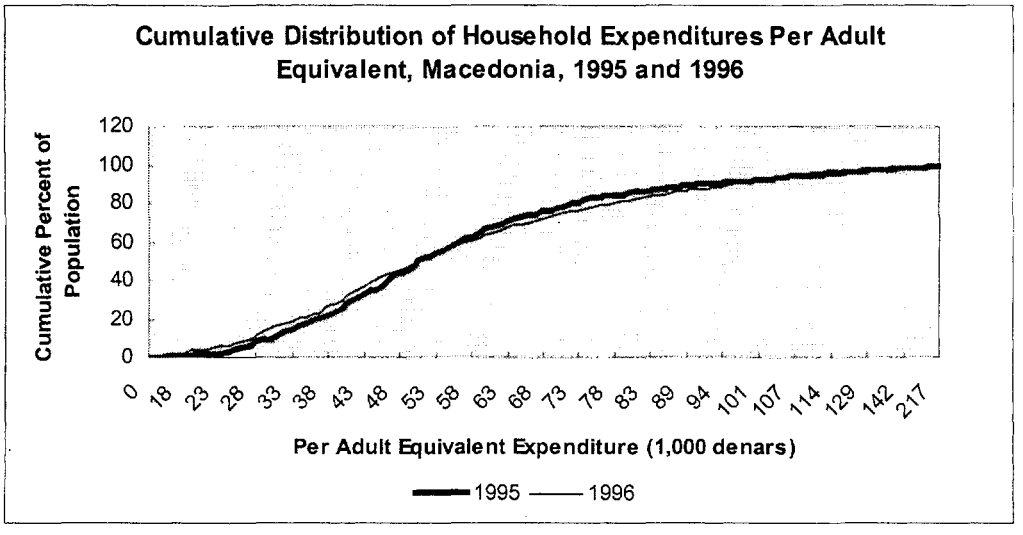


Figure 8

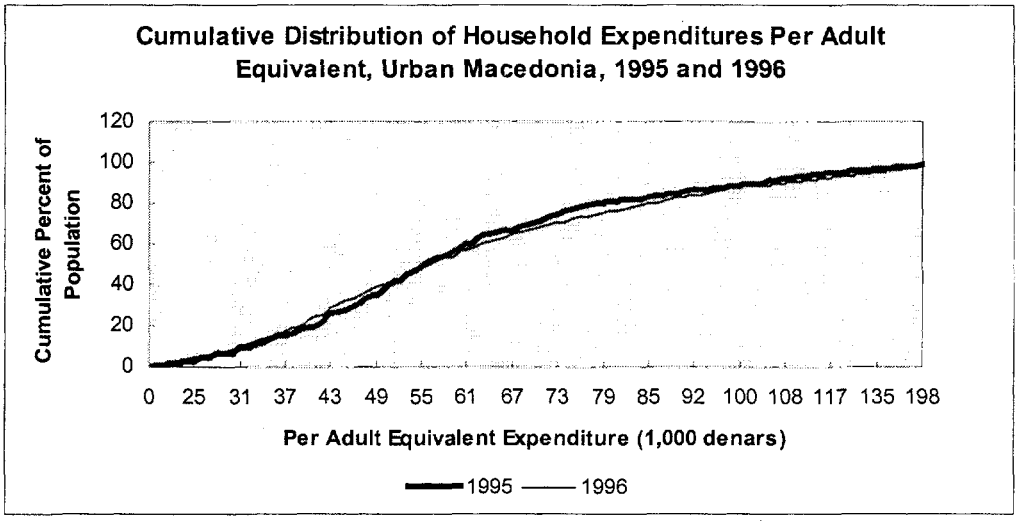
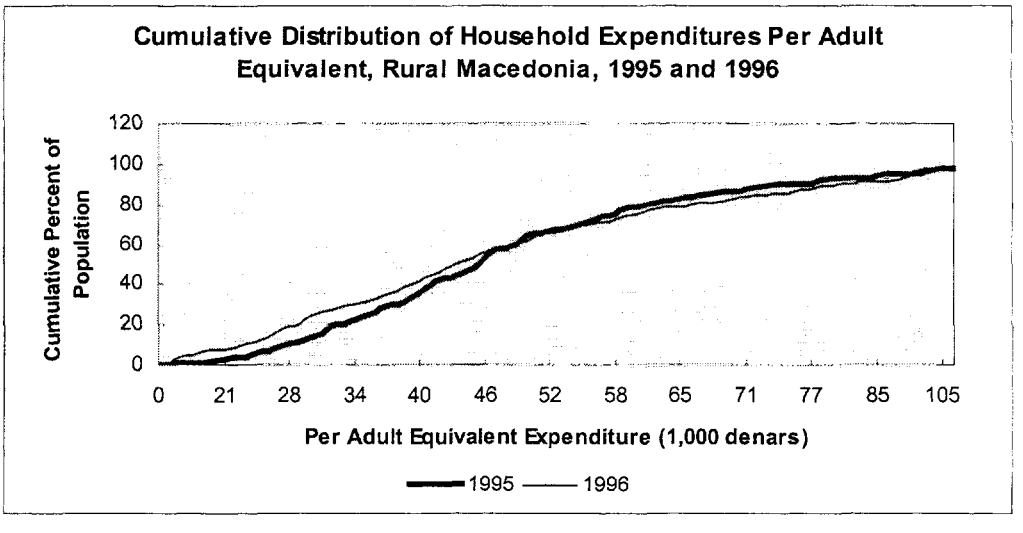


Figure 9



VOLUME II: ANNEX 2

STATISTICAL TABLES

FORMER YUGOSLAV REPUBLIC OF MACEDONIA

FOCUSING ON THE POOR

VOLUME II: STATISTICAL ANNEX

ANNEX 11
STATISTICAL TABLES

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*TABLES 1-57 ARE FROM THE 1996 ADD ON HOUSEHOLD BUDGET SURVEY (UNLESS OTHERWISE INDICATED).

Annex 2: Table 1: Means and Standard Deviations of Variables.		
	Mean	Standard Deviation
Household Size	4.131	2.097
Female Head of Household	0.138	0.345
Age of Head	52.720	13.080
Age of Head Squared/100	29.510	14.210
Education Head ≤ 4 Years of Primary	0.267	0.443
Education Head: Primary (omitted)	0.270	0.444
Education head: Secondary	0.330	0.470
Education Head: Post-Secondary	0.060	0.237
Education Head: University	0.067	0.250
Spouse Absent	0.193	0.395
Head Absent 1-3 Months	0.026	0.158
Head Absent > 3 Months	0.028	0.165
Household Owns Enterprise	0.058	0.235
Household Does Not Own Home	0.095	0.293
Number of Unemployed Household Members	0.319	0.635
Wage Share in Household Income	0.438	0.353
Recent Migrant	0.016	0.125
Capital City	0.285	0.452
Other City	0.397	0.489
Rural (omitted)	0.318	0.466

Annex 2: Table 2 Expenditure By Decile.		
Decile	Adult-Equivalent Expenditure	
	Average	Std. Deviation
1	24,552	4,885
2	34,438	2,475
3	41,125	1,428
4	46,442	1,666
5	52,472	1,718
6	58,685	2,007
7	66,670	2,821
8	77,099	3,265
9	93,220	5,976
10	156,470	77,195

Annex 2: Table 3 Education Level and Poverty (percentages)						
	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population
Education of Head						
Primary (≤ 4 years)	22.9	5.4	2.0	23.6	36.8	27.7
Primary (5-8 years)	25.1	5.7	1.9	22.7	44.4	30.5
Specialized Secondary	8.2	1.2	0.3	14.6	14.6	30.5
High School	8.5	1.1	0.2	12.9	2.6	5.3
University	4.9	0.7	0.1	14.3	1.6	5.5

Annex 2: Table 4 Poverty Measures by Socioeconomic Group (percentages).

	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population
Socio-economic Category						
Agricultural	25.3	4.1	1.0	16.2	10.8	7.3
Mixed	15.2	4.3	1.6	28.3	23.4	26.6
Non-agricultural	17.2	3.4	1.1	19.8	65.9	66.1
Socio-economic Position of Head						
Employed (Non-Farm)	15.4	3.1	1.0	20.1	33.9	37.9
Farmer	28.4	5.3	1.4	18.7	15.9	9.6
Unemployed	31.2	7.7	2.5	24.7	12.7	7.0
Pensioner	12.7	2.2	0.7	17.3	16.5	22.4
Employed (Farmer)	8.8	2.7	1.1	30.7	5.1	10.1
Pensioner (Farmer)	13.4	4.7	2.1	35.1	6.1	7.8
Seasonal Workers	27.5	3.9	1.0	14.2	4.0	2.5
Other[1]	37.5	9.8	4.5	26.1	5.8	2.7

[1] Other category includes students, homemakers, and social assistance recipients.

Annex 2: Table 5 Poverty Measures by Industry (percentages).

Industry of Head[1]	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population[2]
Manufacturing	12.0	1.7	0.4	14.2	8.4	12.2
Construction	25.7	7.1	2.8	27.6	13.9	9.3
Agriculture	21.4	4.1	1.2	19.2	16.3	13.1
Transportation	7.0	1.0	0.2	14.3	1.8	4.4
Trade	11.9	1.9	0.5	16.0	3.7	5.4
Other production	14.0	2.3	0.6	16.4	1.5	1.8
Science/Education	6.9	1.5	0.3	21.7	1.3	3.3
Other non-production	27.5	2.8	0.5	10.2	5.8	3.6

[1] Categories not reported due to low representation are: forestry, communications, commercial services, arts and culture, health care, sports and tourism, finance and credit, management and administration, and army and police.
[2] Total does not add up to 100% since households whose head does not work, did not report an industry, or had low representation were excluded from the industry analysis.

Annex 2: Table 6 Poverty and the Labor Market (percentages).

Number of :	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population
Employed Members						
0	30.6	8.0	3.1	26.1	29.1	16.4
1	18.3	3.8	1.3	20.8	37.6	35.5
2	8.7	1.3	0.3	14.9	16.4	32.6
≥ 3	18.7	4.0	1.2	21.4	16.8	15.5
Unemployed Members						
0	13.8	2.7	0.9	19.6	57.7	72.1
1	20.7	4.8	1.7	23.2	22.4	18.7
≥ 2	37.4	9.1	3.1	24.3	19.8	9.1
Months of Wage Arrears						
0						
1-3	18.1	3.9	1.3	21.5	84.5	80.6
≥ 4	17.4	3.6	1.4	20.7	9.5	9.4
	10.3	1.8	0.6	17.5	6.0	10.0
Second-Job Holders						
0	16.4	2.5	0.6	15.2	86.7	86.0
≥ 1	17.4	3.9	1.4	22.4	13.3	14.0
Disabled Members						
0	16.4	3.5	1.1	21.3	89.2	93.8
≥ 1	29.8	6.8	2.9	22.8	10.8	6.2

Annex 2: Table 7 Welfare and Poverty Regressions			
	Household	**Poverty**	**Welfare of the**
Dependent Variable	ln (household expenditure per equivalent adult)	dummy variable poor/non-poor	ln (household expenditure per equivalent adult) of the poor
Estimation Method	OLS	Probit	Tobit (right censored at poverty line)
Reported Results	regression coefficients	probability derivatives	regression coefficients
Intercept	10.350*	—	10.061*
Household size	-0.0642*	0.0384*	-0.0649*
Female Head of Household	-0.0389	-0.0488	0.0815
Age of Head	0.0240*	-0.0185*	0.0296*
Age of Head Squared/100	-0.0192*	0.0137*	-0.0209*
Education Head ≤ 4 Years of Primary	-0.0879*	0.0410	-0.0834*
Education Head: Secondary	0.1959*	-0.1370*	0.2628*
Education Head: Post-Secondary	0.3621*	-0.1213*	0.2827*
Education Head: University	0.4863*	-0.1566*	0.3975*
Spouse Absent	0.1308*	-0.0681*	0.1092*
Head Absent 1-3 Months	0.0805	-0.0335	0.1104
Head Absent >3 Months	0.0865	-0.1102*	0.2653*
Household Owns Enterprise	0.3750*	-0.1684*	0.5059*
Household Does Not Own Home	-0.0474	0.0190	-0.0211
Number of Unemployed Household	-0.0893*	0.0424*	-0.0929*
Wage Share in Household Income	0.0767*	-0.1653*	0.2725*
Recent Migrant	0.1663*	-0.0894	0.2130
Capital City	0.1279*	0.0131	-0.0138
Other City	-0.0282	-0.0147	0.0309
Number of Observations	1437	1428	1437
R-Squared	0.304	—	—
Pseudo R-Squared	—	0.191	0.229
F-Value	32.64	—	—
Prob > F	0.00	—	—
Chi-Squared	—	284.82	309.61
Prob > Chi-Squared	—	0.00	0.00
Note: Asterisk (*) indicates that coefficient is significantly different from zero at 90% confidence level.			

Annex 2: Table 8 Poverty and Health (percentages)

Category[1]	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population
Members with Health Problems						
0	17.4	3.6	1.3	20.7	36.3	36.0
1	14.7	3.8	1.4	25.9	22.2	26.0
2	20.1	4.4	1.5	21.9	25.5	21.8
≥ 3	17.1	2.6	0.6	15.2	16.0	16.2
Days Ill						
0	17.7	3.9	1.4	22.0	39.7	38.7
1-14	17.1	3.1	0.9	18.1	19.7	19.9
15-30	16.7	4.2	1.5	25.1	20.2	20.8
>30	17.1	3.4	1.1	19.9	20.3	20.6
Work Days Lost						
0	18.0	3.9	1.3	21.7	84.4	80.8
1-9	15.8	3.4	1.1	21.5	9.4	10.3
≥ 10	12.0	2.0	0.7	16.7	6.2	8.9

[1] Time frame for health variables is July through December 1996.

Annex 2: Table 9 Average Household Characteristics by Type of Settlement.

Characteristic	Urban	Rural	Total
Poverty Incidence (%)	10.2	25.7	18.1
Poverty Gap Index (%)	1.9	5.8	3.9
Demographic			
Age of Head	52.6	52.7	52.6
# Children under age 18	0.97	1.44	1.16
# Children under age 6	0.25	0.42	0.32
Household Size	3.72	4.66	4.10
Labor Market			
# of Unemployed members	0.34	0.27	0.31
# of Disabled members	0.05	0.06	0.05
# of Employed members	1.20	1.45	1.30
Socio-economic Position of Head			
Employed (Non-Farm)	44.9	25.6	37.1
Farmer	0.8	16.3	7.0
Unemployed	8.5	5.4	7.3
Pensioner	32.5	16.2	25.9
Employed (Farmer)	5.9	15.0	9.5
Pensioner (Farmer)	4.6	14.0	8.3
Seasonal Workers	1.0	3.7	2.1
Other[1]	1.9	3.8	2.7
Socio-economic Category (share)			
Agricultural	0.4	14.1	5.9
Mixed	12.5	41.2	24.0
Non-agricultural	87.1	44.7	70.1
Education of Head[2] (shares)			
Primary (≤ 4 years)	17.6	43.7	28.0
Primary (5-8 years)	23.6	33.5	27.6
Specialized Secondary	41.4	17.8	32.0
High School	8.1	2.4	5.8
University	8.5	2.1	5.9
Health Outcomes[3]			
Members with Health Problems	1.23	1.05	1.16
Days Ill	29.6	22.0	26.5
Work Days Lost	3.7	3.8	3.7

[1] Other category includes students, homemakers, and social assistance recipients.
[2] Totals do not sum to 100 percent due to missing education variables for 10 observations.
[3] Time frame for health variables is July through December 1996.

Annex 2: Table 10 Welfare Regression Coefficients U/R, Probit Derivatives U/R.				
	Household Welfare		Poverty Status	
Dependent Variable	ln (household expenditure per equivalent adult)		dummy variable poor/non-poor	
Estimation Method	OLS		Probit (maximum likelihood)	
Reported Results	regression coefficients		probability derivatives	
	Urban	Rural	Urban	Rural
Intercept	10.561*	10.321*		
Household size	-.0755*	-.0571*	.0269*	.0496*
Female Head of Household	.0235	-.1228	-.0455	-.0127
Age of Head	.0191*	.0240*	-.0097*	-.0231*
Age of Head Squared/100	-.0153*	-.0190*	.0058	.0193*
Education Head ≤ 4 Years of Primary	-.1713*	-.0392	.0749*	-.0084
Education Head: Secondary	.2098*	.0977	-.1061*	-.1061
Education Head: Post-Secondary	.3574*	.3769*	-.0859*	.0194
Education Head: University	.5508*	.1832	-.0994*	-.1361
Spouse Absent	.0695	.1916*	-.0364	-.1178*
Head Absent 1-3 Months	.0991	-.0123	-.0732	.1862
Head Absent >3 Months	-.0959	.1723*	-.0694	-.1652*
Household Owns Enterprise	.3808*	.3926*	-.0954*	-.2660*
Household Does Not Own Home	-.0368	-.0772	.0034	.0793
Number of Unemployed Household Members	-.1014*	-.0544	.0304*	.0383
Wage Share in Household Income	.1409*	-.0226	-.1552*	-.1308*
Recent Migrant	.0222	.2214	-.0584	-.0987
Number of Observations	923	514	915	513
R-Squared	0.3513	0.1734		
Pseudo R-Squared			0.2566	0.1135
F-Value	28.84	6.12		
Prob > F	0.0000	0.0000		
Chi-Squared			200.70	71.89
Prob > Chi-Squared			0.0000	0.0000

Note: Asterisk (*) indicates that coefficient is significantly different from zero at 90% confidence level. The probability derivatives are calculated at the mean of continuous variables and for a change from 0 to 1 in case of dummy variables. The number of observations differs in the probit estimations due to "education of head: missing" (not reported in OLS welfare regressions) perfectly predicting poverty status and therefore those observations are excluded.

Annex 2: Table 11	Average Distance from Household (meters)			
Item	Urban	Rural	Poor	Non-Poor
Retail Shop	114	310	308	175
Post Office	1,020	3,934	2,811	2,089
Primary School	620	1,413	1,065	919
Secondary School	1,427	8,216	5,900	3,871
Bus Station	1,014	2,754	1,709	1,709
Medical Center	1,120	3,235	2,239	1,923
Hospital	4,059	10,394	7,448	6,461
Theater, cinema	2,003	8,067	6,447	4,142
Park, playground	1,167	4,723	3,464	2,461
Library	1,439	6,366	4,627	3,216
Bank	1,140	7,376	5,282	3,376

Annex 2: Table 12 Household Amenities by Type of Settlement (percentages, unless otherwise indicated).		
Amenity	Urban	Rural
Water supply	98.0	64.1
Sewage system	88.9	24.9
Electricity	99.2	96.8
Phone line	74.3	29.5
Kitchen	95.7	88.0
Bathroom	92.1	52.4
Terrace	76.9	52.0
Garage	31.3	14.7
Cultivable land (acres)	3.9	18.1
Heating (shares)		
central heating	17.3	7.1
electric stove	26.8	2.4
solid fuel stove	54.2	89.5
other	1.7	1.0

Annex 2: Table 13 Education of Head by Gender.			
	Female Head ($N_{weighted}$=193.4)	Male Head ($N_{weighted}$=1244.3)	Overall ($N_{weighted}$=1437.7)
Education of Head[1] (shares)			
No Education	16.7	3.4	5.2
Primary (≤ 4 years, including 0)	44.5	25.5	28.0
Primary (5-8 years)	23.6	28.2	27.6
Specialized Secondary	21.0	33.7	32.0
High School	5.0	5.9	5.8
University	4.9	6.1	5.9

[1] Totals do not sum to 100% due to missing education variables.

Annex 2: Table 14 Education of Head by Type of Settlement.			
	Urban ($N_{weighted}$=861.9)	Rural ($N_{weighted}$=575.8)	Overall ($N_{weighted}$=1437.7)
Education of Head[1] (shares)			
No Education	2.8	8.9	5.2
Primary (≤ 4 years, including 0)	17.6	43.7	28.0
Primary (5-8 years)	23.6	33.5	27.6
Specialized Secondary	41.4	17.9	32.0
High School	8.1	2.4	5.8
University	8.5	2.1	5.9

[1] Totals do not sum to 100% due to missing education variables.

Annex 2:Table 15 Education of Head by Socio-Economic Category of Household.			
	Agricultural ($N_{weighted}$=84.2)	Mixed ($N_{weighted}$=345.4)	Non-Agric. ($N_{weighted}$=1008.1)
Education of Head[1] (shares)			
No Education	8.3	6.9	4.4
Primary (≤ 4 years, including 0)	52.2	43.2	20.8
Primary (5-8 years)	39.9	32.0	25.0
Specialized Secondary	7.9	19.9	38.1
High School	0.0	3.4	7.1
University	0.0	1.4	7.9

[1] Totals do not sum to 100% due to missing education variables.

Annex 2: Table 16 Education of Head by Age Group.

	< 40 (N_w=257.6)	40-49 (N_w=368.9)	50-59 (N_w=341.6)	60-69 (N_w=308.9)	≥ 70 (N_w=160.6)
Education of Head[1] (shares)					
No Education	0.0	1.2	1.7	9.2	22.9
Primary (≤ 4 years, including 0)	9.3	10.6	27.8	46.9	62.4
Primary (5-8 years)	22.0	33.4	33.5	23.8	17.5
Specialized Secondary	55.0	38.7	26.1	21.0	13.2
High School	7.0	8.8	4.7	3.6	3.6
University	6.1	7.5	7.5	4.3	1.6

[1] Totals do not sum to 100% due to missing education variables.

Annex 2: Table 17 Education of Household Members ≥ 21 by Gender and Poverty Status.

	Poor Households		Non-Poor Households	
	Females (N_w=291.9)	Males (N_w=301.5)	Females (N_w=1654.1)	Males (N_w=1658.1)
Education [1] (shares)				
No Education	16.9	6.6	7.6	2.2
Primary (≤ 4 years, including 0)	44.8	27.3	28.3	17.0
Primary (5-8 years)	40.8	42.5	31.0	25.6
Specialized Secondary	12.9	26.2	28.4	43.5
High School	0.6	2.4	4.8	5.6
University	0.0	0.9	4.9	5.9

[1]Totals do not sum to 100% due to missing education variables.

Annex 2: Table 18 Percent of Households Owning Durable Goods.					
Item	Capital City	Other City	Rural Areas	Country	Percent Poor (of Owners)
Phone	58.3	67.9	31.3	56.37	5.8
Car	59.0	50.2	32.8	47.18	5.0
Motorboat	1.0	1.6	1.1	1.25	0.0
Motorcycle	1.5	7.7	2.8	4.38	6.3
Van	1.7	2.6	1.3	1.94	0.0
Boat	1.2	1.2	1.1	1.18	0.0
Bicycle	34.9	39.1	15.5	30.41	5.0
Personal Computer	5.9	3.0	0.7	3.06	0.0
Color TV	84.9	80.2	67.2	77.38	9.3
Black & White TV	13.9	21.4	20.4	18.93	14.3
Radio	54.9	54.0	42.7	50.66	8.7
Stereo	18.5	14.0	5.3	12.53	2.2
CD Player	13.7	9.3	3.1	8.56	0.8
Taper Recorder	43.9	52.2	42.0	46.62	8.7
Video Recorder	39.8	39.8	21.0	33.82	5.8
Video Camera	2.7	3.7	1.8	2.78	0.0
Camera	30.2	19.3	7.4	18.65	3.7
Air conditioner	2.2	2.6	0.7	1.88	3.7
Boiler	85.9	86.0	54.7	75.99	8.1
Washing machine	74.1	78.2	45.5	66.67	7.4
Knitting machine	1.0	1.1	0.2	0.76	0.0
Iron	10.5	18.9	8.1	13.08	5.3
Refrigerator	94.9	93.0	85.3	91.09	11.7
Solid fuel stove	4.4	17.7	13.8	12.67	7.7
Electric stove	36.8	42.8	8.8	30.27	3.7
Petrol stove	3.9	6.0	2.4	4.24	1.6
Gas stove	0.7	1.6	0.2	0.90	7.7
Solid fuel cooker	46.8	74.4	92.8	72.37	16.1
Electric cooker	90.7	94.7	79.6	88.80	10.1
Gas cooker	7.3	5.6	1.8	4.87	2.9
Freezer	77.8	78.4	70.0	75.57	9.1
Sewing machine	39.3	38.4	18.2	32.22	6.5
Dishwasher	4.6	2.1	0.7	2.37	0.0
Vacuum	80.5	80.5	45.1	69.24	7.7
Accordion	2.2	4.4	0.9	2.64	2.6
Piano	1.5	1.1	0.0	0.84	0.0

Annex 2: Table 19 Average Household Characteristics of At-Risk Groups.			
Characteristic	≥ 3 Children	Rural	Total
Poverty Measures (individual-based)			
Poverty Incidence (%)	38.6	25.7	18.1
Poverty Gap Index (%)	9.5	5.8	3.9
Poverty Severity Index (%)	3.4	2.0	1.3
Demographic			
Age of Head	49.3	52.7	52.6
# Children under age 18	3.76	1.44	1.16
# Children under age 6	0.99	0.42	0.32
Household Size	7.55	4.66	4.10
Female-Headed (%)	8.7	8.7	13.4
Labor Market			
# of Unemployed members	.28	0.27	0.31
# of Disabled members	.08	0.06	0.05
# of Employed members	1.57	1.45	1.30
Socio-economic Position of Head			
Employed (Non-Farm)	31.6	25.6	37.1
Farmer	17.2	16.3	7.0
Unemployed	6.5	5.4	7.3
Pensioner	13.2	16.2	25.9
Employed (Farmer)	8.7	15.0	9.5
Pensioner (Farmer)	7.8	14.0	8.3
Seasonal Workers	6.9	3.7	2.1
Other[1]	8.0	3.8	2.7
Socio-economic Category (share)			
Agricultural	13.1	14.1	5.9
Mixed	29.2	41.2	24.0
Non-agricultural	57.7	44.7	70.1
Type of Settlement			
Rural	69.4		40.1
Education of Head[2] (shares)			
Primary (≤ 4 years)	34.7	43.7	28.0
Primary (5-8 years)	38.5	33.5	27.6
Specialized Secondary	21.8	17.8	32.0
High School	3.0	2.4	5.8
University	2.0	2.1	5.9
Health Outcomes[3]			
Members with Health Problems	1.46	1.05	1.16
Days Ill	25.2	22.0	26.5
Work Days Lost	4.2	3.8	3.7

[1] Other category includes students, homemakers, and social assistance recipients.
[2] Totals do not sum to 100 percent due to missing education variables for 10 observations.
[3] Time frame for health variables is July through December 1996.

Annex 2: Table 20 Average Household Characteristics of At-Risk Groups.

Characteristic	Agricultural HH	Head ≥ 70	Total
Poverty Measures (individual-based)			
Poverty Incidence (%)	25.3	20.6	18.1
Poverty Gap Index (%)	4.1	3.2	3.9
Poverty Severity Index (%)	1.0	0.8	1.3
Demographic			
Age of Head	55.1	75.2	52.6
# Children under age 18	1.60	0.87	1.16
# Children under age 6	0.40	0.25	0.32
Household Size	5.12	3.75	4.10
Female-Headed (%)	3.6	25.0	13.4
Labor Market			
# of Unemployed members	0.21	0.19	0.31
# of Disabled members	0.04	0.14	0.05
# of Employed members	2.19	0.81	1.30
Socio-economic Position of Head			
Employed (Non-Farm)	0.0	0.0	37.1
Farmer	85.4	2.7	7.0
Unemployed	0.0	0.0	7.3
Pensioner	12.2	67.8	25.9
Employed (Farmer)	0.0	0.0	9.5
Pensioner (Farmer)	0.0	25.8	8.3
Seasonal Workers	0.0	0.0	2.1
Other[1]	2.4	3.8	2.7
Socio-economic Category (share)			
Agricultural	100	5.2	5.9
Mixed	0	34.7	24.0
Non-agricultural	0	60.1	70.1
Type of Settlement			
Rural	96.4	47.3	40.1
Education of Head[2] (shares)			
Primary (≤ 4 years)	52.2	62.4	28.0
Primary (5-8 years)	39.9	17.5	27.6
Specialized Secondary	7.9	13.2	32.0
High School	**0.0**	3.6	5.8
University	**0.0**	1.6	5.9
Health Outcomes[3]			
Members with Health Problems	1.05	1.52	1.16
Days Ill	30.0	43.8	26.5
Work Days Lost	2.7	3.0	3.7
Cultivable Land (acres)	36.9		9.6

[1] Other category includes students, homemakers, and social assistance recipients.
[2] Totals do not sum to 100 percent due to missing education variables for 10 observations.
[3] Time frame for health variables is July through December 1996.

Annex 2: Table 21 Average Household Characteristics by Gender of Household Head			
Characteristic	Male	Female	Total Population
Poverty Incidence (%)	18.0	10.1	18.1
Poverty Gap Index (%)	3.9	2.3	3.9
Demographic			
Age of Head	51.7	58.8	52.6
# Children under age 18	1.21	0.80	1.16
# Children under age 6	0.33	0.24	0.32
Household Size	4.27	2.98	4.10
Labor Market			
# of Unemployed members	0.50	0.22	0.31
# of Disabled members	0.05	0.05	0.05
# of Employed members	1.37	0.82	1.30
Socio-economic Position of Head			
Employed (Non-Farm)	39.8	20.4	37.1
Farmer	8.0	1.0	7.0
Unemployed	7.5	6.0	7.3
Pensioner	21.6	53.9	25.9
Employed (Farmer)	10.8	1.0	9.5
Pensioner (Farmer)	8.5	7.3	8.3
Seasonal Workers	2.4	0.0	2.1
Other[1]	1.5	10.4	2.7
	100%	100%	100%
Education of Head[2]			
Primary (≤ 4 years)	25.5	44.5	28.0
Primary (5-8 years)	28.2	23.6	27.6
Specialized Secondary	33.7	21.0	32.0
High School	5.9	5.0	5.8
University	6.1	4.9	5.9
	100%	100%	100%

[1] Other category includes students, homemakers, and social assistance recipients.
[2] Totals do not sum to 100 percent due to missing education variables for 10 observations.

Annex 2: Table 22 Regional Distribution of Poverty(percentages).

	Poverty Rate	Poverty Gap Index	Poverty Severity Index	Poverty Gap	Composition of Poor	Composition of Population
Overall Population	18.1	3.9	1.3	21.5	100	100
Region						
Skopje	16.8	3.4	1.1	20.2	22.2	22.8
Northwest	*18.4*	*5.2*	*1.9*	28.3	*21.6*	*20.2*
Kicevo	26.1	9.0	3.5	34.5	4.2	2.8
Brod	61.7	28.3	13.2	45.9	4.9	1.4
Gostivar	5.2	0.9	0.2	17.3	2.0	6.5
Tetovo	19.0	3.7	1.0	19.5	10.5	9.5
Northeast	*23.5*	*5.2*	*1.8*	22.1	*36.7*	*26.9*
Kumanovo	35.1	6.6	1.9	18.8	15.5	7.6
Kriva Palanka	34.5	4.7	0.9	13.6	1.9	0.9
Kratovo	31.1	17.3	11.0	55.6	1.4	0.8
Probistip	12.6	0.1	0.0	0.8	1.0	1.4
Kocani	10.0	2.3	0.7	23.0	1.6	2.8
Delcevo	12.9	1.6	0.3	12.4	1.1	1.5
Vinica	24.3	4.5	1.1	18.5	1.5	1.1
Sveti Nikole	6.8	3.0	1.3	44.1	0.5	1.2
Veles	16.2	3.4	1.1	21.0	3.6	3.9
Stip	6.0	1.2	0.3	20.0	1.1	3.1
Radovis	81.0	23.4	9.6	28.9	7.3	1.5
Berevo	2.9	0.8	0.2	27.6	0.2	1.2
Southeast	*6.8*	*1.2*	*0.3*	17.6	*4.6*	*11.5*
Negotino	13.1	1.9	0.5	14.5	1.2	1.6
Valandovo	0.0	0.0	0.0	0.0	0.0	1.0
Kavadarci	1.4	0.2	0.0	14.3	0.2	2.5
Strumica	6.2	1.0	0.2	16.1	1.9	5.3
Gevgelija	17.6	3.7	0.8	21.0	1.3	1.3
Southwest	*13.9*	*2.0*	*0.5*	14.4	*15.0*	*18.5*
Krusevo	11.1	1.2	0.1	10.8	0.4	0.6
Prilep	10.0	1.1	0.2	11.0	2.8	4.8
Struga	42.0	5.5	1.3	13.1	9.1	3.7
Ohrid	8.3	1.3	0.4	15.7	1.4	2.9
Resen	0.0	0.0	0.0	0.0	0.0	0.5
Bitola	3.7	1.0	0.3	27.0	1.3	6.0

Annex 2: Table 23 Average Household Characteristics by Region.

Characteristic	Skopje	NorthWest	NorthEast	SouthEast	SouthWest
Poverty Measures (individual-based)					
Poverty Incidence (%)	16.8	18.4	23.5	6.8	13.9
Poverty Gap Index (%)	3.4	5.2	5.2	1.2	2.0
Poverty Severity Index (%)	1.1	1.9	1.8	0.3	0.5
Demographic					
Age of Head	52.3	53.9	52.4	50.0	53.9
# Children under age 18	1.03	1.82	1.08	1.12	0.95
# Children under age 6	0.30	0.53	0.28	0.34	0.23
Household Size	3.99	5.53	3.76	3.86	3.81
Labor Market					
# of Unemployed members	0.32	0.34	0.30	0.19	0.38
# of Disabled members	0.05	0.10	0.04	0.05	0.02
# of Employed members	1.32	1.47	1.16	1.61	1.17
Socio-economic Position of Head					
Employed (Non-Farm)	47.3	36.8	34.9	26.9	35.1
Farmer	1.2	13.9	5.0	16.1	6.2
Unemployed	9.2	2.3	7.4	6.4	9.0
Pensioner	32.7	24.4	23.0	20.1	27.0
Employed (Farmer)	2.7	8.4	11.1	19.1	10.0
Pensioner (Farmer)	3.0	7.9	13.3	6.3	9.0
Seasonal Workers	1.7	2.5	2.0	2.9	2.0
Other[1]	2.1	3.7	3.3	2.3	1.8
Socio-economic Category (share)					
Agricultural	1.2	9.3	4.3	15.5	5.2
Mixed	6.3	26.5	32.1	34.9	24.5
Non-agricultural	92.5	64.2	63.6	49.6	70.3
Education of Head[2] (shares)					
Primary (≤ 4 years)	16.2	22.1	33.7	43.1	28.9
Primary (5-8 years)	23.7	38.0	27.6	24.1	26.3
Specialized Secondary	38.8	33.6	28.7	22.9	33.1
High School	9.1	4.0	5.3	6.6	3.5
University	11.8	2.3	4.4	1.7	6.4
Health Outcomes[3]					
Members with Health Problems	1.17	0.98	1.07	1.43	1.24
Days Ill	33.8	18.5	23.9	35.1	22.7
Work Days Lost	6.5	1.5	3.8	2.9	2.5
Cultivable Land (acres)	2.3	11.1	11.2	16.7	10.4

[1] Other category includes students, homemakers, and social assistance recipients.
[2] Totals do not sum to 100 percent due to missing education variables for 10 observations.
[3] Time frame for health variables is July through December 1996.

Annex 2: Table 24 Distribution of Expenditures by Source (percentages).			
Type of Household	Agricultural	Mixed	Non-Agric.
Source			
Food and Beverage	31.5	38.2	52.0
Tobacco	2.9	3.6	3.9
Clothing	6.0	6.3	6.1
Dwelling	1.7	2.3	3.5
Heating & Electricity	7.7	8.0	10.4
Household furnishing	1.8	1.8	1.5
Hygiene and Health	5.0	5.8	7.0
Education, Culture, Recreation	1.7	2.5	3.3
Transportation and Communications	4.4	5.8	6.8
In-Kind[1]	34.5	22.6	2.4
Other	2.7	3.0	3.0

[1] Consumption in-kind includes food, beverages, firewood, clothing, and other durable or non-durable goods.

Annex 2: Table 25 Distribution of Expenditures by Source (percentages).			
Type of Household	Poor	Non-Poor	Total
Source			
Food and Beverage	54.7	45.8	47.0
Tobacco	4.6	3.6	3.8
Clothing	4.0	6.5	6.1
Dwelling	2.3	3.2	3.1
Heating & Electricity	9.9	9.5	9.5
Household furnishing	0.4	1.8	1.6
Hygiene and Health	6.4	6.6	6.5
Education, Culture, Recreation	2.2	3.1	3.0
Transportation and Communications	3.7	6.8	6.4
In-Kind[1]	10.2	9.8	9.9
Other	1.5	3.2	3.0

[1] Consumption in-kind includes food, beverages, firewood, clothing, and other durable or non-durable goods.

Annex 2: Table 26 Distribution of Expenditures by Source (percentages).			
Type of Household	Rural	Urban	Total
Source			
Food and Beverage	41.5	50.9	47.0
Tobacco	4.0	3.6	3.8
Clothing	6.3	6.1	6.1
Dwelling	2.1	3.8	3.1
Heating & Electricity	8.1	10.5	9.5
Household furnishing	1.6	1.6	1.6
Hygiene and Health	5.7	7.1	6.5
Education, Culture, Recreation	2.6	3.3	3.0
Transportation and Communications	5.6	6.9	6.4
In-Kind[1]	19.9	3.0	9.9
Other	2.6	3.3	3.0

[1] Consumption in-kind includes food, beverages, firewood, clothing, and other durable or non-durable goods.

Annex 2: Table 27 Distribution of Expenditures by Source (percentages).			
Type of Household	Male Head	Female Head	Total
Source			
Food and Beverage	46.5	50.3	47.0
Tobacco	3.9	3.0	3.8
Clothing	6.2	5.9	6.1
Dwelling	2.9	4.2	3.1
Heating & Electricity	9.3	10.9	9.5
Household furnishing	1.6	1.6	1.6
Hygiene and Health	6.4	7.3	6.5
Education, Culture, Recreation	3.0	3.0	3.0
Transportation and Communications	6.7	4.5	6.4
In-Kind[1]	10.4	6.9	9.9
Other	3.1	2.4	3.0

[1] Consumption in-kind includes food, beverages, firewood, clothing, and other durable or non-durable goods.

Annex 2: Table 28 Real Wage Dynamics by Selected Percentiles (1990-1996).								
Name	**Unit**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Real net monthly wage	1989=100	80.6	70.4	47.3	60.9	54.7	52.3	52.6
1st decile earnings	1990=100	100.0	74.2	77.1	70.3	63.4	42.5	57.5
1st quartile earnings	1990=100	100.0	73.6	77.6	77.1	58.2	46.9	56.5
Median earnings	1990=100	100.0	81.3	76.9	82.5	62.4	51.6	58.8
3rd quartile earnings	1990=100	100.0	86.9	77.1	89.7	63.8	53.2	60.5
9th decile earnings	1990=100	100.0	91.1	78.7	91.1	67.7	55.2	63.9
Source: The World Bank SCT database.								

Annex 2: Table 29 Summary of Earnings Distribution.							
Name	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
P5	55.0	50.4	52.0	39.8	53.7	42.0	52.1
P10	60.2	55.0	60.4	51.3	61.2	49.6	58.9
P25	76.8	69.5	77.5	71.8	71.6	69.8	73.8
P50	100.0	100.0	100.0	100.0	100.0	100.0	100.0
P75	127.8	136.6	128.2	139.1	130.8	131.7	131.5
P90	165.5	185.6	169.5	182.8	179.6	176.9	180.0
P95	194.5	224.2	203.0	217.7	216.5	211.8	217.6
Decile ratio	2.75	3.38	2.81	3.56	2.94	3.57	3.05
Semi-decile ratio	3.53	4.45	3.91	5.47	4.03	5.04	4.18
Gini coefficient	0.223	0.267	0.235	0.271	0.253	0.270	0.250
Note: The private sector is not covered adequately due to the high non-response rate among private firms. Source: The World Bank SCT database							

Annex 2: Table 30 Summary of Earnings Distribution in Public and Private Sectors, 1996.

	National Economy	Public Sector	Private Sector
P5	40.5	43.8	40.0
P10	54.1	50.0	57.1
P25	70.3	68.8	71.4
P50	100.0	100.0	100.0
P75	135.1	125.0	140.0
P90	195.9	162.5	214.3
P95	243.2	187.5	328.6
Decile ratio	3.6	3.3	3.8
Semi-decile ratio	6.0	4.3	8.2
Gini coefficient	0.309	0.262	0.359

Note: The public sector includes state, cooperative, and socially (worker) owned enterprises. The private sector includes private and mixed (partly private) enterprises.
Source: HBS 1996; Bank staff calculations.

Annex 2: Table 31 The Dynamics of Low- and High-Paid Employment (1990-1996).								
Category	**Unit**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Workers earning < real value of 2/3Med in '90	%	14.5	35.1	37.4	33.0	55.8	72.3	63.4
Workers earning < 1/2Median	%	2.1	4.7	4.3	9.3	3.6	10.1	4.0
Workers earning < 2/3Median	%	14.5	22.5	14.9	20.8	19.9	21.9	15.8
Workers earning > 1.5Median	%	14.4	19.3	15.6	18.8	18.0	15.2	17.8
Workers earning > 2.0Median	%	4.4	7.7	5.3	7.0	6.7	6.5	6.9
Source: The World Bank SCT database.								

Annex 2: Table 32 The incidence and composition of low-paid employment, 1996

	Low paid employment	
	Composition %	Incidence %
All Workers		15.5
Gender		
Male	59.7	13.6
Female	40.3	19.5
Age		
15-24	10.7	19.9
25-34	24.7	15.5
35-44	26.1	12.7
45-54	24.6	15.0
55+	13.8	22.2
Education		
Prim 0-4	22.5	39.5
Prim 5-8	38.3	23.5
Secondary	35.8	11.6
Tertiary	3.4	3.1
Occupation		
Agricultural	28.5	36.3
Laborers	37.0	14.9
Service	33.1	15.3
Professional	1.3	1.3
Industry		
Manufacturing	25.2	16.7
Construction	11.0	13.7
Agricultural	29.8	33.3
Transport	4.1	8.7
Trade	13.5	17.1
Social Service	5.0	6.4
Finance	1.3	8.3
Administrative	0.8	1.9
Others	9.3	15.2
Sector		
Public	46.8	8.3
Private	53.2	9.6
Residence		
Urban	51.4	7.4
Rural	48.6	12.2
Region		
Non-capital	83.9	10.2
Capital	16.1	6.6
Relation to household		
Head	46.8	21.9
Spouse	19.5	29.0
Child	32.3	26.0
Other hh members	1.3	42.5

Low pay=earnings lower than two-thirds times median
Source: HBS 1996; Bank staff calculations

Annex 2: Table 33 Estimates of Human Capital Earnings Functions (OLS),1996.

	Dependent variable: log weekly earnings of full-time workers.									
Independent variables	All workers		Men	Women	Public sector		Private sector		Urban residence	Rural residence
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Intercept	6.710	6.371	6.393	6.009	6.583	6.606	6.920	6.099	6.578	6.846
Years of schooling	0.070	0.063	0.060	0.074	0.074	0.060	0.059	0.061	0.082	0.048
Experience[1]	0.014	0.014	0.015	0.013	0.012	0.011	0.021	0.017	0.004	0.034
Experience2/100	-0.040	-0.037	-0.038	-0.041	-0.018	-0.016	-0.078	-0.050	-0.006	-0.129
Female	-0.234	-0.221			-0.114	-0.144	-0.373	-0.284	-0.180	-0.329
Private sector	0.038	0.090	0.131	0.022					-0.035	0.232
Rural residence		0.064	0.085	0.004		-0.027		0.194		
Industry dummies		Yes	Yes	Yes		Yes		Yes		
No. of observations	1237	1237	824	413	675	675	562	562	854	383
F-statistic	47.9	26.6	14.7	38.9	51.0	19.7	24.3	15.7	46.1	17.3
R-Squared	0.163	0.234	0.191	0.276	0.233	0.280	0.149	0.272	0.214	0.186
Root MSE	0.536	0.515	0.521	0.509	0.451	0.440	0.610	0.569	0.483	0.592

Significant at 5 percent level.
Significant at 10 percent level.
Not significant estimate. (P-value>0.10)

Note: Means and standard deviations of the variables are presented in Annex Table A1.1.

[1]At a current job.

Source: HBS 1996; Bank staff calculations.

Annex 2: Table 34 Contribution of selected variables to log-earnings inequality

	In % of:	
Variable	Total variance	Explained variance
Education	8.9	35.3
Of which Tertiary	9.4	37.1
Job experience	0.8	3.1
Gender	2.0	7.7
Occupation	5.0	19.8
Of which Professional	6.1	24.1
Industry	8.4	33.1
Sector	-0.4	-1.6
Rural/urban residence	-0.3	-1.2
Capital/other region	0.9	3.7
Total explained	25.3	
Unexplained	74.7	
Total	100.0	

Note: The contribution of an variable x to the variance of the log-earnings w was calculated as b*r(w,x), where b is the standardized regression coefficient, and r is the correlation coefficient. The contribution is negative when the regression coefficient and the correlation coefficient differ in sign. For example, the correlation between the private sector variable and earnings is negative while the impact of the private sector on earnings after controlling for the impact onf other variables is positive. The contribution of the categorical variable as a whole (e.g. education) is measured as a sum of contributions by binary regressors representing each category (e.g. primary education, secondary education). The contribution of a single binary regressor (e.g. tertiary education) can be greater than the contribution of a categorical variable as a whole (e.g. education) if the contribution of some other binary regressors (e.g. orimary education) is negative.

Source: HBS 1996

Annex 2: Table 35 Labor force, employment and unemployment, 1996

	Population	Labor force participation rate	Labor force	Employment	Unemployment	Long term unemployment	Unemployment rate	Incidence of LTU
Total (000')	1417.7	X	780.4	533.4	247.0	199.1	X	X
Total (%)	100.0	55.0	100.0	100.0	100.0	100.0	31.6	80.6
Gender								
Men	49.9	67.0	60.7	63.2	55.3	55.5	28.8	80.9
Women	50.1	43.2	39.3	36.8	44.7	44.5	36.0	80.2
Age								
15-19	11.4	23.8	5.0	1.7	12.0	7.5	76.7	50.3
20-29	19.9	70.2	25.4	16.0	45.5	48.2	56.8	85.4
30-39	19.9	80.7	29.2	30.8	25.8	27.5	27.9	85.9
40-49	18.3	77.4	25.8	32.0	12.4	12.9	15.2	83.8
50-59	13.3	48.1	11.7	15.4	3.6	3.3	9.7	74.7
60+	17.0	9.7	3.0	4.1	0.7	0.6	7.3	70.3
Eduational								
Uncompleted								
Without school	24.3	28.8	12.7	11.9	14.5	n.a.	36.2	n.a.
Primary education	31.7	47.7	27.5	24.0	35.0	n.a.	40.2	n.a.
Secondary (3 yrs)	10.4	74.4	14.0	13.6	15.1	n.a.	33.9	n.a.
Secondary (4	24.1	72.0	31.5	32.9	28.6	n.a.	28.7	n.a.
Higher education	9.4	82.9	14.2	17.6	6.8	n.a.	15.2	n.a.
Residence a)								
Urban	n.a.	n.a.	n.a.	55.2	63.8	n.a.	23.4	n.a.
Rural	n.a.	n.a.	n.a.	44.8	36.2	n.a.	17.6	n.a.

a) Household Expenditure Survey 1996
Source: Labor Force Survey 1996; Bank staff calculations

Annex 2: Table 36 Inflows into unemployment and duration of unemployment spells, 1996		
	Inflow rate (% per	Steady-state average duration (months)
TOTAL	1.02	31
Gender		
Men	0.83	35
Women	1.32	27
Age		
15-19	3.28	23
20-29	0.88	64
30-39	0.71	40
40-49	0.53	29
50-59	0.63	15
60+	2.49	3
Eduational attainment		
Less than primary	0.99	36
Primary	1.11	36
Secondary vocational	1.14	30
Secondary (4 years)	0.96	30
Tertiary	0.92	17
Note: The number of unemployed who have duration of less than one month have been taken as the monthly inflow. Average duration of a completed unemployment spell was estimated under the assumption that inflow=outflow (steady state).		
Source: Labor Force Survey 1996, Bank staff estimates		

Annex 2: Table 37 The incidence of lay-offs by socio-demographic characteristics, 19			
	Incidence of lay-offs, %	Laid-off	Employed
Gender			
Male	6.1	83.3	1271.6
Female	11.7	79.7	603
Age			
15-24	2.5a)	5.1	196.4
25-34	7.0	34.2	451.5
35-44	10.1	63	562
45-54	9.5	48.5	462.5
55+	5.7a)	12.2	202.2
Education			
Primary or less	7.6	60.3	735.8
Secondary	9.8	90.4	828.4
Tertiary	3.6a)	10.3	276.3
a) Figure is not reliable due to the small number of observations			
Source: HBS 1996; Bank staff calculations			

Annex 2: Table 38 The profile of new hires a), 1996

	Tenure with the firm			
	More than five years	Five years or less		
		National economy	Private sector	Public sector
TOTAL	100.0	100.0	100.0	100.0
Gender				
Male	67.6	68.5	70.5	61.8
Female	32.4	31.5	29.5	38.2
Age				
15-24	1.9	32.7	X	X
25-34	17.2	42.0	X	X
35-44	35.3	16.3	X	X
45-54	31.3	7.5	X	X
55+	14.4	1.5	X	X
Education				
Primary or less	42.0	34.7	35.0	18.3
Secondary	41.9	53.3	56.6	51.7
Tertiary	16.1	12.0	8.5	30.0
Residence				
Urban	56.5	51.9	60.0	57.5
Rural	43.6	48.1	40.1	42.5
Region				
Capital	22.5	27.3	30.7	29.0
Other	77.5	72.7	69.4	71.0
Sector				
Private	59.8	33.9	X	X
Public	40.2	66.1	X	X
Industry				
Manufacturing	24.0	12.1	X	X
Construction	10.0	12.4	X	X
Agriculture	24.5	18.4	X	X
Trade	7.5	20.9	X	X
Others	34.1	36.1	X	X

X= Not applicable, or sample size too small to calculate reliable estimates
Mote: Data for the national economy are not directly comparable with the data by puboic/private sector since the latter were calculated using a subsample of workers with known sector affiliation.
A) New hires=workers who have held their current job for five years or less.
Source: HBS 1996; Bank staff calculations

Annex 2, Table 39 Association Between Poverty, Labor Force Status, and Earnings.
(The Goodman and Kruskal's Gamma coefficient)

Worker Category	Gamma coefficient	
	Labor force status	Earnings category
All workers	0.334	0.424
Gender		
Men	0.276	0.438
Women	0.475	0.668
Age		
Youth[1] (15-24)	0.131	0.196
Prime age (25-54)	0.456	0.468
Prime age men	0.478	0.471
Relation to Household Head		
Household heads	0.238	0.537
Spouses	0.554	0.702
Children a)	0.289	0.228

Notes:

If the association is positive, the Goodman and Kruskal's Gamma coefficient takes the values from 0 to 1. Zero denotes no association and 1 denotes perfect association.

Labor force status categories are: Employed, Non-active, Unemployed.
Earnings categories are: Low, Middle, and High (see notes to table 3.4).

The magnitudes of Gamma coefficients for labor force status and for earnings category are not comparable because they were calculated on a different subsamples (all working age persons in the former case and employed persons in the latter).
[1]Of working age

Source: HBS 1996, Bank staff calculations.

Annex 2: Table 40 Poverty and Labor Force Status of Individuals[1]		
Labor Force Status	Individuals[2] %	Poverty Incidence, %
All persons		
Employed	40.8	11.2
Unemployed	10.8	26.2
Non-active	48.4	21.4
Men		
Employed	55.4	14.3
Unemployed	11.6	30.3
Non-active	33.0	20.0
Women		
Employed	26.3	4.8
Unemployed	10.0	21.5
Non-active	63.7	22.1
Youth (15-24)		
Employed	19.6	19.5
Unemployed	19.2	27.6
Non-active	61.2	21.8
Prime age workers (25-54)		
Employed	61.2	10.2
Unemployed	12.3	24.4
Non-active	26.5	30.5

Note: Poverty incidence is defined here as the percentage of individuals whose equivalent expenditure is lower than bottom quintile of equivalent expenditure distribution for all individuals in the sample.

[1]Aged 15 or more.
[2]The total number of individuals is 4,590

Source: HBS 1996, Bank staff calculations.

Annex 2: Table 41 Adult Education by Quintile and Region, Total.						
Quintile	No School	Incomplete Primary	Primary	High School	University	Total
1	14.4	33.6	33.2	17.7	1.0	100.0
2	9.8	32.5	31.3	25.5	0.8	100.0
3	8.0	27.2	25.9	35.6	3.3	100.0
4	6.2	25.4	27.4	37.2	3.7	100.0
5	2.3	18.3	19.3	46.6	13.5	100.0
Region						
Urban	4.8	16.7	24.3	46.3	7.9	100.0
Rural	11.0	39.5	29.8	18.2	1.5	100.0
Capital	6.0	14.9	22.9	46.0	10.2	100.0
Other	7.9	30.0	27.8	30.7	3.6	100.0
Total	7.5	26.5	26.7	34.2	5.1	100.0

Annex 2: Table 42 Adult Education by Quintile and Region, Females.						
Quintile	No School	Incomplete Primary	Primary	High School	University	Total
1	20.8	38.8	30.9	9.1	0.4	100.0
2	15.5	35.6	33.0	16.0	0.0	100.0
3	11.3	29.5	29.0	28.3	1.9	100.0
4	10.0	30.3	28.5	28.1	3.1	100.0
5	3.4	21.7	21.5	41.0	12.4	100.0
Region						
Urban	7.7	20.3	27.1	37.8	7.2	100.0
Rural	15.8	44.0	29.2	10.7	0.3	100.0
Capital	9.2	18.4	24.2	38.7	9.4	100.0
Other	11.7	33.8	29.1	22.7	2.7	100.0
Total	11.1	30.1	28.0	26.5	4.3	100.0

Annex 2: Table 43 Adult Education by Quintile and Region, Males.						
Quintile	No School	Incomplete Primary	Primary	High School	University	Total
1	8.2	28.5	35.6	26.2	1.6	100.0
2	4.3	29.5	29.7	35.0	1.7	100.0
3	4.7	24.8	22.9	42.8	4.7	100.0
4	2.2	20.2	26.4	46.9	4.4	100.0
5	1.1	14.7	16.9	52.7	14.6	100.0
Region						
Urban	1.6	12.9	21.3	55.5	8.7	100.0
Rural	6.4	35.2	30.3	25.4	2.6	100.0
Capital	7.7	20.3	27.1	37.8	7.2	100.0
Other	15.8	44.0	29.2	10.7	0.3	100.0
Total	11.1	30.1	28.0	26.5	4.3	100.0

Annex 2: Table 44 Reasons for Lack of School Participation

-> School age= 0 (child is NOT between 6 & 18)

REASON NOT IN SCHOOL*	Freq.	Percent	Cum.
Codes:			
1	410	18.50	18.50
2	718	32.40	50.90
3	8	0.36	51.26
4	91	4.11	55.37
5	2	0.09	55.46
6	83	3.75	59.21
7	73	3.29	62.50
8	8	0.36	62.86
9	823	37.14	100.00
Total	2216	100.00	

-> school age= 1 (child IS between 6 & 18)

REASON NOT IN SCHOOL	Freq.	Percent	Cum.
1	75	21.68	21.68
2	16	4.62	26.30
4	3	0.87	27.17
5	1	0.29	27.46
6	34	9.83	37.28
7	51	14.74	52.02
8	8	2.31	54.34
9	158	45.66	100.00
Total	346	100.00	

* Codes
1 = completed compulsory minimum
2 = completed desired level
3 = not relevant to getting job
4 = looking for job
5 = expelled
6 = failed
7 = cost was too high
8 = distance too great
9 = other

Annex 2: Table 45 Net Enrollment Rates by Level of Schooling, Quintile, Region and Gender.

	Preschool			Primary			Secondary			Tertiary		
Quintile	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**
1	4	9	7	84	85	85	27	29	28	2	5	3
2	8	2	6	82	82	82	39	37	38	4	10	7
3	18	15	16	87	84	85	57	65	60	6	11	9
4	10	3	5	90	74	82	66	65	66	10	5	8
5	15	19	18	76	80	78	69	60	65	17	29	22
Region												
Urban	13	14	14	86	79	82	68	61	64	12	18	15
Rural	6	3	5	81	85	83	38	37	37	2	4	3
Capital	12	12	12	81	78	79	65	52	59	9	22	16
Other	9	8	8	85	83	84	48	48	48	7	8	7
All	10	9	9	84	82	83	51	49	50	8	12	10

Annex 2: Table 45A Gross Enrollment: Rates by Level of Schooling, Quintile, Region and Gender

	Preschool			Primary			Secondary			Tertiary		
Quintile	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**
1	7	16	12	89	85	87	41	39	40	3	5	4
2	18	7	14	84	82	83	57	54	56	4	13	8
3	18	15	16	91	84	87	78	98	86	8	12	10
4	10	8	9	90	75	83	86	111	98	12	8	10
5	15	19	18	76	80	78	93	85	89	20	34	27
Region												
Urban	17	21	19	87	79	83	91	90	91	15	21	18
Rural	11	5	8	85	85	85	54	56	55	3	5	4
Capital	21	29	25	84	78	81	86	75	81	12	27	20
Other	12	9	11	86	83	85	67	73	70	8	9	9
All	14	13	13	86	82	84	71	73	72	9	14	12

Annex 2: Table 46 Distribution of Household Spending on Education per Enrollment in Public Schools by Level of Schooling, Quintile and Region

Quintile	*Admission Fee*		*Coaching*		*Transport*		*Books/Supplies*		*Other Expenditures*		*Total Expenditures*	
	(Denars)	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*
Preschool												
1	0.0	0.0	0.0	0.0	0.0	0.0	1,453.0	90.8	149.8	9.2	1,602.8	100.0
2	0.0	0.0	17.2	1.0	619.4	5.5	2,086.0	93.5	0.0	0.0	2,722.6	100.0
3	666.7	14.3	0.0	0.0	0.0	0.0	1,277.8	83.3	22.2	2.4	1,966.7	100.0
4	0.0	0.0	0.0	0.0	500.0	50.0	600.0	44.1	80.0	5.9	1,180.0	100.0
5	0.0	0.0	0.0	0.0	0.0	0.0	474.2	100.0	0.0	0.0	474.2	100.0
Total	134.8	3.2	4.5	0.4	218.0	5.3	1,315.6	87.6	50.8	3.6	1,723.7	100.1
Urban	182.7	4.6	0.0	0.0	295.4	7.6	1,248.0	87.2	12.2	0.5	1,738.3	100.0
Rural	0.0	0.0	17.2	1.2	0.0	0.0	1,506.0	88.5	159.5	10.3	1,682.7	100.0
Capital	0.0	0.0	0.0	0.0	428.9	6.1	1,409.8	93.9	0.0	0.0	1,838.7	100.0
Other	216.5	4.8	7.2	0.6	90.2	4.8	1,258.6	84.4	81.6	5.4	1,654.1	100.0
Primary												
1	0.0	0.0	0.0	0.0	22.4	1.1	1,870.7	95.8	59.7	3.1	1,952.8	100.0
2	0.0	0.0	14.0	0.5	151.4	1.8	2,219.0	93.8	99.8	3.9	2,484.2	100.0
3	0.0	0.0	106.2	1.8	94.3	1.2	2,459.2	88.1	270.4	8.9	2,930.1	100.0
4	0.0	0.0	323.3	5.5	73.1	2.5	2,252.3	85.5	178.2	6.4	2,826.9	100.0
5	0.0	0.0	1,435.0	13.3	248.0	3.1	2,923.2	75.8	667.9	7.7	5,274.1	100.0
Total	0.0	0.0	282.7	3.4	108.8	1.8	2,281.6	89.1	215.8	5.6	2,888.9	100.0
Urban	0.0	0.0	522.0	6.3	77.3	1.1	2,478.4	85.5	340.6	7.1	3,418.3	100.0
Rural	0.0	0.0	45.6	0.4	140.1	2.6	2,086.5	92.8	92.1	4.1	2,364.3	100.0
Capital	0.0	0.0	796.8	6.6	173.4	2.2	2,760.2	84.8	510.3	6.5	4,240.7	100.1
Other	0.0	0.0	148.3	2.5	91.9	1.8	2,156.4	90.3	138.7	5.4	2,535.3	100.0

Annex 2: Table 46 (Continued) Distribution of Household Spending on Education per Enrollment in Public Schools by Level of Schooling, Quintile and Region.

Quintile	*Admission Fee*		*Coaching*		*Transport*		*Books/Supplies*		*Other Expenditures*		*Total Expenditures*	
	(Denars)	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*	*(Denars)*	*(%)*
Secondary												
1	0.0	0.0	0.0	0.0	1,870.0	36.3	1,759.7	61.9	53.0	1.9	3,682.7	100.1
2	17.9	0.2	80.1	4.2	2,574.8	37.2	2,110.2	57.3	36.6	1.0	4,819.6	100.0
3	177.3	3.4	58.7	1.6	1,871.2	21.6	3,114.1	70.3	133.3	3.1	5,354.6	100.0
4	211.1	3.3	200.9	3.0	1,572.7	20.1	2,588.8	64.7	287.9	8.9	4,861.4	100.0
5	96.1	1.1	1,081.7	8.6	3,176.2	36.2	3,185.5	50.6	428.1	3.5	7,967.6	100.0
Total	120.4	2.0	319.8	3.8	2,199.6	28.6	2,677.9	61.4	212.5	4.2	5,530.2	100.0
Urban	190.0	3.1	411.7	4.7	1,927.5	22.8	2,774.3	64.4	257.7	5.0	5,561.2	100.0
Rural	14.2	0.2	179.5	2.5	2,614.7	37.9	2,530.9	56.5	143.5	2.9	5,482.8	100.0
Capital	201.4	2.4	742.2	5.3	4,272.4	48.9	3,393.4	40.3	383.9	3.1	8,993.3	100.0
Other	93.1	1.9	177.1	3.3	1,499.3	21.4	2,436.2	68.9	154.6	4.6	4,360.3	100.1
Tertiary												
1	0.0	0.0	0.0	0.0	3,445.9	64.4	2,675.6	31.1	249.3	4.5	6,370.8	100.0
2	1,149.4	21.9	36.3	0.4	3,133.1	29.7	3,695.9	44.8	299.0	3.2	8,313.7	100.0
3	807.5	8.3	0.0	0.0	4,543.1	43.1	3,244.6	46.3	405.0	2.3	9,000.2	100.0
4	395.1	5.5	0.0	0.0	3,054.1	43.7	3,161.9	48.8	151.3	2.0	6,762.4	100.0
5	4,916.0	26.2	672.3	5.6	4,346.9	33.7	3,713.9	33.4	133.3	1.0	13,782.4	100.0
Total	2,636.5	17.6	316.8	2.7	3,942.5	38.3	3,470.7	39.4	211.3	1.9	10,577.8	100.0
Urban	3,048.6	19.5	369.6	3.1	4,184.1	39.3	3,381.4	36.7	187.6	1.4	11,171.3	100.0
Rural	400.2	5.2	30.0	0.4	2,631.4	31.9	3,955.6	57.2	340.1	5.3	7,357.3	100.0
Capital	4,632.3	24.2	506.6	2.7	5,442.1	43.1	3,843.3	28.6	182.8	1.4	14,607.1	100.0
Other	1,121.8	12.3	172.7	2.8	2,804.3	34.5	3,188.0	48.2	233.0	2.3	7,519.8	100.1

Annex 2: Table 47 Distribution of Public Subsidies on Education by Level of Schooling, Quintile and Region.

	Total ('000 Denars)	*Per Capita (Denars)*	*Column Share (%)*	*Subsidy as Percent of Expenditure*
Preschool @ 33,040 Denars				
Quintile				
1	115,821	292	24.9	1.5
2	121,514	306	26.1	1.1
3	94,077	237	20.2	0.6
4	52,265	132	11.2	0.3
5	81,480	205	17.5	0.2
Total	465,157	234	100.0	0.5
Urban	343,272	318	73.8	0.6
Rural	121,885	135	26.2	0.3
Capital	175,469	358	37.7	0.6
Other	289,688	194	62.3	0.4
Primary @ 16,582 Denars				
Quintile				
1	978,118	2,464	25.4	13.0
2	955,909	2,409	24.8	8.3
3	722,294	1,819	18.7	4.8
4	655,115	1,650	17.0	3.3
5	541,175	1,363	14.0	1.5
Total	3,852,611	1,941	100.0	3.9
Urban	1,924,745	1,781	50.0	3.2
Rural	1,927,867	2,131	50.0	5.0
Capital	791,123	1,614	20.5	2.6
Other	3,061,489	2,048	79.5	4.5
Secondary @ 20,819 Denars				
Quintile				
1	247,919	625	12.6	3.3
2	307,676	775	15.7	2.7
3	491,084	1,237	25.0	3.3
4	478,809	1,206	24.4	2.4
5	438,704	1,105	22.3	1.2
Total	1,964,192	990	100.0	2.0
Urban	1,187,852	1,099	60.5	2.0
Rural	776,341	858	39.5	2.0
Capital	491,014	1,002	25.0	1.6
Other	1,473,178	985	75.0	2.1

Annex 2: Table 47 (Continued) Distribution of Public Subsidies of Education by Level of Schooling, Quintile and Region.

	Total ('000 Denars)	*Per Capita (Denars)*	*Column Share (%)*	*Subsidy as Percent of Expenditure*
Tertiary @ 46,466 Denars				
Quintile				
1	112,612	284	7.1	1.5
2	202,515	510	12.8	1.8
3	267,892	675	16.9	1.8
4	274,063	690	17.3	1.4
5	729,801	1,838	46.0	2.0
Total	1,586,882	799	100.0	1.6
Urban	1,327,544	1,229	83.7	2.2
Rural	259,339	287	16.3	0.7
Capital	693,076	1,414	43.7	2.2
Other	893,806	598	56.3	1.3
All Education				
Quintile				
1	1,454,469	3,664	18.5	19.3
2	1,587,614	4,001	20.2	13.8
3	1,575,346	3,968	20.0	10.5
4	1,460,253	3,677	18.6	7.4
5	1,791,161	4,512	22.8	5.0
Total	7,868,843	3,964	100.0	7.9
Urban	4,783,412	4,427	60.8	8.0
Rural	3,085,431	3,411	39.2	8.0
Capital	2,150,682	4,389	27.3	6.9
Other	5,718,161	3,825	72.7	8.3

Annex 2: Table 48 Household Characteristics of Pensioned Households (Poor vs. Non-Poor).									
	Non-poor					Poor			
	Total	Urban	Rural	Capital	Other	Total	Urban	Rural	Capital
Number of Children 0-18	0.9	0.7	1.1	0.7	0.9	1.7	1.0	2.1	2.0
Household Size	3.8	3.5	4.3	3.7	3.9	5.3	4.2	6.0	6.1
Number of Unemployed	0.3	0.3	0.3	0.3	0.3	0.7	0.9	0.6	1.2
Number of Pensioners	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.2
Age of Head	61.7	60.9	63.4	60.5	62.1	58.1	62.5	55.5	57.3
Male Headed (percent)	77.2	74.0	83.3	77.1	77.2	87.0	86.9	87.1	73.7
Number of Elderly	1.3	1.3	1.4	1.3	1.3	1.2	1.2	1.1	1.1
Annual Adult Equivalent Expenditures	66,264	69,262	60,525	77,898	62,410	25,599	26,683	24,954	25,026
N	558	367	191	139	419	74	28	46	17
N= Total sample									

Annex 2: Table 49 Average Age of Individual Pensioners.				
	Urban		Rural	
Gender	Poor	Non-Poor	Poor	Non-Poor
Male	64.4	64.4	62.3	67.7
Female	53.1	63.0	60.6	65.1
N	30	442	19	209

Annex 2: Table 50 Percentage of Elderly Receiving Pensions.							
Age group	Total	Male	Female	Urban	Rural	Capital	Other
51-55	30.8	32.2	29.5	34.2	24.2	27.7	32.6
56-60	30.4	34.2	26.8	38.2	18.1	35.3	29.0
61-65	62.4	78.5	47.3	72.9	46.4	66.8	60.7
66-70	62.6	87.9	36.0	74.9	48.0	74.8	59.5
71-75	73.3	98.6	50.2	85.4	62.0	78.3	72.9
76+	71.7	94.8	53.0	70.2	73.2	73.2	71.4
N	1189	581	608	682	507	282	907

Annex 2: Table 51 Types of Primary Pensions Received.						
Type of Pension	Urban Male	Rural Male	Male	Urban Female	Rural Female	Female
Old Age	71.3	56.2	65.1	63.4	40.4	57.1
Minimal	5.6	4.8	5.3	7.3	9.2	7.8
Disabled	17.1	13.4	15.6	17.4	12.1	16.0
Agricultural	1.1	20.8	9.1	0.5	15	4.5
Other	4.9	4.8	4.9	11.4	23.3	14.7
Total	100	100	100	100	100	100
N	263	179	442	209	80	289

Annex 2: Table 52 Poverty Rates for Female Pensioners and Average Monthly Primary Pension.

Age	Average Pension	% Poor
55-59	5,284	0
60-64	5,175	4.2
65-69	5,290	7.4
70-74	5,068	2.5
75+	4,156	10.65

Annex 2: Table 53 Poverty Rates for Male Pensioners and Average Monthly Primary Pension.

Age	Average Pension	% Poor
55-59	5,853	10.2
60-64	6,409	6.3
65-69	6,311	12.8
70-74	5,634	19.2
75+	4956	13.2

Source: HBS 1996

Annex 2: Table 54 Poverty Rates for Pensioners and Non-pensioners.

	Male		Female	
Age	Pensioners	Non-Pensioners	Pensioners	Non-Pensioners
55-59	10.18	6.79	0	8.26
60-64	6.25	10.77	4.23	14.78
65-69	12.76	44.41	7.42	14.83
70-74	19.22	76.86	2.52	22.87
75+	13.22	0	10.65	27.68

Note: N's for female non-pensioners over 65 are very small.
Source: HBS 1996

Annex 2: Table 55: Characteristics of Poor *Pensioner* Households					
(Percent Poor)	Total	Urban	Rural	Capital	Other
Female Headed Households	7.0	8.1	15.7	12.6	5.0
Male Headed Households	13.0	3.6	20.1	10.3	12.7
All Pensioner Households	11.7	7.0	19.4	11.1	11.9
Non-working Pensioners	11.7	6.9	20.3	11.7	11.7
Working Pensioners	10.7	12.5	10.0	0.0	15.0
Household Size:					
-1	4.4	4.1	5.4	6.7	3.8
-2	9.3	9.2	9.5	3.1	10.8
-3	10.7	4.8	26.8	9.2	10.5
-4	4.6	2.2	10.4	0.0	6.9
-5	8.5	4.4	14.7	10.3	7.9
>5	22.7	12.1	32.4	29.9	20.8
Note: Pensioner households are defiend as those with at least one Pensioner					
Source: : HBS 1996					

Annex 2: Table 56 Probit Estimates of Social Assistance, Macedonia 1997			
	Co-efficient	Asymptotic t Value	Marginal Effect at Mean of x
Constant	0.105	0.23	0.057
Income excluding			
Capital	0.947	6.80	0.619
Female head	0.184	0.95	0.094
Non-agricultural	0.732	4.05	0.514
Own a car	-0.458	-2.60	-0.197
Own house	-0.185	-1.10	-0.081
Age of head	-0.024	-4.30	-0.003
Level of head'	0.270	7.34	0.233
Household size	-0.051	-0.66	-0.022
N		1236	
Log-likelihood		-232.55	

56 continued	Co-efficient	Asymptotic t value	Marginal Effect at Mean of x
Constant	0.584	1.36	0.420
Expenditure			
Capital	0.919	6.96	0.596
Female head	0.026	0.14	0.013
Non-agricultural	0.793	4.56	0.569
Own a car	-0.420	-2.53	-0.183
Own house	-0.223	-1.39	-0.095
Age of head	-0.028	-5.38	-0.002
Level of head'	0.262	7.60	0.224
Household size	-0.091	-1.27	-0.035
N		1236	
Log-likelihood		-250.8	

Annex 2: Table 57 Stepwise Targeting Regression.		
	All Observations	Observations Below Median
Best Five Predictors		
	Phone (+)	Household size (-)
	Household size (-)	Electric cooker (+)
	Car (+)	Car (+)
	Camera (+)	Number of unemployed in household (-)
	Washing machine (+)	Freezer (+)
Percent of Correct Predictions		
-- Poor	34.25	63.70
-- Non-poor	95.98	69.48
-- All	83.44	67.13
Second Best Five Predictors		
	Other city (-)	Washing machine (+)
	Personal computer (+)	Age head (+)
	Number of unemployed in household (-)	Education Head: Secondary (+)
	Boiler (+)	Household gets foreign private transfers (+)
	Own enterprise (+)	Household gets pension (-)
Percent of Correct Predictions		
-- Poor	38.70	67.46
-- Non-poor	95.20	67.61
-- All	83.72	67.55
All Variables -- Percent of Correct Predictions		
-- Poor	45.20	71.57
-- Non-poor	94.58	68.31
-- All	84.55	69.64

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia 1998.

Type of benefit	Eligibility criteria	Benefit formula and duration	Financing
Pensions			
• Old-age pension	Retirement age is 63 years for men and 60 for women. Required years of service are 20 years for both men and women. The length of service may be reduced for persons in certain professions[1].	Pensions are determined from average monthly salary earned during entire insurance period, starting from January 1970 (=pension base). Replacement ratio is 35 to 80% of pension base, depending on years of service. With 20 years of service, replacement rate is 44% for men and 53% for women. For beneficiaries who worked *n* years less than minimum period required, replacement ratio is decreased by *n* times 2%. Accrual rate is 2%.	1. Pensions are mainly paid from the Pension and Disability Insurance Fund, PDIF. Other sources of finance are the State budget, contributions from the Employment Fund and the Health Insurance Fund. 2. Contribution rate to the PDIF: Employers pay 20% of payroll. For certain professions, employers have to pay additional 1.67 to 10% of payroll [2].
• Disability pension	Insured employees with loss of working abilities, or with remaining working capabilities, who due to excess years of age can not undergo vocational retraining or otherwise not qualify for other corresponding positions, acquire the right to disability pension if: (a) Disability is due to injury at work or occupational illness; (b) Disability is due to injury apart from work or illness, if the insured has acquired no less than one-third of pension service from the age of 20 to the day of disability. Special rules are applicable in cases where disability occurred prior to age of 30[3].	Replacement rate is no less than 44% of the pension base for men and 53% for women, if disability occurred prior to age of 63 (men) and 60 (women). If disability occurred after the above mentioned ages, replacement rate is no less than 35% of the pension base for men and 40% for women.	
• Disability supplement	Beneficiaries of disability pension suffering loss of working skills prior to age of 63 (men) and 60 (women) with replacement rate less than 80% of pension base.	Depends on the proportion between years of service and accrued benefits. Replacement rate is paid as share of disability pensions. It amounts to: (a) 10% if accrued benefits are less than half of the years of service; (b) 15% if accrued benefits are between half and 3/4 of the years of service; (c) 20% if accrued benefits are more than 3/4 of the years of service. Disability pension together with disability supplement may not exceed 80% of the pension base.	

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia 1998 (Continued).

Type of benefit	Eligibility criteria	Benefit formula and duration	Financing
• Survivor pension	Surviving dependent persons: (a) Spouses; (b) Children; and (c) Parents. For each of the three categories, there are further requirements for receiving the pension[4]. These criteria refer to age, accumulated years of insurance, requirements for old-age/disability pensions and incapability of work.	Determined in relation to old-age and disability pension received by the insured at the time of death: 70% for one family member , and 10% for every other member. Total pension level can not exceed 100% . Special formula is applied for children deprived of both parents, and in cases when three or more family members are recipients of the pension.	
• Occupational injury & disease	See disability pension.	100% of earnings. Duration: Unlimited.	1. In addition to PDIF, occupation injuries are paid from the Health Insurance Fund. 2. Contribution rate: Employers pay 1.5% of profit. This includes the financing of both occupational injuries and sick pay.
Sickness benefits	Employment.	No less than 70% of earnings, determined by collective agreement. If taking care of sick child up to the age of three: 100%. Duration: Unlimited.	1. First 60 days, benefits are paid by the employer, thereafter from the Health Insurance Fund. 2. Contribution rate: See occupational injury & disease above.
In-kind benefits for the elderly and the disabled			
• Institutional protection	Persons without appropriate living conditions are entitled to be accommodated in a social institution.		Programs are paid from the State budget.
Family allowances			
• Child allowance	Child allowance is entitled for the first three children, up to age 18 or 26 if in education. It is means-tested: Eligibility is related to average monthly net salary, accomplished in the last three months. The criteria are: (a) Households with average income per member below 1,700 denars during the last three months; (b) Self supporting mothers with average income below 3,400 denars during the last three months.	500 denars per child and month for children up to age 15. For children aged 15-26 years the benefit is 800 denars per child and months.	All family allowances are paid from the State budget, except maternity benefits which are paid from the Health Insurance Fund.
• Allowance for disabled children	Disabled children.	2,500 denars per child and month.	
In-kind benefit for newly born children	First born child.		

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia 1998 (Continued).

Type of benefit	Eligibility criteria	Benefit formula and duration	Financing
• Maternity benefit	Employed mothers.	100% of earnings. Duration: 9 months.	Paid from the Health Insurance Fund.
Unemployment			
• Unemployment benefit	(a) Unemployed; (b) Minimum 9 months of continuous employment, or 12 months with interruptions, in the last 18 months; (c) Registration at labor office; and (d) Obligation to report in person to labor office every 30 days and to prove active job searching.	Benefit is related to average monthly net earnings during the last 12 months before the termination of employment. For persons with the right to receive UB up to 12 months, it is 50%. For persons with the right to receive UB more than 12 months it is 40%. Duration: Depending on how long the unemployed person has been insured, the duration varies between 3 months and until new employment / new basis for termination of receiving benefits (if length of insurance is more than 25 years).	1. Unemployment benefits are paid from the Employment Fund and administered by National Employment Bureau. Severance pay is paid from the State budget. 2. Contribution rate to the Employment Fund: employers pay 1.5% of payroll.
• Severance pay	Termination of employment through notice, due to economic, technological, structural or similar transformations.	One month of salary for each two years of service, not exceeding 12 monthly salaries.	
Active Labor Market Programs			
• Payroll tax exemption	Employers who increase the number of employees by employ worker on a regular basis no later than 1 December 1997. The newly employed worker has to comply with the following conditions no later than 1 December 1997: (a) Unemployed and registered at the Employment Bureau for at least one year; (b) Have terminated from work due to economic and technical reorganization or bankruptcy; and (c) Social assistance recipient, capable to work and uninsured according to the Social Assistance Law.	Employer will be exempted from paying contributions for newly employed persons, see eligibility criteria, as regards health, pension and employment. Duration: Two years (from 1 January 1998 to 31 December 1999).	1. Active labor market programs are mainly paid from the Labor Redeployment Fund, LRF, and administered by the Privatization Agency. Costs for providing tax exemption are covered by the State budget. Training, retraining and qualification is paid from the Employment Fund. 2. The LRF is financed by 75% from World Bank credit and 25% from the State budget.
• Retraining services	Workers who are to be dismissed, with basic education, some experience with small business and management skills.	Duration: 12 months.	
• Public works	Unemployed workers.	Minimum wage: enterprises are encouraged to supplement minimum wage by at least 20% of minimum wage. Duration: 6 months.	

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia 1998 (Continued).

Type of benefit	Eligibility criteria	Benefit formula and duration	Financing
• Small business assistance programs	Unemployed workers from socially owned enterprises, who wish to start or are in the first year of operating small businesses.		
• Small business incubator programs	Private agencies and enterprises, autonomous public organizations, statutory occupational/labor organizations, foundations, associations, and other NGO's.	Incubator participants can take up to three year credit loans: maximum amount USD 50,000 per participant.	
• Training, retraining and qualification	Unemployed persons	See unemployment benefit.	
Health			
• Health insurance	General coverage.	Insured persons are provided by salary reimbursement from the first to the last day of work inability.	1. Health care is paid from the Health Insurance Fund. 2. Contribution rate: employers pay 8.6% of payroll.
Support for low income families			
• Benefit for uninsured persons incapable of work	ns-tested. ersons incapable of work; (b) Pregnant women one month before giving birth and single parents with children up to three years; (c) Children up to 15 years, or up to 26 years if in higher education; and (d) Persons over 65 years.	Benefit is related to average monthly net earnings accomplished in the last three months. The benefit level is: (a) 20% (1,900 denars) for a one person household; (b) 28% (2,660 denars) for households with two persons; and (c) 40% (3,800 denars) for households with three or more persons.	Paid from the State budget. Administered by Centers for Social Works.
• Benefit for uninsured able bodied persons	ns-tested.	Vary, depending on region (urban / rural) and household structure (adult / children). Maximum monthly benefit per household amounts to 4,983 denars (urban areas).	
• Cash benefit for care of persons incapable taking care of themselves	Means-tested.	21% (1995 denars) of average monthly net salary accomplished in the last three months.	

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia 1998 (Continued).

Type of benefit	Eligibility criteria	Benefit formula and duration	Financing
• One-time payment[5]	Means-tested. ons at risk who suffer from natural catastrophe, epidemics, long hospital treatment, etc.	Maximum two average monthly net salaries, accomplished in the last three months.	
• Salary compensation for part-time work for taking care of disabled children	Persons with disabled children.	30% (2,850 denars) of average monthly net salary, accomplished in the last three months.	
• Housing	(a) User of basic rights from social assistance; (b) Homeless persons up to 18 years, or up to 26 years if in higher education.		
Education			
• Meals	Enrolled pupils.	(a) 100 (if disabled 150) denars per month for pupils who receive child allowance; (b) 150 (if disabled 700) denars per month for pupils with single or unemployed parents, pupils with high frequency of attendance and pupils from rural areas; (c) 200 (if disabled 1,000) denars per month for pupils with parents who receive social assistance.	Paid from the State budget.
• Transport	Enrolled pupils who have more than 2km to nearest school.	Free transport.	

Annex 2: Table 58 Institutional description of main social protection programs in FYR Macedonia

Footnote 1: Required years of service are reduced by one year in the following cases:
(a) For each seven years of service in jobs where 12 months of service are considered equivalent to 13 months of service;
(b) For each six years of service in jobs where 12 months of service are considered equivalent to 14 months of service;
(c) For each five years of service in jobs where 12 months of service are considered equivalent 15 months of service;
(d) For each four years of service in jobs where 12 months of service are considered equivalent to 16 months of service;
(e) For each three and a half years of service in jobs where 12 months of service are considered equivalent to 17 months of service;
(f) For each three years of service in jobs where 12 months of service are considered equivalent to 18 months of service.

Footnote 2: This applies to professions where 12 months of service are considered equivalent to 13-18 months of service. The contribution supplement that the employer has to pay is:
(a) 1.67% if 12 months of service are considered equivalent to 13 months of service;
(b) 3.33% if 12 months of service are considered equivalent to 14 months of service;
(c) 5.0% if 12 months of service are considered equivalent to 15 months of service;
(d) 6.66% if 12 months of service are considered equivalent to 16 months of service;
(e) 8.33% if 12 months of service are considered equivalent to 17 months of service;
(f) 10.0% if 12 months of service are considered equivalent to 18 months of service;

Footnote 3: In cases where disability occurred prior to the age of 30, due to injury apart from work or illness, the insured acquire the right to disability if:
(a) Disability occurred before the age of 20, with a minimum of six months of insurance;
(b) Disability occurred before the age of 25, with a minimum of nine months of insurance;
(c) Disability occurred before the age of 30, with a minimum of twelve months of insurance.

Footnote 4: See the Pension Law (No. 80/93-1986, articles 71-73 and 75-76).

Footnote 5: The budget for lump-sum assistance was frozen for 1997.

Annex 2: Table 59 Health						
	1991	1992	1993	1994	1995	1996
Health Fund (millions of denars)						
Expenditures[1]	79.50	704.70	3,576.30	7,992.00	9,719.40	9,785.80
Revenues	55.96	683.15	3,683.50	8,064.11	8,412.30	9,568.90
Contributions	55.96	683.15	3,683.50	8,064.11	8,412.30	6,204.00
Central budget transfers	0.35	2.00	15.96	197.57	131.80	181.80
Deficit	(23.54)	(21.55)	107.20	72.11	(1,307.10)	(3,581.80)
Health Fund, % GDP						
Expenditures[1]	8.79	6.15	6.24	6.02	6.86	6.73
Revenues	6.18	5.96	6.43	6.08	5.94	6.58
Contributions	6.18	5.96	6.43	6.08	5.94	4.26
Central budget transfers	0.04	0.02	0.03	0.15	0.09	0.12
Deficit	(2.60)	(0.19)	0.19	0.05	(0.92)	(2.46)
Real Expenditure (1996=1.00)	1.71	1.05	0.96	0.90	1.01	1.00
% of Government Expenditure	18.28	11.80	11.29	11.92	14.82	14.87
Total Health Expenditures[2]						
Expenditure (millions of denars)	103.40	986.50	4,835.40	10,420.70	11,391.10	9,785.80
Real Expenditure (1996=1.00)	2.22	1.46	1.30	1.18	1.19	1.00
% GDP	11.43	8.61	8.44	7.85	8.04	6.73
% Gov. Expenditure	23.77	16.52	15.26	15.54	17.37	14.87

[1]1991-1993 data from IMF; 1994-1996 data from HIF.
[2]1996 is HIF only.
Source: HBS 1996

Annex 2: Table 60 Employment Fund: Financing, Recipients, and Benefits.						
	1991	1992	1993	1994	1995	1996
Employment Fund[1]						
Expenditures (millions of denars)	4.50	64.10	429.20	1,120.00	2,509.17	3,801.00
Benefits				1,003.00	2,392.75	3,660.00
Administration				117.00	116.42	141.00
Revenue				1,120.00	2,509.17	3,801.00
Contributions	4.50	64.10	429.20	943.00	958.00	921.00
Central budget transfers				132.00	964.00	2,871.00
Deficit (contributions less benefits)				(177.00)	(1,551.17)	(2,880.00)
Deficit (contributions less expenditures)				(60.00)	(1,434.75)	(2,739.00)
Employment Fund, % of GDP						
Expenditure (millions of denars)	0.50	0.56	0.75	0.84	1.77	2.61
Benefits				0.76	1.69	2.52
Administration				0.09	0.08	0.10
Revenue	0.50	0.56	0.75	0.84	1.77	2.61
Contributions				0.71	0.68	0.63
Central budget transfers				0.10	0.68	1.97
Deficit (contributions less benefits)				(0.13)	(1.10)	(1.98)
Deficit (contributions less expenditures)				(0.05)	(1.01)	(1.88)
Expenditures as a % of government spending	1.03	1.07	1.35	1.67	3.83	5.78
Real Expenditures (1996=1.00)	0.25	0.24	0.30	0.33	0.67	1.00

Annex 2: Table 60 (Continued) Employment Fund: Financing, Recipients, and Benefits.						
	1991	1992	1993	1994	1995	1996
Recipients and Benefits						
Annual Average Beneficiaries				16,686.00	46,391.00	48,187.00
Average Unemployment Benefit[2]				5,593.51	4,507.29	6,573.35
Real Average Unempl. Benefit (1996=1.00)				0.94	0.70	1.00
Average Benefit Average Net Wage				0.72	0.53	0.75

[1]1991-1993 data from CEM, 1994 data form MOF, 1995-1996 data from IMF.
[2]Total expenditure 12 annual average beneficiaries.
Source: Household Budget Survey, 1996 (Expanded Sample)

Annex 2: Table 61 Social Assistance: Expenditures, Recipients, and Benefits.						
	1991	1992	1993	1994	1995	1996
Expenditure (millions of denars)[1]	4.89	20.09	395.03	1,620.50	2,088.10	1,937.90
% of GDP	0.54	0.18	0.69	1.22	1.47	1.33
% of Gov. Expenditure	1.12	0.34	1.25	2.42	3.18	2.95
Real Expenditure (1996=1.00)	0.53	0.15	0.54	0.92	1.10	1.00
Recipients and Benefits						
Average Recipient Households		14,148.88	29.277.58	41.035.33	52,645.83	53,742.00
Average Social Assistance Benefit		118.34	1,124.37	3,290.86	3,305.26	3,004.94
Real Average Benefit (1996=1.00)		0.57	0.98	1.21	1.12	1.00
Average Benefit/Average Net Wage		0.19	0.30	0.42	0.39	0.34

[1]Monthly social assistance expenditures, data from MOLSW.