

POVERTY AND REFORM  
OF FINANCIAL SUPPORT TO THE POOR



Republic of Serbia  
Ministry of Social Affairs



Center for  
Liberal-Democratic Studies

Biljana Bogićević, Gorana Krstić, Boško Mijatović, and Branko Milanović  
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Biljana Bogićević  
Gorana Krstić  
Boško Mijatović  
Branko Milanović

Belgrade, 2003

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# Foreword

This Study presents yet another result of the activities of the Ministry of Social Affairs in the area of poverty research in Serbia and proposals for policy measures in poverty reduction.

Based on the Poverty Survey (Survey on the Living Standards of the Population) conducted by SMMRI, Belgrade, the joint work on the poverty analysis methodology and subsequent consultations, three partly related projects were completed: this Study, the World Bank's *Serbia & Montenegro: Poverty Assessment* and the Republic of Serbia Government's *Poverty Reduction Strategy in Serbia*.

This Study was formulated simultaneously with the Poverty Reduction Strategy in Serbia and two of the authors were involved in both projects. Therefore, this Study can be considered as an input for the PRSP since it contains texts regarding poverty in Serbia that have been elaborated in more depth and proposals for policy reform in the area of poverty reduction.

In comparison to the previous CLDS study – *Poverty in Serbia and Reform of Governmental Support for the Poor* (2002) – this Study presents a major step forward for several reasons: it includes a much improved survey on income and expenditures, i.e. improved database; a substantively improved poverty research methodology; a new chapter on social transfers and inequality; new proposals for the reform of assistance to the poor.

Gorana Krstić is the author of the first chapter, Branko Milanović of the second, Biljana Bogičević of the third, and Boško Mijatović of the fourth.

We wish to thank, first of all, Gordana Matković, Minister of Social Affairs, who formulated the project concept and worked diligently with the authors – from the formulation of the questionnaires and development of the poverty analysis methodology, through discussions on the findings and proposals for changes in governmental policy for assisting the poor, up to the final editing of the Study.

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Belgrade, August 5, 2003

*The Authors*

# I The Poverty Profile in Serbia in 2002

## THE RESEARCH METHODOLOGY

### **Defining consumption as an indicator of the population's living standard**

The elements needed for the poverty analysis are: aggregates for measuring living standards, the poverty line, and a way of representing individual consumer units that takes into account economies of scale. The two main aggregates that may be used to measure living standards are household consumption and household income. There are several reasons for using household consumption as an adequate measure of living standards, i.e. poverty. The first reason lies in the fact that household consumption is more regular than income, since in many countries in transition the salaries are paid irregularly. The second reason, and perhaps the more important one, lies in the fact that the survey participants/respondents usually tend to hide income coming from illegal or semi-legal activities, but they don't hide the expenditures which derive from the income gained in such way. The extent of the gray economy in transition countries implies that consumption is a more adequate measure of poverty. The third reason lies in the fact that consumption in kind, especially in rural areas, represents an important component of the population's nutrition, and it is not expressed in terms of money income.

In the research, poverty in Serbia was analyzed on the basis of consumption bearing in mind the previously mentioned advantages of the use of this aggregate. Income is being used only for the purpose of comparison with previous poverty studies in Yugoslavia, which were based on household income. It is also used to make comparison on how much those who are poor according to the consumption measure are also poor according to the income measure. Besides consumption, the inequality analysis is based on income since this has two advantages over consumption. Firstly, analysis of income inequality provides international comparability compared to analysis of the consumption inequality. Secondly, inequality measured by income provides an insight into the income sources that contribute most to income inequality.

Household consumption is defined as the sum of expenditures for food and other current expenditures including goods purchased, own produce and gifts. The main components of consumption include:

- 1) Consumption of food, tobacco, and beverages;
- 2) Expenditures for clothing and footwear;
- 3) Expenditures for hygiene and household items;
- 4) Expenditures for accommodation and transportation;
- 5) Expenditures for education;
- 6) Expenditures for health care;
- 7) Imputation of the service value by using consumer durables (including depreciation of consumer durables);
- 8) Imputed rents for house/apartment owners.

An imputed rental value for house/apartment owners is defined in such a way that, first of all, the average market value of the apartment is assessed, according to its market characteristics (using real estate agencies) for 24 areas in Serbia. Thereafter, a yearly value of the use of the apartment by owners is defined assuming that the depreciation period is 100 years, i.e. the depreciation rate is 1% per year.

Consumption outlined in this way is deflated by the regional price index. Namely, consumption is a good living standard indicator only if higher expenditures mean higher consumption or consumption of better quality products, but not in the case where higher levels of consumption are caused by higher prices.

### Defining equal units of consumption<sup>1</sup>

Household consumption (income) needs to be adjusted by household size bearing in mind economies of scale since some of expenditures are shared among the household members, such as expenditures for household items, using the car, daily newspapers, etc. Economies of scale can be approximated by adjusting household size to a variable representing units of equal consumption. For example, a household having 3.5 consumer units spends 3.5 times more in relation to a single-adult family. Besides household size, the sex and age of household members also have an effect on the necessary household income/expenditure size, so consumer units may include these household characteristics and its members as well.

Consumer units can reflect household size only, so they depend on a parameter  $\theta$ . The following formula<sup>2</sup> may represent household consumption for a consumer unit POT<sub>pj</sub>:

$$POT_{pj} = \frac{POT}{n^\theta},$$

POT – household consumption

n – number household members

$\theta$  – parameter

1 The related term for *consumer unit* is *the equivalent adult*, i.e. the first (or the only) grown-up individual in the household

2 J. Braithwaite, C. Grootaert, and B. Milanovic – *Poverty and Social Assistance in Transition Countries*, Palgrave Macmillan, 1999

A special case, when  $\theta = 1$ , represents per capita consumption. OECD uses the value  $\theta = 0.7$ . For a typical household in the countries of Eastern Europe and the former Soviet Union, the quoted formula represents a simplification of the OECD scale where the first adult equals 1, the second one = 0.7, and children = 0.5. However, the previous exponential formulation simplifies the calculation.

Consumer units in this study are established on the basis of data from a survey using the Engel method. The basic assumption of this method is the existence of an inverse and monotonic relationship between economic well-being of a household and participation of the food expenditures in overall consumption. Namely, two households are at the same level of economic well-being only if and only if they have equal participation of food in their consumption. The following non-linear regression was used, which was estimated by the non-linear least squares method:

$$UH_i = \beta_0 + \beta_1 \ln \left( \frac{\text{Consumption}_i}{(\text{Adults}_i + \alpha_1 \text{Children06}_i + \alpha_2 \text{Children718}_i)^\theta} \right) + \varepsilon_i$$

UH – food share in total household consumption

Consumption – total household consumption

Adults – number of adults in household

Children06 – number of children age 0-6

Children718 – number of children age 7-18

$\varepsilon$  – estimation error.

Parameters  $\beta_0$ ,  $\beta_1$ ,  $\alpha_1$ ,  $\alpha_2$ ,  $\theta$  are estimated from the quoted regression

Table 1 presents an estimation of the equivalent scale developed by use of the Engel method. The resulting equivalent scale can be simplified for easier use. Using the estimated coefficients, Serbia's equivalent scale may be formed, which is then regressed using the following variables: adults, children06, and children718. In this way, parameter  $\theta$  disappears, and the equivalent scale becomes of the OECD form:

Serbian Scale =

$$= (1 + 0.81 * (\text{adults} - 1) + 0.24 * \text{children06} + 0.75 * \text{children718}).$$

This equivalent scale was used to represent household consumption in terms of consumption per consumer unit.

In order to compare poverty with the previous period, consumer units from Household Budget Survey (APD) were applied (those that were used earlier in the poverty research). They are calculated for each household through adjustments for the difference in consumption of the household members based on differences in sex, age and occupation. The consumer unit value for men varies from 0.33 (for up to 1-year-old children) to 1.50 (for miners and industrial workers performing heavy-duty labor). For women, it varies from 0.33 (for children less than 1-year-old) to 1 (for industrial workers and farmers).



**Table 1.**  
**Evaluation of the Equivalent Scale Using the Engel Method**  
 (standard errors quoted in parenthesis)

Estimated parameters	Values
$\alpha_1$	0.299 (0.171)
$\alpha_2$	0.944 (0.156)
$\theta$	0.905 (0.048)
$\beta_0$	1.235 (0.031)
$\beta_1$	-0.080 (0.003)
R <sup>2</sup>	0.084
Број опсервација	6386

Source: The Living Standard Survey (AZS), 2002

### Defining the poverty line

The definition of poverty depends on the definition of the poverty line. The poor are considered to be those with an income level below a certain subsistence minimum (poverty line), which is necessary to satisfy minimum needs of life. Subsistence needs of an individual or a family can be defined on various levels, which makes the poverty line a somewhat arbitrary concept depending on the period of time and area for which it is defined.

There are two types of poverty lines: absolute and relative. The absolute poverty line establishes the absolute minimum living standards, and it is usually based on the fixed consumer food basket necessary for satisfying minimum needs for a certain quantity and structure of calories. It is decreased by the amount of other expenditures, such as clothing, hygiene, heating, electricity, etc. Such defined absolute poverty line varies from one country to another depending on the consumer basket structure. For the purpose of international comparability, it is calculated in US\$ at the same buying power. For example, the official poverty line in Slovenia is fixed at an amount of 37,000 tolar (DM 370) referring to the head of the household, and for other household members, coefficients are in the range 0.3 – 0.8 reflecting economies of scale.

The relative poverty line defines poverty in relation to the national standard of living and it is used for international comparison of characteristics of the poor. It is usually defined as a certain percentage of median or average household income, so it changes depending on movements of the average living standard of the population. In the

republic of Macedonia, for instance, the relative poverty line is defined as 60% of the median annual income of the population.<sup>3</sup>

The consumer basket calculated by the Federal Statistics Office (SZS) has been used so far as the poverty line. It is defined as a minimum consumer food/beverage basket of a 4-member household, which is necessary for satisfying minimum needs for food in accordance with nutritionist requirements. The main shortcoming of the SZS consumer basket lies in its somewhat more extensive list of food/beverage items than actually needed for a basic minimum subsistence. On the other hand, it does not include expenditures for clothing, for maintaining basic accommodation conditions, as well as for elementary hygienic, health care and educational needs. This poverty line has been used also for defining the absolutely poor, i.e. persons whose income falls beyond 50% of the poverty line.

In this study, the poverty line shall be defined in two steps. In the first, the food poverty line is defined as absolute poverty. It is established on the basis of the minimum consumer food basket. In reality, the minimum daily average amount of calories, based on the AZS consumption structure, is established and adjusted to the FAO nutritional requirements. It amounts to 2,288 calories on average. This consumer basket reflects the actual consumption structure in Serbia, where consumption per item should be at least equal to the consumption of the lowest decile<sup>4</sup>, and, at the same time, it has the lowest value expressed in current prices from the period May-June 2002. So, the minimum consumer basket for a 4-member household (man and women of the working age, a male child up to 7 years old, and a female child 11-13 years old) amounted to 7,605 dinars per month, expressed in average prices in Serbia from the period May-June 2002.

Table 2. presents the nutritional content of different food baskets (AZS, SZS, RZS). The minimum consumer basket calculated on the basis of the AZS data is the actual average food basket in the two lowest deciles.

The AZS consumer basket value is significantly smaller than that of the SZS amounting, for the same period of time, to 11,746.5 dinars for a 4-member household. That is not surprising if we have in mind the SZS consumer basket structure, not including the minimum necessary calories, but its content is far extended.

The RZS consumer basket is closer to the minimum basket, but its value is lower than the AZS basket. For the same period of time, it amounted to 6,680 dinars for a 4-member household. The key reason for this lies in the fact that the Republic's basket uses unrealistically low prices of bread which are not to be found on the market at all (19 dinars per kilo of bread). The basket based on AZS is based on the actual prices for the items over the reference period, which is the case with

---

3 D. Johnson – *Restructuring Social Welfare Allowance*, Working Paper: Seminar for Government Officials, 2000

4 10% variation from the first decile spending is allowed

**Table 2.**  
**Nutritionist Contents of Different Baskets in Relation to Standards**

	<b>AZS min.</b>	<b>SZS min.</b>	<b>RZS min.</b>
Energy	99%	106%	98%
Proteins	140%	156%	137%
Fats (up to max. rec. intake)	99%	116%	98%
Iron	166%	147%	156%
Vitamin A	52%	227%	188%
Thiamin	197%	203%	219%
Riboflavin	133%	169%	159%
Niacin	133%	132%	141%
Folate	265%	284%	302%
Vitamin C	229%	389%	434%

*Information source on standards – UN FAO, on nutritional structure of food – USDA.*

bread as well (around 30 dinars per kilo). In addition, the Republic Statistics Office (RZS) adjusts the contents of the basket monthly to reflect seasonal variations, using only the calorie criteria. As a result, some products are removed from the basket, others are added, and the quantity of other products are adjusted. This results in some arbitrariness in the formation of the basket's contents and may represent a nutritionally inadequate minimum level. Table A1 in the Annex presents the composition of the minimum food basket from AZS, SZS, RZS, and WFP.

Thus, the basket based on the Survey represents the best and most realistic minimum. It uses a nutritional equivalent scale based on FAO standards, and it is differentiated into 19 groups by age and sex.

The second step defines the total poverty line, which besides food expenditures also includes other expenditures (clothing and footwear, hygiene and household items, transportation, health care, education, etc.). It is defined as total consumption of those households whose food consumption equals the minimum consumer basket. This was how the poverty line was established for a 4-member household at the amount of 13,827 dinars per month, i.e. 4,489 dinars per consumer unit.

In order to estimate the total consumption corresponding to the minimum consumer basket, we should start with the following formula:

$$OH = \frac{UPH}{NES * MKH}$$

$$POTpj = \frac{UP}{ES \cdot IC}$$

OH is the relationship between a household's food consumption and household's minimum consumer food basket; UPH is total household's food consumption; MKH is household's minimum food basket; POTpj is consumption per consumer unit (equal consumption units), as defined in the previous section; UP is the total household's consumption; ES is the equivalent scale (consumer units); and IC is the price index. Variable OH equals one when a household spends on food exactly as much as the minimum consumer food basket amounts.

In order to obtain the poverty line corresponding to the consumption required for the minimum consumer food basket, it is necessary to estimate the following relation using the non-linear least squares method:

$$\ln(OH_i) = \alpha_0 + \alpha_1 \ln(POTpj_i) + \alpha_2 \ln(POTpj_i)^2 + \varepsilon_i$$

Where  $i$  represents a household;  $\alpha_0, \alpha_1, \alpha_2$  are parameters to be estimated; and  $\varepsilon$  represents the error term.

We solve the estimated regression for the level of equivalent consumption when a household's expenditure on food equals the amount to purchase the contents of the minimum consumer basket, or for  $OH=1$ :

$$\ln(1) = 0 = \hat{\alpha}_0 + \hat{\alpha}_1 \ln(LS) + \hat{\alpha}_2 \ln(LS)^2,$$

where  $\hat{\alpha}_0, \hat{\alpha}_1, \hat{\alpha}_2$  represent regression parameters; and  $LS$  is the poverty line estimate. By solving this equation, we obtain:

$$LS = \exp\left(\frac{-\hat{\alpha}_1 \pm \sqrt{\hat{\alpha}_1^2 - 4\hat{\alpha}_0\hat{\alpha}_2}}{2\hat{\alpha}_2}\right)$$

i.e. the poverty line which includes other expenditures, in addition to expenditure on food, and amounts to 4,489 dinars per consumer unit.

The second poverty line is intended to measure and determine the characteristics of the population near poverty, meaning near the poverty line of 4,489 dinars. This is the poverty line corresponding to the end

**Table 3.**  
**Poverty Lines Used in This Study**

	Poverty Line expressed per consumer unit
Poor	4,489 dinars
Materially insufficiently supported individuals (MNO)	5,507 dinars

of second decile. It amounted to 5,507 dinars and (as per definition) 20% of population is below this line (population with the lowest consumption per consumer unit).

The establishment of this poverty line is completely arbitrary. Such poverty lines are established mostly in other countries in order to compare profiles of the poor with those who are near the poverty line and who are sensitive to outside shocks that can easily push them below the poverty line and into the category of the poor.

In order to compare poverty in 2002 with the previous period, the SZS consumer basket has been used because it represented the poverty line in previous poverty studies. Since the SZS consumer basket referred to a 4-member household, it was necessary to calculate the SZS consumer basket value per consumer unit based on the APD consumer units. The SZS consumer basket, amounting to 11,746.5 dinars in the reference period (May-June 2002) was divided by 3.3 consumer units, and thus, a poverty line of 3.560 dinars for an average consumer unit per month was obtained.

### Basic poverty indicators

The most frequently used indicators can be defined according to Foster, Greer and Thorbecke (1984) in the following way:<sup>5</sup>

$$P(\alpha) = \frac{1}{n} \sum_{i=1}^n \left[ \max \left( \frac{z - c_i}{z}, 0 \right) \right]^\alpha,$$

$\alpha$  – parameter

$z$  – poverty line

$c_i$  – equivalent consumption of the unit  $i$

$n$  – total number of persons

For  $\alpha = 0$ ,  $P(0)$  is the poverty index representing the number of the poor as a percentage of the total population. However, this poverty indicator does not tell us anything about how poor these people are, i.e. to what extent their consumption (income) is below the poverty line. The poverty indicator that takes this into account is that showing the depth of poverty (poverty gap), which is obtained for  $\alpha = 1$ . So,  $P(1)$  can be defined in the following way:

$$P(1) = P(0) * (\text{average deficit})$$

where the average deficit represents the average consumption (income) deficit of the poor as a percentage of the total population. The poverty depth ( $P(1)$ ) represents the average consumption (income) deficit as a percentage of the poverty line among total population (poor and those

<sup>5</sup> *Making Transition Work for Everyone*, World Bank, 2000

who are not). When the average deficit of the poor is multiplied by the number of poor individuals and expressed as a percentage of GDP, then the minimum funds which are necessary for the elimination of poverty are calculated, assuming that it is perfectly targeted.

Finally, for  $\alpha = 2$ , we get  $P(2)$  which is called severity of poverty. This indicator measures inequality among the poor, since it puts more weight on those poor being further away from the poverty line.

In this analysis, all three indicators will be used as poverty indicators; the poverty index  $P(0)$ , poverty depth  $P(1)$ , and severity of poverty  $P(2)$ .

## THE DATA SOURCE

Poverty in Serbia was analyzed on the basis of the Survey on the Living Standards of the Population (AZS), which was conducted in the period between May 15 and June 15, 2002 in Serbia (without Kosovo-Metohija). The basic sample included 6,386 households, or 19,725 individuals. The additional sample included 500 households, recipients of family material support (MOP), which were used for the analysis of this important social transfer.

AZS is the largest and most comprehensive survey on living standards conducted in Serbia so far. The survey sample includes the permanent population of Serbia<sup>6</sup> meaning that IDPs were included in this research to a limited extent. Previous poverty research was based mostly on the Federal Statistics Office Household Budget Survey (APD), including around 2,500 households in the territory of FR Yugoslavia which are also a part of the permanent population).

A two-stage stratified sample was applied. Primary sample units are the census districts, and secondary units are households. Census districts are selected randomly, so census districts with more households are more likely to be selected. Eleven households were selected by random in each census district. When selecting households, the household list according to the census districts from the April 2002 census in Serbia was used. Households were selected with equal probability without replacement. Stratification was performed by cross-linking territories (Vojvodina, Belgrade, Western Serbia, Central Serbia, Eastern Serbia, and Southeastern Serbia) and types of settlement (urban, rural), which resulted in 12 strata. The final analysis included 6,386 households, or 93.5% of the total sample originally selected.

The main aim of this survey was to collect representative data, at the household and individual level, on the living standards of the population in Serbia in 2002. Thus, the survey was conceived in such a way as to provide detailed data on household consumption, as well as other

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6 Permanent population is defined according to the UN Instructions on the Census which were used for the 2002 census in Serbia. Thus, the permanent population includes all individuals living in Serbia for longer than one year, excluding diplomatic and consular staff

elements of living standards of the population (accommodation conditions, durable consumables provision, accessibility to education, health care, and so on). The instrument (questionnaire) itself includes a few components. These include:

1. Main demographic characteristics (sex, age, education, marital status, household composition, residential location and changes therein);
2. Durable assets (elementary information on apartment/house type, accommodation and maintenance costs, durable consumables);
3. Agriculture (agricultural production of households cultivating more than 10 ares of land or cattle breeding);
4. Health care (health care accessibility, use and cost of health services, including informal payments);
5. Food expenditures and other household expenditures (clothing, footwear, transportation, hygiene, household items, sports, culture, entertainment, etc.), including purchased products, own produce and gifts; this component includes also family income not related to work;
6. Education (education accessibility, use and cost of services, including informal payments);
7. Working activity (main and additional employment, unemployment, income from work);
8. Social programs (inclusion and benefits).

Data on monthly food expenditures were obtained on the basis of a diary that was kept by a household over a 7-day period, and other expenditures were recorded over a one-year or one quarter period, depending on the expenditure type. In this way, the main shortcomings of APD were removed, where the household expenditures were not recorded in a diary (from the beginning of nineties), but relied on participants' memory or on their voluntary records, which raises questions of arbitrariness of the reported values and quantities.

## MAIN POVERTY INDICATORS IN SERBIA IN 2002

Poverty in Serbia was analyzed using household consumption as a main aggregate for measuring poverty. The only comparison with previous poverty research in Yugoslavia was based on household income in order to use the same aggregate indicator for measuring poverty as in previous research.

In 2002, nearly one in every ten inhabitants in Serbia (10.6%) lived in a household whose consumption per consumer unit was in average less than 4,489 dinars or US\$72, meaning \$2.4 per day (Table 4.). The standard error in the estimate of the poverty index shows the extent of statistical certainty with which we can talk about the percentage of the poor. With 95% statistical certainty, the actual poverty index is situated in a statistical interval around two standard errors of our estimation

**Table 4.**  
**Poverty Indicators in Serbia in 2002**  
 (standard errors in parenthesis)

	Materially Insufficiently Supported (poverty line=5,507 din.)			The Poor (poverty line=4,489 din.)		
	Index (P0)	Gap (P1)	Severity (P2)	Index (P0)	Gap (P1)	Severity (P2)
<b>Urban</b>	16.0% (0.99)	3.3% (0.27)	1.1% (0.12)	7.8% (0.70)	1.5% (0.17)	0.5% (0.07)
<b>Rural</b>	25.1% (1.44)	6.1% (0.46)	2,3% (0.21)	14,2% (1.11)	3,2% (0.31)	1,1% (0.13)
<b>Total</b>	20.0% (0.84)	4.6% (0.25)	1,6% (0.11)	10,6% (0.62)	2,2% (0.17)	0,8% (0.07)

*Note:* standard errors adjusted to the sample stratification.

Source: AZS 2002

of 10.6%. In another words, the actual poverty index is between 9.4% and 11.8%.

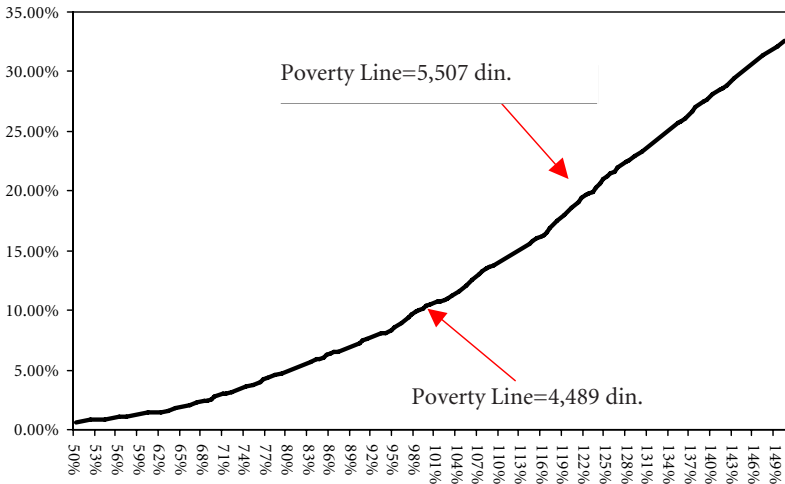
The poverty depth (gap) was 2.2%, which indicates that if the state allocates funds amounting to 2.2% of the poverty line for each individual (poor or not) and targets these funds to the poor, poverty would be theoretically eliminated, given that assistance to the poor is perfectly targeted. More details on the funds needed for the elimination of poverty will be offered in Section 6. Severity of poverty, the indicator which takes into account the fact that some poor have a greater depth of poverty and are thus further away from the poverty line than others (and thereby attaches more weight those further away from the poverty line), was 0.8%. Based on these data, we can draw the conclusion that the poverty gap and severity are not significant, which is in line with the relatively low level of inequality in Serbia (see the Section on inequality of income and consumption).

The relatively low poverty index in 2002 may be encouraging but it should not mislead us since the population concentration around the poverty line is significant. It further means that a small drop in actual earnings and other income of population or the unemployment increase in the upcoming period may significantly increase the share of the poor. That is why we are of the opinion that besides poor population, it is also necessary to analyze those who are directly above the poverty line and who are vulnerable to dropping below the poverty line. We should bear in mind that the number of unemployed is expected to grow during economic restructuring.

Pic.1 shows how a small shift in the poverty line upwards significantly increases the percentage of those below the poverty line. An increase in the poverty line by just over 20% increases the poverty index by 100 percent points. In another words, an increase in the poverty line from 4,489 dinars to 5,507 dinars leads to a doubling in the number of poor,



**Figure 1.**  
**Change of the Poverty Index with the Change of the Poverty Line**



Source: AZS 2002

as the poverty index moves up from 10.6% to 20%. The population whose consumption was on average less than 5,507 dinars<sup>7</sup> or US\$ 89 per month is “close to poverty”, so we call them Materially Insufficiently Supported (MNO). The depth and severity of their poverty is much higher in relation to the poor category.<sup>8</sup>

We may draw the conclusion that in 2002 around 790,000 people in Serbia were poor, and around 1.5 million had insufficient material resources (i.e. income). In terms of households, 10.3% or around 250,000 households in Serbia lived in poverty, and 19.5% or around 474,000 households were MNO.

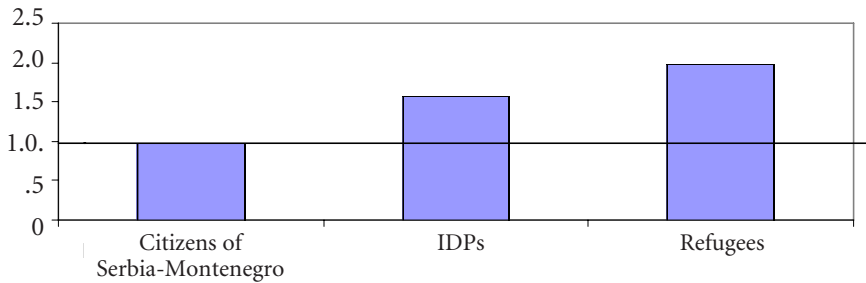
The poverty picture in Serbia is certainly worse than this given that these data do not fully include refugees and IDPs (less than 25,000 of them are in collective centers) who are undoubtedly more vulnerable than the permanent population of Serbia. Pic.2 may serve only as an indicator of how much the poverty risk of the refugees/IDPs included in the AZS is higher compared to citizens of Serbia/Montenegro.

Table 4 shows that the rural population is significantly poorer than the urban population since the poverty index of the rural population is almost twice as high as the poverty index of the urban population (14.2% and 7.8% respectively). Its relative poverty risk was a third higher compared to the average for the total population. Poverty has

<sup>7</sup> More details on this poverty line may be found in section 1.3.

<sup>8</sup> If we apply a subjective measure of poverty, based on an individual’s opinion on the income level needed for satisfying their needs, then more than half of the population of Serbia would be poor.

**Figure 2.**  
**Relative Poverty Risk of Refugees and IDPs in Serbia in 2002**



Source: AZS 2002

become a rural phenomenon as in many transition countries.<sup>9</sup> It can be explained by the fact that the growth in actual earnings of pensions and of the employed (which constitute major income sources for the urban population) was relatively higher than the growth in other income sources. In addition, possibilities for working in the gray economy, as one of the main strategies for survival, are more numerous in cities than in other areas, so that the additional income coming from the gray economy has an effect on consumption growth of these households. Poverty depth and severity in rural areas were also significantly higher than in rural areas.

In terms of the materially insufficiently supported population, a relatively smaller difference can be observed between urban and rural poverty and the poverty depth.

#### **POVERTY TRENDS IN THE PERIOD 1995-2002**

This study uses a standard methodology for poverty research, as is applied in most countries in the world. Accordingly, the analytical results of poverty in Serbia in 2002 are internationally comparable. However, they are not comparable with previous poverty research in Serbia/Yugoslavia due to the following differences:

- 1) The AZS sample is based on the last census of April 2002, whilst the APD sample in the past decade was based on the 1991 census;
- 2) The AZS instrument (questionnaire) was designed to collect full data on the total consumption of the population based on their records kept in a diary; APD has abandoned this approach since the beginning of the 90s as expenditures were not recorded in these diary;

<sup>9</sup> In the majority of transition countries, the decrease in urban poverty was more evident than that in rural areas. See Transition report 2002, EBRD

- 3) Household consumption is being used as the poverty indicator for the first time in this research, whilst previous poverty research was based on household income;
- 4) In this research, consumer units were empirically established on the basis of the Survey data, through the Engel Method (see Section 1.2); previous poverty research was based on previously established consumer units, which requires adjustments household consumption for differences in the consumption of household members according to age, sex and occupation;
- 5) In this research, the poverty line is defined as the consumption of those households whose food consumption equals the minimum consumer food basket established on the basis of the Survey. In contrast, previous research used the SZS consumer food basket as the poverty line.

The above quoted differences lead to the conclusion that the poverty indicators in 2002 cannot be directly compared to the previous years' results. Approximate comparability can be achieved only if household income defined in the same manner as in the previous research and the SZS consumer basket as the poverty line were used as poverty indicators in 2002. It is also necessary for equal consumption units to be adjusted to those from APD. This is how we can get to an approximate picture on the development of poverty in Serbia in the past 10 years, which has been done in this study. However, these methodological adjustments did not succeed in removing differences that exist within the data sources themselves (AZS and APD).

In order to obtain an approximate picture of poverty development in the previous period, poverty in 2002 was measured in relation to income per consumer unit since the poverty research during 1995-2000 was based on household income because valid data on consumption were not available. For the purpose of comparability, household income was defined in the same way as before, meaning that household income did not include income coming from either durable consumable goods or imputed rent values (details on other income components can be found in the Section on inequality). Also for the purpose of comparability, the poverty line is calculated on the basis of the SZS consumer basket; as in previous poverty studies, it amounted to 3,560 dinars per consumer unit. Consumer units from APD are applied to the AZS data. In this manner, all three components necessary for the analysis of the growth in poverty have been disaggregated to a comparable basis. The only problem is that the results from the two different data sources are compared, AZS and APD having different samples and instruments (questionnaires).

It is assumed that the AZS incorporates regular and irregular household income better than does APD, as the former survey (AZS) was not conducted using official statistics as was APD for previous years. It has been noticed that in many countries the income coverage was much better in the surveys that were conducted by independent agencies than in surveys conducted by official statistics agencies. It is more likely that

**Table 5.**  
**The Poverty Trends in Relation to Income in the Period 1995-2002**

	1995	2000	2002
Poverty index, in %	28.9	36.5	14.5
Poverty depth, in % of GDP	4.1	3.1	3.5
Average income deficit, in % of the poverty line	23.2	25.4	32.2

*Note:* The population's income is defined in a comparable way for the observed period and it is disaggregated to consumer units from APD. The SZS consumer basket is used as the poverty line for the period 1995-2002.

Data for 1995 refer to FRY as in A. Posarac – Human Development Report Yugoslavia, 1997, and, for the period 2000-2002, they refer to Serbia without Kosovo-Metohija.

*Source:* APD for 1995-2000; AZS for 2002.

survey participants/respondents would provide a more complete declaration of their income (regular and irregular) to an independent private agency rather than to the official state institution.<sup>10</sup> If this assumption proves to be correct, then it can be assumed that poverty was overestimated in the previous period. Consequently, comparisons between poverty in 2002 and poverty in the past decade can be taken only as an indicator of potential trends.

Poverty in Serbia has been significantly reduced with 14.5% of population being poor according to the 2002 income compared to more than one third of the population in 2000 (Table 5.1). Real growth in GDP, earnings and other income of the population in this period are reflected in the growth in household consumption and in a decrease in poverty. However, although the poverty index declined, the poor needed more income to be able to get up to the poverty line. It means that in spite of a lower percentage of the poor in the population, the poor were on average poorer than two years before and even more than in comparison to 1995. The poverty depth (gap) in 2002 was 3.5% of GDP, which is between the 1995 and 2000 values of this indicator.

## COMPARING CONSUMPTION AND INCOME POVERTY

### Components of consumption

Table 6 presents the structure of consumer consumption for the first decile and by quintile broken down into urban and rural dwellers. The average spend on food was 47.9% of the total spend for the whole population (in-kind food consumption was 11.3%). Rural dwellers spent

<sup>10</sup> See more on a comparison of income between the regular and gray economy, participation and unemployment rates from the Survey on Work Force conducted by SZS and the Survey on Gray Economy conducted by the Economic Institute in: G. Krstic – Empirical Analysis of the Formal and Informal Labor Markets in the FRY, 1995-2000, Ph.D. thesis, Sussex University, Brighton, 2002

more on food on average than those in urban areas (53% and 45% respectively). The difference in food consumption between rural and urban areas increases if we observe in-kind food consumption (consumption of the food that household produce for its own needs). Its part in overall consumption in rural settlements was almost five times higher than in urban settlements (22.4% and 4.6% respectively). Observing the consumption distribution by quintiles, we note that, as expected, the poorer population spends relatively more on food than wealthier individuals (56% and 41% respectively). Food is the most important consumption item for the rural poor, and the least important item for the wealthiest quintile in urban settlements (60% and 40% respectively). It is also interesting to note that in-kind food consumption constitutes just over one half of the food consumption of the poorest population (1st decile) in rural areas, and much less in urban areas (20%).

### **Consumption and income poverty**

Although this study uses poverty indicators based on household consumption (because the consumption in general terms is accepted as a better measure of living standards), it is interesting to analyze to what extent poverty by the consumption measure coincides with that by the income measure, i.e. includes the same people. The poor, in income terms, are defined as those individuals with an income below the poverty line, or less than 4,489 dinars per consumer unit per month.<sup>11</sup> The materially insufficiently supported, in terms of income, are those individuals with an income less than 5,507 dinars per consumer unit per month.

Table 7 indicates that 5.6% of population is poor in relation both to consumption and to income, so this population category we call very poor or extremely poor. Namely, just over one half of population (52.8%) who is poor in terms of consumption also proves to be poor in relation to income. The situation is similar with MNO, too (Table 8). It means that there is relatively little overlap between these two categories of the poor. This is due to there being less than one half of those poor (and MNO) in terms of consumption, are not poor in relation to income, as their consumption was less than the poverty line, and their income was above that line. This individuals have an income which enabled them to spend more, but they used part of their income for saving, gifts, etc.

On the other hand, only 30.6% of the poor in terms of income are also poor in terms of the consumption (for MNO, that percentage is 40.6%). This points to a significant number of individuals whose income was less than the poverty line, and whose consumption was higher than that line. Finally, it is interesting to note that 76.7% of the total population were not poor in terms of either of the criteria, either consumption or income, (for MNO, that percentage is 62.9%).

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11 See sources of household income in the Section on inequality

**Table 6.**  
**1st Decile Consumption and Consumption by Rural/Urban Dwellers**  
**in Serbia in 2002**

	1st dec.	1st quint.	2nd quint.	3rd quint.	4th quint.	5th quint.	Average
<b>Total</b>							
Food	56.5	55.8	54.1	51.9	49.7	41.4	47.9
Accommodation	19.8	19.1	17.5	16.7	16.5	16.8	17.0
Clothing, footwear, household items, etc.	10.6	11.9	15.0	17.7	20.9	26.9	21.2
Healthcare	3.5	3.6	4.4	4.6	4.3	6.8	5.3
Education	1.2	1.4	1.6	2.0	2.4	2.4	2.1
Durables	1.2	1.4	1.6	1.7	1.8	2.3	1.9
Imputed rent	7.1	6.9	5.9	5.4	4.5	3.3	4.6
In kind food consumption	22.9	20.4	15.9	13.7	10.3	7.3	11.3
<b>Total</b>	100	100	100	100	100	100	100
<b>Urban</b>							
Food	51.9	51.1	50.0	49.5	47.4	39.9	45.0
Accommodation	20.4	20.1	19.2	17.7	17.2	17.0	17.6
Clothing, footwear, household items, etc.	10.4	12.0	15.0	17.4	21.3	27.2	22.0
Healthcare	3.5	3.3	4.0	4.2	3.9	6.8	5.2
Education	1.2	1.6	1.8	2.3	2.7	2.8	2.5
Durables	1.5	1.6	1.7	1.6	1.8	2.3	2.0
Imputed rent	11.0	10.3	8.3	7.3	5.6	4.0	5.7
In kind food consumption	9.9	8.3	6.0	5.4	4.3	3.6	4.6
<b>Total</b>	100	100	100	100	100	100	100
<b>Rural</b>							
Food	59.9	60.0	58.6	55.2	54.1	45.0	52.8
Accommodation	19.4	18.1	15.6	15.3	15.0	16.2	15.9
Clothing, footwear, household items, etc.	10.8	11.7	15.0	18.2	20.0	26.1	19.8
Healthcare	3.4	3.8	4.8	5.0	4.9	6.8	5.4
Education	1.1	1.3	1.3	1.5	1.8	1.5	1.5
Durables	1.0	1.2	1.5	1.7	1.9	2.5	1.9
Imputed rent	4.3	3.9	3.2	3.0	2.4	1.9	2.7
In kind food consumption	32.5	31.2	27.0	24.6	21.9	15.7	22.4
<b>Total</b>	100	100	100	100	100	100	100

*Note:* The consumption defined as consumption per consumer units. Decile and quintile defined on the basis of consumption per consumer units.

*Source:* AZS 2002

**Table 7.**  
**Consumption and Income Poverty in Serbia in 2002**  
 The poverty line = 4,489 dinars

	Consumption poor	Consumption non-poor	Total
Income poor	5.6%	12.7%	18.3%
Income non-poor	5.0%	76.7%	81.7%
<b>Total</b>	<b>10.6%</b>	<b>89.4%</b>	<b>100%</b>

Source: AZS 2002

**Table 8.**  
**The Materially Insufficiently Supported (MNO) in Relation to Consumption and Income in Serbia in 2002**  
 The poverty line = 5,507 dinars

	MNO in relation to consumption	Non-MNO in relation to consumption	Total
MNO in relation to income	11,7%	17,1%	28,8%
Non-MNO in relation to income	8,3%	62,9%	71,2%
<b>Total</b>	<b>20,0%</b>	<b>80,0%</b>	<b>100%</b>

Source: AZS 2002

### Resources necessary to eliminate poverty

Since the targeting of the existing MOP system (family support) was carried out in terms of income, the minimum resources necessary for the elimination of poverty is presented in Table 9, both in relation to consumption and income.

If there were perfect targeting of social assistance to the poor, and in order to eliminate poverty in Serbia in 2002, it would be necessary to allocate between 9.1 and 37 billion dinars, or between 1% and 3.9% of GDP<sup>12</sup>. The amount depended on which criteria were used to define the poor – the poor in terms of consumption or of income (excluding the costs of administering assistance). These are additional funds supplementing the existing resources for administering support to the poor by means of social assistance (MOP), child allowance, humanitarian aid, and others. As the assumption of perfect targeting is unrealistic, actual resources necessary for the elimination of poverty can be several times higher than the minimum amount. If the targeting of social assistance was 60-70%, 11.8-12.7 billion dinars would be needed for the

12 For all calculations, GDP for 2002 was used – amounting to 948.3 billion din. The total population of Serbia was 7.45 million.

elimination of poverty in terms of the consumption, or 48.1-51.8 billion dinars for the elimination of poverty in terms of income.

These funds are at least twice as large as the minimum amount necessary for the elimination of poverty with perfect targeting in market economies. In transition countries (Poland, Hungary, Bulgaria, Estonia, and Russia) US\$1 of social assistance costs between \$1.5-8.0 (excluding administrative cost for paying benefits).<sup>13</sup>

**Table 9.**  
**Funds Needed for Elimination of Poverty in Serbia in 2002**

	<b>Consumption poor</b>	<b>Income poor</b>
Average consumption of the poor (dinars/consumer unit)	3,539	3,131
Poverty line (dinars/consumer unit)	4,489	4,489
Additional consumption needed (dinars/consumer unit)	950	1,358
Average shortfall (% of poverty line)	21.2%	30.3%
Budget needed for poverty elimination (perfect targeting; in billion dinars) (targeting: 70-60%; in billion dinars)	9.1 11.8-12.7	37.0 48.1-51.8

Source: AZS 2002

## WHO ARE THE POOR IN SERBIA?

### Poverty by region

Two regions with an above average poverty risk are Southeastern and Western Serbia. Southeastern Serbia (table 10) is the region with the highest share of the poor. The poverty risk if this region is 56.6% higher than the average poverty risk of the total population. Within this region, a significant difference can be noticed between urban and rural poverty. The poverty risk in rural areas of Southeastern Serbia is twice as high as in the general population, whilst urban population is in a much better position with a near-average poverty risk. The population of rural areas in Southeastern Serbia is not only the poorest, but poverty in that region is the deepest and strongest. Western Serbia is the next region with an above-average poverty risk (+27.4% compared to the population average), particularly rural areas where the poverty risk is more than a third higher than the population average (+35.8%). The poverty depth and severity in Western Serbia are also higher than

13 J. Braithwaite, C. Grootaert, and B. Milanovic – *Poverty and Social Assistance in Transition Countries*, Palgrave Macmillan, 1999



average. The data indicate that the rural population of Southeastern and Western Serbia was the most vulnerable. It represented 14% of the total population and one-quarter of the total number of the poor. One of the reasons for greater poverty being found in these two rural regions in Serbia is the significantly higher share of one or two-member elderly households which tend to be poorer than other households (see table 15).<sup>14</sup> When observing the MNO category, a similar picture is obtained of regional distribution of poverty.

**Table 10.**  
**Poverty per Regions in Serbia in 2002 (in %)**

	% MNO	%of the poor	Relative poverty risk	Total population structure	Structure of the poor	Poverty depth	Severity of poverty
<b>Belgrade – total</b>	<b>15.0</b>	<b>7.9</b>	<b>-25.5</b>	<b>21.1</b>	<b>15.8</b>	<b>1.5</b>	<b>0.5</b>
Urban	13.2	6.9	-34.9	17.2	11.2	1.2	0.4
Rural	22.9	12.2	15.1	4.0	4.6	2.9	1.0
<b>Vojvodina – total</b>	<b>18.4</b>	<b>8.8</b>	<b>-17.0</b>	<b>27.1</b>	<b>22.5</b>	<b>1.9</b>	<b>0.6</b>
Urban	16.0	6.8	-35.8	15.4	9.8	1.3	0.4
Rural	21.5	11.5	8.5	11.7	12.7	2.6	1.0
<b>West Serbia – total</b>	<b>23.9</b>	<b>13.5</b>	<b>27.4</b>	<b>11.2</b>	<b>14.2</b>	<b>2.8</b>	<b>0.9</b>
Urban	22.7	12.1	14.2	4.3	5.0	1.9	0.5
Rural	24.7	14.4	35.8	6.8	9.3	3.4	1.2
<b>Central Serbia – total</b>	<b>19.5</b>	<b>10.2</b>	<b>-3.8</b>	<b>17.3</b>	<b>16.6</b>	<b>2.2</b>	<b>0.7</b>
Urban	15.2	6.9	-34.9	8.5	5.5	1.4	0.5
Rural	23.7	13.2	24.5	8.8	11.1	3.0	1.0
<b>East Serbia – total</b>	<b>17.4</b>	<b>10.1</b>	<b>-4.7</b>	<b>9.3</b>	<b>8.9</b>	<b>2.3</b>	<b>0.8</b>
Urban	14.3	9.2	-13.2	4.4	3.8	2.0	0.7
Rural	20.2	10.9	2.8	4.9	5.1	2.6	1.0
<b>SE Serbia – total</b>	<b>29.8</b>	<b>16.6</b>	<b>56.6</b>	<b>14.0</b>	<b>22.0</b>	<b>3.6</b>	<b>1.2</b>
Urban	21.3	10.0	-5.7	6.7	6.3	2.2	0.7
Rural	37.7	22.7	114.2	7.3	15.7	5.0	1.7
<b>Total</b>	<b>20.0</b>	<b>10.6</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>2.2</b>	<b>0.8</b>

*Note:* The relative poverty risk is calculated as the percentage growth (drop) in the poverty index of each group compared to the average poverty index of the entire population.

*Source:* AZS 2002

14 The share of one and two-member elderly households in rural areas of SE/W Serbia is twice as high as that in urban areas in these two regions in Serbia. These households' share in the total number of households in SE/W Serbia was 25% and 22% respectively, whilst the percentage in urban areas in these two regions was 11% and 13% respectively.

Other regions in Serbia had a poverty index below average. The urban populations in Belgrade, Vojvodina and Central Serbia were in the best position in terms of poverty risk, at one third less than the average for the population. However, the rural parts of these regions were poorer than average.

### Poverty according to sex and age

Poverty was approximately equally distributed among men and women with the percentage of poor men and women being almost equal (table 7.2). Thus, the entire population structure according to sex represents, at the same time, the sex structure of the poor population. The same applies to MNO.

**Table 11.**  
**Poverty according to Sex and Age Groups in Serbia in 2002 (in %)**

	% MNO	% of the poor	Relative poverty risk	Total population structure	Structure of the poor	Poverty depth	Severity of poverty
<b>Sex</b>							
Man	20.1	10.6	0.2	48.6	48.7	2.3	0.8
Woman	19.9	10.6	-0.1	41.4	51.3	2.2	0.7
<b>Age</b>							
Children 0-6	14.2	6.9	-34.5	6.0	3.9	1.4	0.5
Children 7-14	22.2	12.7	20.1	8.5	10.3	3.0	1.1
Children 15-18	19.7	10.7	1.3	5.1	5.2	2.4	0.8
Adults 19-25	18.6	9.6	-9.6	9.5	8.6	1.8	0.6
Adults 26-45	17.3	9.1	-14.2	26.4	22.7	1.9	0.6
Adults 46-64	19.1	9.7	-8.0	26.8	24.6	2.0	0.7
Old 65+	27.2	14.8	40.0	17.7	24.8	3.2	1.1
<b>Total</b>	20.0	10.6	-	100	100	2.2	0.8

*Note:* The relative poverty risk is calculated as the percentage growth (drop) in the poverty index of each group compared to the average poverty index of the entire population.

*Source:* AZS 2002

Observed according to the age, the poorest persons were those aged 65 or older. Their poverty risk was 40% higher than the population average, and the depth was also significantly higher than average. They constituted 17.7% of the entire population and almost one quarter of the total.

There is a higher percentage of poor among retired people than in the entire population (10.9% to 10.6%). On the other hand, there are fewer poor among them than among elderly (65+) who are not pensioners (10.9% to 19.8%). It suggests that the pension system provides, in principle, sufficient income for old age. Among all elderly of 65+, the poverty rate is 14.8%.

**Table 12.**  
**Poverty of the Elderly (in %)**

	Total	Belgrade	Vojvodina	West Serbia	Central Serbia	East Serbia	Southeast Serbia
Retired	10.9	8.3	9.6	12.6	8.5	13.2	19.2
Elderly 65+. with no pension	19.8	23.0	20.2	13.7	18.7	9.4	32.7
All elderly. 65+	14.8	12.7	13.7	12.1	13.6	12.0	26.1

Source: AZS 2002

The next category with a poverty risk above average is children 7-14 years old. Namely, 12.7% of the population belonging to this age group lived below the poverty line of 4,489 dinars per consumer unit, and thus, its relative poverty risk was 20% higher than the population average. However, the share of this age group in the poor population is considerably smaller than that of the elderly, and amounted to 10.3%. Even though children 7-14 do not represent a significant part of the poor population (due to their low share in the entire population), their poverty was relatively deep compared to other age groups. Children 15-18 years old also had a poverty risk which was nearly equal to the population average. Other age groups of adults had a poverty risk below average. The MNO share distribution within entire population according to age does not differ from the age distribution of the poverty index.

### **Poverty according to household type and composition**

Poverty was more prevalent among households without children than among household with children (table 13). The poverty risk of households without children was above average (+8.5%) and they constituted over 2/3 of the poor population. Their poverty depth and severity was close to average. When observing poverty according to the number of household members, it may be noticed that poverty does not grow with an increase in the number of members. Although the most vulnerable households are those with five or more members (with a poverty risk of +26.3%), the next relatively vulnerable category is one or two-member households (with a poverty risk somewhat higher than average). The least poor were three and four-member households (below average poverty risk). This is in line with the fact that poverty is the least prevalent among households with children since most of three and four-member households have children.

For households with children, it is interesting to point out that single mothers with children have almost half the poverty risk compared to the population as a whole. Table 14 presents poverty according to household composition. Namely, the poverty index increases when one elderly person joins the household, as do the other two poverty

**Table 13.**  
**Poverty according to Household Type in Serbia in 2002 (in %)**

	% MNO	%of the poor	Relative poverty risk	Total population structure	Structure of the-poor	Poverty depth	Severity of poverty
<b>Households</b>							
Without children	20.6	11.2	8.5	63.5	68.9	2.3	0.8
With children	17.6	8.8	-14.8	36.5	31.1	1.9	0.6
<b>Number of members</b>							
One member	20.4	11.3	9.1	17.4	19.0	2.4	0.8
Two members	21.0	10.9	5.8	24.7	26.1	2.4	0.9
Three members	16.5	8.6	-16.9	19.8	16.4	1.7	0.5
Four members	15.4	8.4	-18.6	21.6	17.6	1.6	0.5
Five and more members	25.3	13.0	26.3	16.5	20.9	2.9	1.0
<b>Total</b>	19.5	10.3	-	100	100	2.2	0.8

*Note:* The relative poverty risk is calculated as the percentage growth (drop) in the poverty index of each group compared to the average poverty index of the entire population.

*Source:* AZS 2002

**Table 14.**  
**Poverty according to Household Composition in Serbia in 2002 (in %)**

	% MNO	%of the poor	Relative poverty risk	Total population structure	Structure of the-poor	Poverty depth	Severity of poverty
Single mothers with children	13.4	5.4	-47.4	1.6	0.9	0.9	0.7
Other households	19.6	10.4	0.8	98.4	99.2	2.2	0.2
<b>Household composition</b>							
One member	20.4	11.3	9.1	17.4	19.0	2.4	0.8
2 adults. 2 children	12.9	6.9	-33.2	9.5	6.4	1.6	0.5
2 adults. 2 children. 1 elderly	23.8	10.8	5.1	1.4	1.5	2.4	0.7
1 adult with children	12.3	5.0	-51.9	1.8	0.9	0.8	0.2
1 adult. 1 elderly with children	16.5	6.4	-37.6	0.5	0.3	1.6	0.4
2 elderly without children	30.9	16.9	63.6	7.4	12.2	3.4	1.2
<b>Total</b>	19.5	10.3	-	100	100	2.2	0.8

*Source:* AZS 2002

indicators go up: the poverty depth and severity. Yet, the most vulnerable households were those with two elderly people without children.

Table 15 presents poverty among elderly households, where elderly households are defined as households in which all members are aged 65 or over. As the previous table pointed out, elderly households have a poverty index above average. Two-member elderly households were the most exposed to poverty since their poverty risk was almost 2/3 higher than the population average. They constituted 12.2% of the total number of poor households, and their poverty depth and severity was considerably higher than average.

**Table 15.**  
**Poverty Among Elderly Households in Serbia in 2002 (in %)**

	% MNO	%of the poor	Relative poverty risk <sup>*</sup>	Total population structure	Structure of the-poor	Poverty depth	Severity of poverty
Elderly-1 member	26.2	13.7	33.1	10.9	14.5	3.0	1.0
Elderly-2 members	30.9	16.9	63.6	7.4	12.2	3.4	1.2
Other households	17.6	9.3	-10.2	81.7	73.3	1.9	0.7
<b>Total</b>	19.5	10.3	-	100	100	2.2	0.7
Elderly-1 member	18.5	7.7	6.8	9.6	10.2	1.4	0.4
Elderly-2 members	25.6	10.7	47.7	5.7	8.4	2.2	0.7
Other households	14.1	7.0	-4.0	84.7	81.4	1.2	0.4
<b>Total urban</b>	15.2	7.3	-	100	100	1.3	0.4
Elderly-1 member	34.2	20.0	36.8	12.8	17.5	4.7	1.7
Elderly-2 members	35.2	21.9	49.9	9.8	14.7	4.6	1.5
Other households	22.9	12.8	-12.4	77.4	67.8	3.0	1.1
<b>Total rural</b>	25.6	14.6	-	100	100	3.4	1.2

\* The relative poverty risk is calculated compared to the average poverty index of the reference population

*Note:* elderly households are defined as households in which all members are 65 years old and over 65.

*Source:* AZS 2002

When the data are viewed by rural/urban areas, it is noticed that one and two-member elderly households have a higher share in rural areas (22.6%) than in urban areas (15.3%). The poverty risk of these households in rural areas was the highest – twice that of the population average, and 36.8% and 49.9% higher, respectively compared to the rural area average. Their poverty was considerably deeper and more acute than other households.

### **Poverty and education**

Table 16 shows the relationship between education level and poverty. It is easy to come to the conclusion that the share of the poor

declines with education level. Individuals who have not completed elementary school have the highest poverty risk. The poverty risk of these people was twice as high as the population average, and the depth and severity were considerably higher compared to other education levels.

**Table 16.**  
**Poverty according to Education in Serbia in 2002 (in %)**  
population over 15 years of age

	% MNO	% of the poor	Relative poverty risk	Total population structure	Structure of the-poor	Poverty depth	Severity of poverty
Uncompleted elementary school	36.1	21.5	102.5	17.5	35.4	5.1	1.8
Elementary school	25.4	14.3	33.9	23.3	31.2	3.1	1.0
Secondary school	15.1	6.9	-35.1	47.5	30.8	1.2	0.3
Jr. college	7.8	2.9	-72.8	5.1	1.4	0.4	0.1
University	5.6	2.0	-81.4	6.6	1.2	0.4	0.1
<b>Total</b>	20.0	10.6	-	100	100	2.2	0.8

Source: AZS 2002

On the other hand, the highly educated (junior college and University) had a below average poverty risk. Only 2.9% people with completed junior college and 2% people with a university degree were poor. This disaggregation of poverty by education indicates that education is worthwhile since the labor market awards education. A very similar picture is obtained when observing MNO according to the education level.

### **Poverty and status on the labor market**

The labor market in Serbia is characterized by relatively low rates of participation of the population in the labor market and relatively high unemployment. Table 17 presents the participation and unemployment rates according to rural/urban areas, defined in two ways: according to the ILO (International Labor Organization) standards and according to the respondent's self-declaration.

The participation rate, calculated as the ratio between the active population and the population capable of work (men 15-59 years of age, women 15-54), is 62.2% according to the ILO definition; it is somewhat higher according to self-declaration, at 65.2%. However, it is particularly important to emphasize that the unemployment rate (defined as the ratio between the number of unemployed persons and the active population), by the ILO definition is considerably lower compared to the unemployment rate according to self-declaration. The source of this difference lies in the fact that the ILO definition, to ensure international comparability, starts from the fact that unem-

ployed persons are those who did not work during the reference period, but actively looked for a job and were ready to take up a job if offered. There were 256,000 of these people, whilst a further 745,000 people defined themselves as unemployed, but a part of them actually worked.<sup>15</sup> It means that only one third of those who declared themselves unemployed are actually unemployed. Based on this, we can draw the conclusion that the unemployment rate according to the ILO's definition, in line with international comparability, was 8.4%. Disaggregated by rural/urban dwellers, a somewhat higher unemployment rate is found in urban areas than in rural areas.

**Table 17.**  
**The Participation Rate according to Rural/Urban Population in Serbia in 2002 (in %)**

	%Participation rate		%Unemployment rate	
	ILO	Self-declare	ILO	Self-declare
Urban	62.2	65.7	9.0	21.6
Rural	62.3	64.4	7.5	25.9
<b>Total</b>	62.2	65.2	8.4	23.3

*Note:* The unemployment rate is calculated for men 15-59 years of age, and women 15-54

*ILO* – The International Labor Organization

*Source:* AZS 2002

**Table 18.**  
**Gray Economy and Poverty in Serbia in 2002 (in %)**

	% MNO	%of the poor	Relative poverty risk	Total population structure	Structure of the-poor	Poverty depth	Severity of poverty
<b>Employed</b>							
Main job in regular ec.	14.7	7.3	-16.4	69.4	58.0	1.4	0.4
Main job in gray ec.	22.7	12.0	37.1	30.6	42.0	2.5	0.8
Without additional job	17.5	8.9	2.1	89.2	91.0	1.7	0.6
With addition. job (gray)	14.4	7.2	-17.3	10.8	9.0	1.5	0.5
<b>Total</b>	<b>17.2</b>	<b>8.7</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>1.7</b>	<b>0.6</b>

*Note:* the employed were defined as persons who performed any kind of job, during the reference week, for money or any other benefit in kind.

*Source:* AZS 2002

<sup>15</sup> The data on 745,000 unemployed, which were estimated from the survey, were very close to the number of the registered unemployed – there were 800,000 of them in May 2002.

**Table 19.**  
**Poverty according to Socio-economic Status in Serbia in 2002 (in %)**  
 based on self-declaration

	% MNO	%of the poor	Relative poverty risk*	Total population structure (over 15)	Structure of the-poor	Poverty depth	Severity of poverty
Employed	12.7	6.2	-42.0	30.6	17.7	1.2	0.4
Employers and self-employed	16.3	9.2	-13.3	5.1	4.4	1.6	0.5
Farmers	23.3	10.6	-0.5	5.3	5.3	2.0	0.7
Other active	23.1	13.2	24.6	1.4	1.7	2.7	0.8
Unemployed	29.2	16.9	59.4	11.9	19.0	3.6	1.2
Pensioners	22.0	10.9	2.9	24.1	24.8	2.4	0.8
Other non-active	23.7	13.3	25.2	21.7	27.1	2.9	0.9
<b>Total</b>	<b>20.2</b>	<b>10.6</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>2.2</b>	<b>0.8</b>
Employed	10.2	4.8	-38.6	36.4	22.3	0.8	0.2
Employers and self-employed	13.6	7.4	-4.9	5.7	5.4	0.7	0.2
Farmers	13.3	8.6	10.6	0.5	0.5	1.5	0.5
Other active	22.3	8.8	14.1	0.8	1.0	1.4	0.2
Unemployed	26.9	14.4	86.1	11.6	21.6	2.6	0.7
Pensioners	18.0	7.9	1.3	26.0	26.3	1.5	0.5
Other non-active	19.2	9.3	19.9	19.0	22.8	1.8	0.5
<b>Total urban</b>	<b>16.2</b>	<b>7.8</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>1.4</b>	<b>0.4</b>
Employed	17.8	9.0	-37.2	23.1	14.5	1.9	0.6
Employers and self-employed	20.9	12.4	-13.5	4.2	3.6	3.2	1.2
Farmers	23.9	10.7	-25.5	11.6	8.6	2.0	0.7
Other active	23.5	15.4	7.7	2.1	2.3	3.3	1.0
Unemployed	32.0	20.0	39.4	12.3	17.1	4.9	1.8
Pensioners	28.1	15.7	9.6	21.6	23.7	3.6	1.4
Other non-active	28.3	17.2	20.2	25.1	30.2	4.1	1.4
<b>Total rural</b>	<b>25.4</b>	<b>14.3</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>3.3</b>	<b>1.2</b>

\*the relative poverty risk is calculated compared to the poverty index of the reference population.

Note: the social-metric status categories are defined on the basis of the respondent self-declaration.

Source: AZS 2002

Another important labor market feature is the gray economy. The gray economy as the source of primary employment was accounted for by 30.6% of the employed who were defined as being in the active population (see the note accompanying table 18). They made 42% of the poor being employed, and their poverty risk was much higher than the



average for the employed (+37.1%). Such a high share of the gray economy among the poor employed clearly indicates that the gray economy continues to be a main strategy for survival of a significant part of the population. On the other hand, 10.8% of the employed had an additional job in the gray economy. They were not confronted with poverty since their poverty risk was significantly below average (-17.3%). The gray economy was found mostly in agriculture, trade, crafts, and other services.

Table 19 shows poverty according to the socio-economic status of the population based on respondents' self-declaration of their status. The poverty indicators differ a great deal according to this status and whether people were rural or urban dwellers. Within the labor market, the unemployed had the highest poverty risk (59.4% higher than the population average), and with the highest poverty depth and severity. Other labor market participants had a below average poverty risk, except for the category of other active ones. When disaggregated by rural/urban areas, the unemployed in rural areas were the most vulnerable since their poverty risk was twice as high as the population average, or 39.4% higher compared to the rural population average. By contrast, the employed in urban areas enjoyed the most favorable position – their poverty index was less than half the population's average, and 38.6% lower than the urban population average.

**Table 20.**  
**Poverty among Pensioners in Serbia in 2002 (in %)**

	% MNO	% of the poor	Relative poverty risk*	Pensioners structure	Structure of the poor-pensioners	Poverty depth	Poverty severity
Total pensioners	22.0	10.9	2.9	24.1	24.8	2.4	0.8
Pensioners-farmers	31.1	19.6	84.4	2.1	3.9	5.0	1.8
Other pensioners	21.1	10.1	-5.0	22.0	20.9	2.1	0.7
<b>Total population</b>	<b>20.2</b>	<b>10.6</b>	-	-	-	<b>2.2</b>	<b>0.7</b>
Total pensioners	18.0	7.9	1.3	26.0	26.3	1.5	0.5
Pensioners-farmers	22.5	12.5	61.0	0.6	1.0	3.5	1.1
Other pensioners	17.9	7.7	-0.1	25.4	25.3	1.5	0.5
<b>Total urban population</b>	<b>16.2</b>	<b>7.8</b>	-	-	-	<b>1.4</b>	<b>0.4</b>
Total pensioners	28.1	15.7	9.6	21.6	23.7	3.6	1.4
Pensioners-farmers	32.8	21.0	46.5	4.1	5.9	5.3	2.0
Other pensioners	27.0	14.5	1.1	17.5	17.7	3.3	1.1
<b>Total rural population</b>	<b>25.4</b>	<b>14.3</b>	-	-	-	<b>3.3</b>	<b>1.2</b>

\*the relative poverty risk is calculated compared to the poverty index of the reference population.

Source: AZS 2002

Amongst persons participating in the labor market, poverty was the most distributed among the other non-active category, which includes persons with property income and other personal income, home-makers, children, students, those incapable of work, and other persons who do not have an occupation. Pensioners were slightly more disproportionately represented in the total number of the poor compared to the average. Whilst pensioners in urban areas were below average poor, pensioners in rural areas had an above average poverty index (48.1% higher than the population average, and 9.6% higher than the rural population average).

Table 20 presents the status of poverty for pensioners. It is easy to see that pensioners-farmers were considerably more vulnerable than other pensioners, with a much higher poverty risk compared to the population average, and with much deeper and more acute poverty compared to other pensioners. They adversely affected the poverty picture among pensioners as their pensions were very low and had significant arrears. Disaggregated by rural/urban dwellers, pensioner-farmers in rural areas were the most exposed to poverty; they constituted almost 6% of the total number of poor pensioners in rural areas.

#### DETERMINANTS OF CONSUMPTION AMONG THE POOR

This section shows the results of research behind the factors affecting living standards and poverty. Their identification could be useful in implementing social policy for poverty reduction. This brief analysis points out factors, which are connected with poverty, but does not reveal cause-and-effect relationship.

Although important determinants of poverty remain unidentified (for example, personal ability/preference), the model which is used identifies important factors related to poverty. The factors that are researched include household characteristics (age structure, education, sex and age of the household head, the household size), economic characteristics (socio-economic status of the household head, labor status and whether employment of household members is in private or state sector), and location (region and rural/urban). These factors are used as explanatory variables in a simple regressive method where the consumption per consumer unit represents a dependent variable. The model identifying factors which are the most related to the consumption per consumer unit is estimated by the least squares regression model (MNL), and the results are presented in the next table.

The danger in relying only on the estimated regression, which is based on mean values, lies in the fact that data may contain extreme values (outliers). Consequently, the estimation of regression per quintiles, which is less sensitive to extremes, may be more suitable (Chamberlain, 1994). In this way, the effects of different variables can be estimated on different parts of the distribution (for example, on

10th, 25th, 50th, 75th and 90th percentile). Table 21 presents coefficients of the average regression and the median regression (estimated by the method of the smallest absolute variance – MNAO) for the purpose of comparability. The estimated coefficients for various percentiles are shown in the Annex. The Annex also shows the results of the estimated poverty index regression, poverty depth (gap) and severity of poverty. In Table 21, in addition to the estimated regression coefficients, standard errors are shown in parenthesis. By comparing the values of the coefficients in the two regressions and their statistical significance, we come to the conclusion that mostly the same factors determine the consumption per consumer unit in both regressions. Also, there are no statistically significant differences in the values of the factors (coefficients). Thus, we shall comment only on coefficients of the first regression – the average regression.

Household demographic characteristics have an important role in explaining consumption levels. The number of elderly persons in a household has a statistically significant negative effect on consumption. It means that an increase in the share of the elderly (65+) in a household, given an unchanged household size, leads consumption per consumer unit to fall compared to the reference age category (persons 46-64 years old). This effect is statistically significant not only on average, but also across all parts of the consumption distribution (table A2 in the Annex). Thus, given an increase in the number of elderly people in a household compared to the reference age group, the poverty index increases significantly, as well as the other two poverty indicators – poverty depth and severity (see tables A3-A5 in the Annex). The same effect can be seen with children 7-14 years old. An increase in their share in a household, given an unchanged household size, decreases consumption. This effect was not statistically significant with the poorest and the wealthiest, but it was so with other parts of the distribution studied. This effect was also insignificant when looking at all three poverty indicators. It means that an increase in the share of children 7-14 compared to the reference age category, given unchanged other household characteristics, does not affect the poverty index, nor the poverty depth or severity. At first glance, this result appears to be different from the conclusion that children 7-14 are, after the elderly, the next vulnerable population category. That is because regression enables identification of the effect of certain factors (for example, participation of children 7-14) on the dependent variable, given the same other household characteristics. The share of adults 19-25 and 26-45 years of age has a statistically significant positive effect on consumption. The total number of household members significantly affects consumption. An increase in the number of household members decreases consumption per consumer unit by 20% on average, given other conditions unchanged. This effect is larger among the richest than among the poorest. An increase in household size significantly increases the poverty index and the poverty depth and severity.

**Table 21.**  
**Determinates of Poverty in Serbia in 2002**  
 Dependent variable: ln(consumption per consumer unit)

Characteristics of the household head or household	MNK			MNAO		
	Estimates	s.e.		Estimates	s.e.	
Share of children 0-6 in household	0.541	(0.074)	**	0.507	(0.079)	**
Share of children 7-14 in household	-0.149	(0.059)	*	-0.156	(0.060)	**
Share of children 15-18 in household	0.039	(0.068)		-0.004	(0.069)	
Share of adults 19-25 in household	0.243	(0.053)	**	0.244	(0.052)	**
Share of adults 26-45 in household	0.180	(0.035)	**	0.157	(0.035)	**
Share of elderly 65+ in household	-0.149	(0.026)	**	-0.175	(0.025)	**
Ln (no. of household members)	-0.220	(0.020)	**	-0.193	(0.019)	**
Age of household head	-0.003	(0.001)	**	-0.003	(0.001)	**
Woman head of household	0.011	(0.018)		0.001	(0.018)	
Incomplete elementary education	-0.267	(0.022)	**	-0.262	(0.021)	**
Elementary education	-0.213	(0.017)	**	-0.184	(0.018)	**
Jr. college education	0.124	(0.025)	**	0.128	(0.027)	**
University education	0.287	(0.024)	**	0.299	(0.026)	**
Employer or self-employed	0.096	(0.040)	*	0.134	(0.040)	**
Farmer	0.028	(0.051)		0.061	(0.047)	
Other active	0.038	(0.117)		0.082	(0.092)	
Unemployed	-0.060	(0.031)		-0.041	(0.034)	
Retired	-0.018	(0.021)		-0.012	(0.021)	
Other non-active	-0.145	(0.038)	**	-0.139	(0.033)	**
% employers or self-employed in household	-0.026	(0.044)		-0.100	(0.043)	*
% farmers in household	0.011	(0.055)		-0.049	(0.052)	
% other active in household	-0.074	(0.081)		-0.143	(0.069)	*
% unemployed in household	-0.264	(0.027)	**	-0.279	(0.028)	**
% employed in a private registered firm	0.168	(0.019)	**	0.165	(0.019)	**
% employed in a private unreg. firm	0.034	(0.024)		0.058	(0.022)	**
% employed in other sectors	0.019	(0.051)		-0.072	(0.050)	
Belgrade – rural	-0.136	(0.040)	**	-0.170	(0.040)	**
Vojvodina – urban	0.037	(0.021)		0.011	(0.023)	
Vojvodina – rural	0.005	(0.025)		0.008	(0.025)	
W. Serbia – urban	0.009	(0.032)		0.022	(0.034)	
W. Serbia – rural	-0.030	(0.030)		-0.001	(0.030)	
Central Serbia – urban	0.021	(0.025)		0.020	(0.026)	
Central Serbia – rural	0.040	(0.028)		0.042	(0.028)	
E. Serbia – urban	-0.001	(0.032)		-0.032	(0.033)	
E. Serbia – rural	0.093	(0.038)	*	0.102	(0.031)	**
S.E. Serbia – urban	-0.094	(0.026)	**	-0.111	(0.028)	**
S.E. Serbia – rural	-0.154	(0.029)	**	-0.197	(0.029)	**
Constant	9.471	(0.056)	**	9.464	(0.054)	**
F(37,6348)	50.80	[0.000]		MSD	2338.1	
Adj R squared	0.2481			RSD	2712.2	
Root MSE	0.4745			PseudoR <sup>2</sup>	0.1379	

Note: \* indicates 5% of significance, \*\* indicates 1% of significance

Education is a significant determining factor of consumption and poverty. The household head with low education levels has a lower level of consumption and a higher poverty risk compared to persons whose head of household has a secondary level education (reference variable), given unchanged other conditions. By contrast, highly educated household heads (jr. college and university) have higher consumption, a lower poverty index score, and lower poverty depth and severity compared to the reference category. On average, households with University educated heads recorded consumption which was one third higher than in households whose heads only completed secondary school. This effect is relatively high compared to other transition countries. Observed across different parts of the consumption distribution, it is higher among the poorest than the wealthiest. Based on these results, it can be concluded that investing in human capital, i.e. in education, is one of the ways out of poverty since the labor market awards high education.

The share of the unemployed in a household significantly decreases consumption and increases the poverty risk compared to the share of the employed (the reference variable). An increase in the share of the unemployed in a household, given unchanged household size, decreases the consumption level by 23% on average compared to the reference variable. This effect is most significant across the median of the consumption distribution, and smallest at very ends of distribution. If we observe whether employment of household members is in the state or private sector, we note the following: an increase in the share of the employed in a household working in a private registered firm lead to an increase in consumption compared to those employed by socially/state owned enterprises (by 18% in average). Consequently, the poverty index score declines. This effect increases if one moves from the poorest towards the wealthiest part of population. It means that employment with private sector pays off and that it represents one of the ways to increase income and household consumption, and also a way out of poverty.

Finally, household location has an important role when seeking an explanation for consumption. Households in rural areas of Southeastern Serbia have the biggest negative effect on consumption. These households had 14% lower consumption levels on average compared to households in urban areas of Belgrade (the reference variable), and this effect is more prominent with the wealthiest than with the poorest. These households had a higher poverty risk compared to the reference variable. Similar but somewhat smaller effect on consumption is noted with households from urban areas of Southeastern Serbia. Other locations do not have a significant effect on consumption, except for households in rural areas of Belgrade, which have a negative effect on consumption compared to the city of Belgrade.

## CONCLUSION

In 2002, 10.6% population of Serbia was poor as their consumption per consumer unit was on average less than 4,489 dinars, or US\$72 per month, equating to \$2.4 per day. The concentration of the population around the poverty line is significant since a small upward shift in the poverty line significantly increases the percentage of the poor. As a result, in addition to the poor, individuals directly above the poverty line has also been analyzed since a small drop in actual earnings and other resources, or an increase in unemployment in upcoming period may significantly increase the share of the poor. Thus, 20% of the population whose average consumption was under 5,507 dinars, or US\$89, per month was “close to poverty” or materially insufficiently supported (MNO). The picture of poverty in Serbia is certainly somewhat worse than this, since the quoted data do not fully include refugees and IDPs, who are undoubtedly more vulnerable than the permanent population of Serbia.

Poverty in Serbia has been considerably reduced in recent years; 14.5% of the population was poor in 2002 compared to just over one-third of population in 2000. The key factor affecting the reduction of poverty was the growth in real GDP, and an increase in earnings and other income of the population in this period. Yet, even though the poverty index fell, the poor needed much more income in order to reach the poverty line. In comparison with 2000, poverty in 2002 became more of a rural phenomenon, as is the case in most of transition countries.

The population categories that were most exposed to the risk of poverty include: 1) poorly educated individuals; 2) the unemployed and poorly supported; 3) those who have their main employment in the gray economy; 4) the elderly (65+) and children 7-14 years of age; 5) households with five or more members; 6) one and two-member elderly households, in rural areas in particular; 7) pensioner-farmers, in rural areas in particular; 8) rural areas of Southeastern and Western Serbia.

The main determinants of the consumption effecting reduction of the consumption level and increase of poverty are: increase in the share of the elderly in a household, increase in the share of the unemployed in a household, given unchanged household size, and increase in the household size. Also, these factors were identified as to increase the poverty index and the poverty depth and severity. Opposite to that, an increase of the share of the employed with private registered firms, as well as an increase of the education level of the household head increases consumption, decreases the poverty index, depth, and severity.

## II Incidence of Social Transfers; Inequality

### INCIDENCE OF SOCIAL TRANSFERS

In this section, we shall analyze the distribution of four social transfers. They are (1) family income support (MOP from its Serbian abbreviation), the key social assistance transfer; (2) humanitarian assistance; (3) municipal aid; and (4) child allowance. We shall focus on the following questions: (a) who receives them (are transfers pro-poor?); (b) how much of total spending “leaks” to the non-poor; (c) how important are the transfers to the recipients’ households; and (d) how much of the poverty gap they fill.

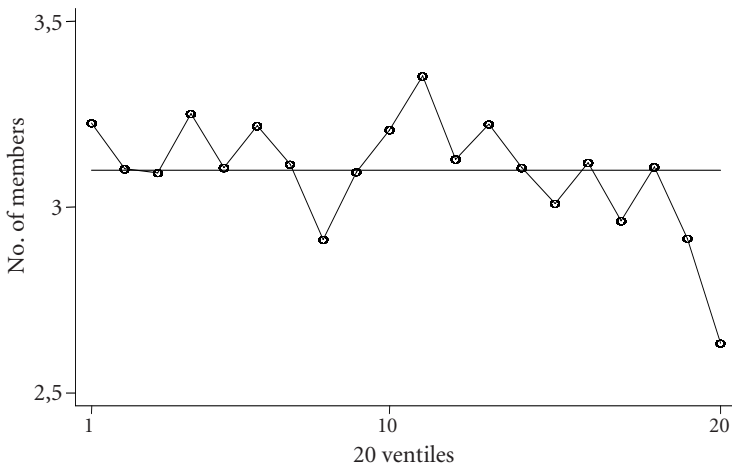
*The poor.* As we have seen before, 10.58 percent of individuals are deemed poor, i.e. their consumption per equivalent adult is below the poverty line. Similarly, 10.31 percent of all households are poor. That these two percentages are similar is rather unusual since generally poor households are larger in size, and even after one accounts for economies of scale, there are normally fewer poor households than people. However, in the Serbian case, household size is, as illustrated in Figure 1, remarkably stable regardless of income level. Thus, the percentages of poor households and individuals are very similar.

Income-poverty is more widespread: 18.7 percent of households are income poor. Only 5.6 percent of households are both expenditure- and income-poor. These are presumably the most vulnerable households, or, in other words there is little doubt that they are indeed poor. In accordance with the rest of the study, we shall treat the consumption-poor, that is, the 10.58 percent of households described above, as “the poor” – i.e. as the households who, in principle, should be recipients of social assistance. Our decision to use consumption rather than income is motivated by the fact (discussed in Chapter II) that expenditures, particularly during the transition, are a far more reliable indicator of one’s real economic status than income. Those who are poor according to both income and consumption criteria are termed “very poor.”

*How important are transfers and who are the recipients?* Consider first the data in Table 1 that show the size of transfers and the percentage of households in receipt of MOP, humanitarian assistance, municipal aid, and child benefits: (i) in the total population, (ii) among the poor, and (iii) among the very poor.



**Figure 1.**  
Average Household Size by Income Ventile



Note: Ventiles (5% of individuals) defined by the level of consumption per equivalent adult.

The expenditures of the four transfers are equal to 0.9 percent of total household consumption. By far the largest of the four are child benefits (0.58 percent of total household consumption). MOP and humanitarian assistance are about equal in total size (0.12-0.14 percent), and municipal assistance is much smaller (0.03 percent).

The table shows that more than 18 percent of all households receive at least one of these transfers and that child benefit is by far the most important of the four. The table also shows that the percentage of recipients steadily increases in all cases as we move toward the poorer segments of the population. Thus for example, only 1 out of 100 households receives MOP, but that percentage rises to 4.7 among the poor and to 5.6 percent among the very poor. The situation is the same with all other transfers with the small exception of municipal aid, which is of about equal importance to both the poor and the very poor. Of course, that also implies that among the very poor a greater percentage of households receive at least one transfer. Almost one-third of households receive at least one of the transfers vs. only 13.8 percent in the entire population. If we exclude child benefits whose function is not social assistance alone and consider the three other transfers, we note that almost 13 percent of the poor and 16 percent of the very poor receive at least one type of anti-poverty benefit. This is the same percentage as in Russia, but significantly less than in Hungary where almost 25% of poor households receive social assistance. Of course, another implication of these findings is that the transfers seem to be generally geared (targeted) towards the poor. However, a more detailed analysis of the distribution of the transfers is needed.



**Table 1.**  
**Size of Transfers and Percentage of Households Who Are Receiving a Given Transfer**

	Amount as % of total household consumption	In total population	Among the poor	Among the very poor
MOP	0.12	1.1	4.7	5.6
Humanitarian assistance	0.14	3.4	8.8	11.3
Municipal aid	0.03	0.5	1.3	1.0
Child benefit	0.58	10.1	14.4	18.9
At least one transfer		13.8	25.0	31.6
Excluding child benefit		4.6	12.8	15.7

*Note:* Amount is total spending on transfers as reported in the Survey.

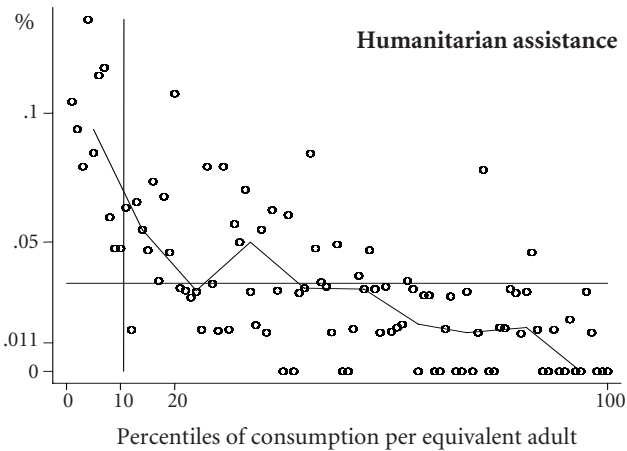
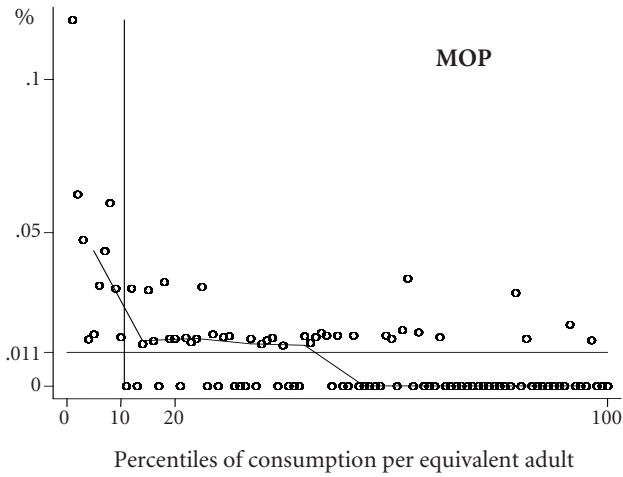
Figure 2 illustrates where along the income distribution spectrum are the households recipients of the four types of social transfers. On the horizontal axis are households ranked according to their consumption per equivalent adult and divided into percentiles from the poorest to the richest. On the vertical axis, we show the percentage of households (within each percentile) who are receiving a given transfer. For example, about 12 percent of households belonging to the poorest percentile receive MOP. This value is represented by a dot. The percentile dots are connected by a solid line to show broader trends. For each transfer, the overall average percentage of households who are in receipt of the transfer is shown by a horizontal line. A vertical line at  $x=10.6$  divides households into poor and non-poor.

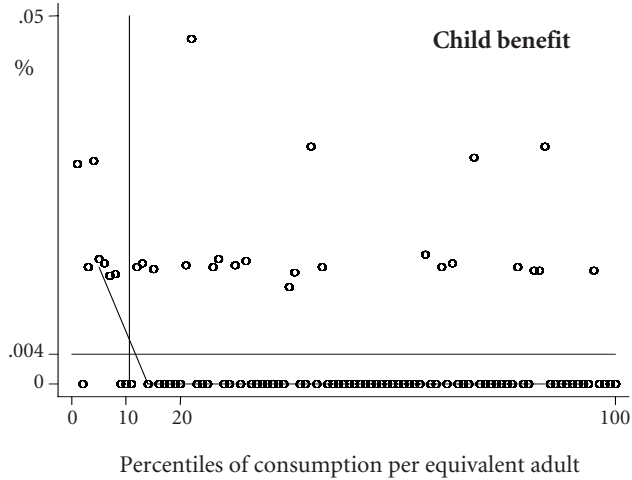
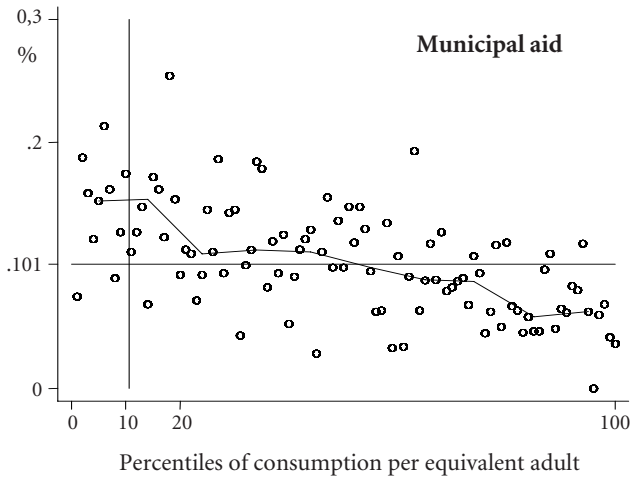
Notice that in all four cases, the trend lines, that is the share of recipients (or differently put, the simple probability of receipt of social assistance) are downward sloping indicating that the percentage of recipients declines with the level of welfare. Consider now each individual transfer. For MOP we see that, among the poor, the number of recipients is always above average. The incidence remains around the average (1 household in a hundred) all the way to the fifth decile, and then becomes negligible. Broadly, the same trend – but with a higher average incidence – is displayed by humanitarian assistance. Municipal assistance is significant among a few poor percentiles, and then becomes negligible. (As we have seen, very few households are recipients of municipal aid overall.) For child benefits, the trend line is also downward sloping, but the decline is much less steep than for the other transfers. In other words, child benefit remains an important transfer for many households all the way up to the top decile. The sharpness of the trend line already conveys a message about pro-poor targeting of the transfer. We can easily see that MOP and humanitarian assistance both seem more sharply downward sloping than child benefits – and

thus more concentrated on the poor. This is of course an expected finding since, despite income-testing of child benefits, they cover a broader section of the population than either of the two (or even three) other transfers.

All households who are to the right of the  $x=10.6$  line, i.e. all those who are non-poor, should not in principle receive poverty-related social transfers, that is all transfers considered here with the exception of child

**Figure 2.**  
**Percentage of Households Recipients of Social Transfers**  
**by Level of Welfare (Consumption by Equivalent Adult)**





*Note:* Mean calculated across households.

benefits. In an extreme case, where targeting is 100%, all transfers would go to households on the left of (i.e. below) the poverty line, and none to those above the poverty line. Everything to the right of the poverty line is therefore “leakage.” In terms of the number of beneficiaries, Table 2 shows that 43 percent of MOP benefits are received by the poor, and that 52 percent of total MOP expenditures go to the poor.<sup>1</sup> Consequently, MOP’s “leakage” is about half of the total amount. The

<sup>1</sup> From these two figures, we can readily conclude that MOP payments are, on average, greater for the poor than for non-poor.

MOP leakage is significantly less than that of other transfers (see Table 2). Put differently, 2 dinars of MOP have to be spent, on average, in order to transfer 1 dinar to the poor. This ratio is called the “spending ratio” and is important when discussing the issue of elimination or reduction of the poverty gap. It shows that the actual spending needed to close the poverty gap is several times higher than the amount of the poverty gap itself. Serbian experience is very similar to that of other East European countries: if one focuses attention on benefits that are basically social assistance (MOP, humanitarian assistance, and municipal aid), we find that it is necessary to spend 2.7 dinars for each dinar that reaches the poor. As Table 3 shows this is very much in keeping with results from several East European countries, where the poor too are defined as the poorest decile of the population.<sup>2</sup>

**Table 2.**  
**Efficiency of Transfers: How much Do the Poor Receive?**

(1)	(2)	(3)	(4)
	Percentage of benefits being paid to the poor	Efficiency: Percentage of money disbursed to the poor	Spending ratio (100/column 2)
MOP	43	52	1.9
Municipal aid	26	19	5.3
Child benefit	15	17	5.9
All four benefits	19	24	4.1
(Excluding child benefits)	29	37	2.7

*Note:* The spending ratio gives the amount of dinars that need to be spent on each transfer in order to disburse 1 dinar to the poor. It is equal to 100/efficiency.

**Table 3.**  
**Spending Ratios in Serbia and Several Other Countries**

Country	Spending ratio	Year of survey
Serbia	2.7	2002
Estonia	2.9	1995
Hungary	3.7	1993
Bulgaria	4.8	1995
Poland	4.8	1993-94

*Source:* Milanovic (1999).

2 For clearly, the larger the share of the poor, the greater the efficiency of transfers and the smaller the spending ratio. (If the entire population is poor, every dinar spent by definition closes poverty gap.) Thus, equality of the headcount is needed for a meaningful comparison.

*Where does the money go?* We now move to a more detailed analysis of each transfer. Tables 4-7 show how important each transfer is in the total, how important it is for the poor, how much they receive on average, and how much of the poverty gap and consumption each transfer covers. The tables present, as it were, a photograph or an ID card of each transfer. We shall focus on four indicators that we believe describe the role of each transfer: (1) the importance of the transfer in financing the consumption of its recipients, (2) importance of the transfer in financing the consumption of its *poor* recipients, (3) how much of the poverty gap the transfers cover, and (4) the absolute amount of the average transfer.

Figure 3 compares the four transfers across the two first indicators. We see that MOP stands out by being both more important for those who receive it, and for poor recipients than other three transfers. To see the difference, let us compare MOP and child benefits. For example, MOP pays for almost 20 percent of the consumption of its recipients, while child benefits pay for less than 5 percent of the consumption of its recipients. But this is because child benefits are disbursed to many households, not all of which are poor, and understandably will not play a major role in such households' total income (or consumption). What is less expected is the difference between MOP and humanitarian assistance. The overall spending of the latter is some 20 percent higher than MOP's (see Table 1). But humanitarian assistance transfers are much smaller in absolute amounts (1038 dinars, on average, vs. 2761 dinars) and thus they tend to cover a smaller percentage of its recipients' consumption.

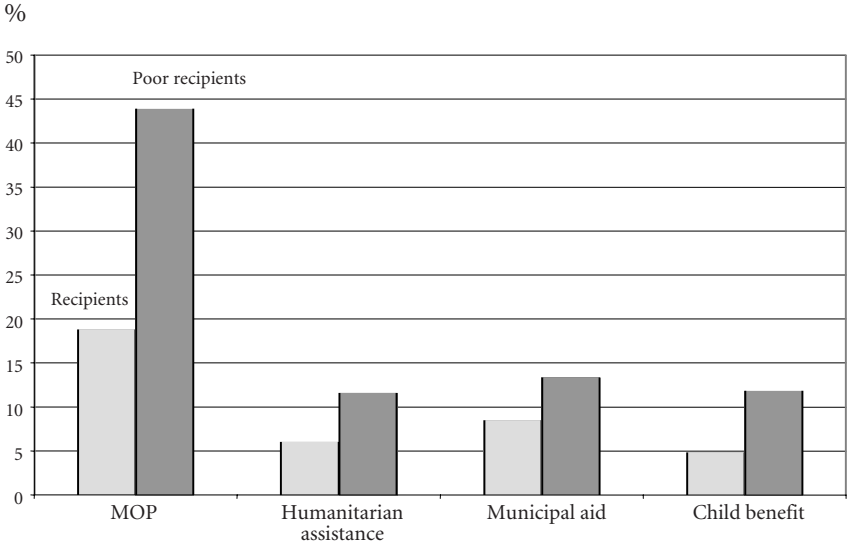
The next Figure illustrates the importance of each transfer in reducing the poverty gap. This is called effectiveness. Here child benefits are the most effective simply because they are the largest. They eliminate almost 8 percent of the poverty gap. Yet MOP is not far behind (eliminating 5.2 percent of the poverty gap) even if total spending on MOP is less than one-quarter of spending on child benefits. Overall, the four transfers eliminate about one-sixth of the poverty gap.<sup>3</sup>

Finally, Figure 5 illustrates the average amount of each transfer (per household). Not surprisingly, child benefits are by far the most important, amounting to 6500 dinars on average per recipient household. But MOP, which is – as we have seen –fairly concentrated, comes second with an average disbursement per (recipient) household of 2700 dinars monthly.

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3 Since total spending on the four transfers equals 1 percent of GDP (BM: check), the implication of this finding is that—with unchanged efficiency—it would be necessary to spend 6 percent of GDP to bring all the poor up to the level of the poverty line.

**Figure 3.**  
**Percentage of Consumption of Recipient Household Financed by Each Transfer**



**Figure 4.**  
**Percentage of the Poverty Gap Eliminated by Each Transfer (Effectiveness) per Recipient Household (in DIN pm)**

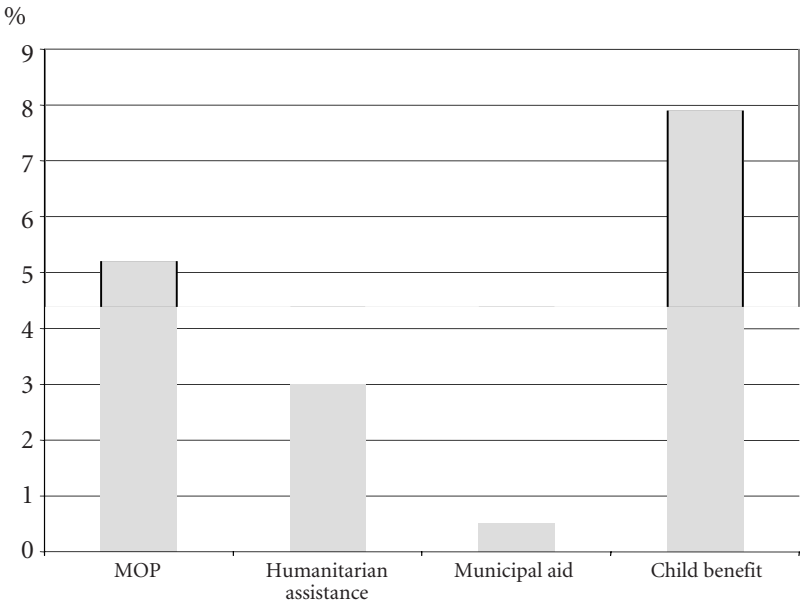


Figure 5. Average Amount of Each Transfer

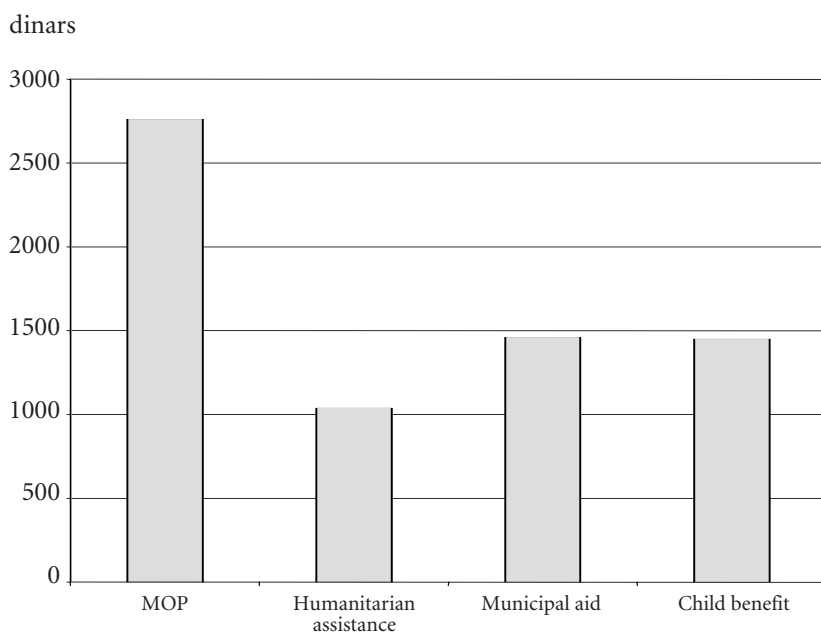


Table 4.  
MOP: Reduction of the Poverty Gap and “Leakage”

	Total	Poor	Non poor
<b>MOP (amount in DIN pm)</b>	197,246 (100)	105,281 (52)	94,387 (48)
<b>In DIN million p.m.</b>			
Consumption	160.4 (100)	6.3 (3.9)	153.2 (96.1)
Consumption of those with MOP>0	1.05	0.24	0.81
Poverty gap	2.03	2.03	–
<b>MOP as percentage of</b>			
consumption	0.12	1.67	0.06
consumption of those with MOP>0	18.8	43.9	11.7
poverty gap	9.7	5.2	–
<b>MOP per recipient household (DIN pm)</b>	2761	3309	2341
<b>Consumption per capita of those with MOP (DIN p.m.)a/</b>	5064	2698	6877
<b>Memo: Consumption per capita (overall average DIN p.m.)a/</b>	8788	3110	9441

**Table 5.**  
**Humanitarian Assistance: Reduction of the Poverty Gap and "Leakage"**

	<b>Total</b>	<b>Poor</b>	<b>Non poor</b>
<b>Humanitarian assistance</b>	225,835 (100)	60,416 (26)	166,467 (74)
<b>In DIN p.m.</b>			
Consumption	160.4 (100)	6.3 (3.9)	153.2 (96.1)
Consumption of those with HA>0	3.78	0.52	3.26
Poverty gap	2.03	2.03	
<b>HA as percentage of</b>			
consumption	0.14	0.96	0.11
consumption of those with HA>0	6.0	11.6	5.1
poverty gap	11.1	3.0	
<b>HA per recipient household (DIN pm)</b>	1,038	1,010	1,049
<b>Consumption per capita of those with HA (DIN p.m.)<sup>a/</sup></b>	6,076	2,993	7,204
<b>Memo: Consumption per capita (overall average DIN p.m.)<sup>a/</sup></b>	8,788	3,110	9,441

**Table 6.**  
**Municipal Aid: Reduction of the Poverty Gap and "Leakage"**

	<b>Total</b>	<b>Poor</b>	<b>Non poor</b>
<b>Municipal aid</b>	48,401 (100)	9,342 (19)	39,180 (81)
<b>In DIN p.m.</b>			
Consumption	160.4 (100)	6.3 (3.9)	153.2 (96.1)
Consumption of those with MA>0	0.57	0.07	0.50
Poverty gap	2.03	2.03	
<b>MA as percentage</b>			
of consumption	0.03	0.15	0.03
consumption of those with MA>0	8.51	3.3	7.8
poverty gap	2.4	0.5	
<b>MA per recipient household (DIN pm)</b>	1,461	1,062	1,601
<b>Consumption per capita of those with MA (DIN p.m.)<sup>a/</sup></b>	6,811	2,775	8,221
<b>Memo: Consumption per capita (overall average DIN p.m.)<sup>a/</sup></b>	8,788	3,110	9,441



**Table 7.**  
**Child Benefit: Reduction of the Poverty Gap and “Leakage”**

	<b>Total</b>	<b>Poor</b>	<b>Non poor</b>
<b>Child benefit</b>	930,772 (100)	159,895 (17)	772,638 (83)
<b>In DIN p.m.</b>			
Consumption	160.4 (100)	6.3 (3.9)	153.2 (96.1)
Consumption of those with CB>0	19.25	1.35	17.90
Poverty gap	2.03	2.03	
<b>CB as percentage of</b>			
consumption	0.58	2.54	0.50
consumption of those with CB>0	4.8	11.8	4.3
poverty gap	45.9	7.9	
<b>CB per recipient household (DIN pm)</b>	1,450	1,638	1,417
<b>Consumption per capita of those with CB (DIN p.m.)<sup>a/</sup></b>	6,520	2,813	7,165
<b>Memo: Consumption per capita (overall average DIN p.m.)<sup>a/</sup></b>	8,788	3,110	9,441

Notes: p.m. = per month. HH=household.

a/ Mean across households.

Poverty gap calculated for the situation prior to the payment of the four transfers considered here.

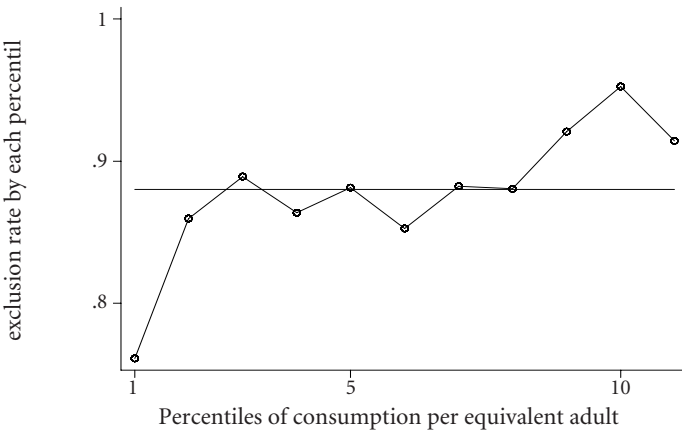
*The poor who do not receive any transfers.* We have seen above (Table 1) that 25 percent of the poor receive at least one of the four transfers. If we leave out child benefits, the proportion falls to 12.8 percent. Consequently, 87.2 percent of the poor are excluded from any type of social assistance (child benefits are not social assistance). This is called “error of exclusion” (since ideally all these households should be receiving some assistance) and is the converse of “leakage” which we discussed before. There are two questions that we can ask with respect to the error of exclusion: first, does it decline with income or not—or in other words, are the poorest among the poor more likely to receive assistance or not; second, what explains the fact that a household is excluded. We shall consider these two questions separately for (i) the three types of social assistance transfers combined, and then (ii) for child benefits.

Figure 6 shows that the percentage of the excluded poor declines as one moves toward the less poor, a fact which indicates improvements in targeting together with increasing depths of poverty. It is worth noting that the exclusion among the very poorest percentile of people is 76 percent, much less than the 95 percent exclusion among those just below the poverty line. However, improved targeting as people become poorer should not allow us to forget the fact that 87 percent of the poor receive no social assistance of any kind at all (see the line drawn at  $y=0.87$  in Figure 6).

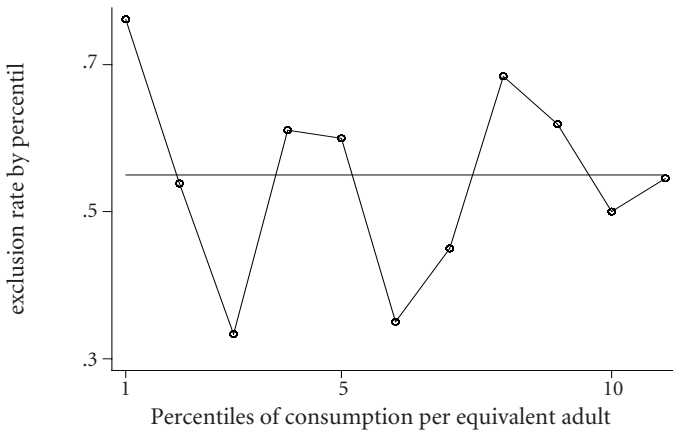
**Table 8.**  
**Percentage of Households Receiving Child Benefits**

	In total population	Among the poor	Among all who have children	Among the poor who have children
1 month question	10.1	14.4	27.2	45.4
12 months question	10.9	14.4	29.2	45.4

**Figure 6.**  
**Failure to Deliver Social Assistance (Share of the Poor Who Do Not Receive Social Assistance)**



**Figure 7.**  
**Failure to Deliver Child Benefits (Share of the Poor Who Do Not Receive Child Benefits)**



*Note:* Social assistance defined as MOP, humanitarian assistance and municipal aid. Average exclusion error shown as the horizontal line.

Error of exclusion for child benefits does not occur when poor households as such do not receive child benefits, but when poor households *with children* fail to receive child benefit. The average of this error of exclusion is 55 percent. In other words, more than one-half of poor households with children do not receive a child benefit. As Figure 7 illustrates, this percentage does not show any obvious pattern among the poor although the fact that among the very poorest the error of exclusion is the highest (more than 75 percent) should be a matter of concern. However, we need to point out again that child benefits (as discussed before) have not been satisfactorily covered in the Survey, in other words there is an almost certain downward bias in reporting of child benefits. The question, of course, is whether this bias is constant across all households (irrespective of their income level) or is decreasing (or increasing) with income.

Households have also been asked if they have received child benefits during the previous 12 months (rather than during the last month which was the question asked for all the transfers discussed so far). The results, despite what one might expect, are practically identical (Table 8). Both questions give the percentage of all households with children who are receiving benefits to be 27-29 percent, and the percentage of poor households with children who are receiving benefits as 45 percent. Thus, exclusion is 55 percent in either case. So, if there is a systematic lack of reporting of child benefits, this is not due to the duration of the reference period but simply to the fact that some households fail to report receiving benefits whatever the period they are asked to remember.

*Why are some poor excluded?* After addressing the issue of how many poor are excluded from getting the benefits that ideally (or legally) they should receive, the next question is to try to find out the reasons why they are excluded. Obviously, many of these reasons may be idiosyncratic or unobservable, e.g. the lack of information about the transfers, long physical distance from the relevant administrative office, complicated procedure, etc.

First, note (Table 9) that 92 percent of the poor and 95 percent of the excluded poor have *not* applied for MOP. Thus, the error of MOP exclusion appears to be almost entirely explained by households' lack of application for the benefit. Only 5 percent of those who are excluded have applied for MOP and have been rejected by the social assistance offices.<sup>4</sup> Thus only 5% of the error of exclusion may be ascribed to social assistance offices' making a wrong decision (not to allocate MOP). Note also that applying is crucial to receiving MOP and to avoiding error exclusion, as reflected in the fact that 37 percent of the poor who receive MOP have applied for it.<sup>5</sup>

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4 The reason for rejection (among these 5 percent of excluded) were: lack of fulfillment of financial or other criteria (37 percent), negative assessment by a social worker (31 percent), and other reasons (32 percent).

5 The difference between 37.3 and 4.6 percent in column 2 of Table 9 is statistically significant at less than 1 percent

**Table 9.**  
**MOP: The Excluded and Non-Excluded Poor**

Error of exclusion	During the previous 12 months have you applied for MOP		Total
	Yes	No	
No	37.3	62.7	100
Yes	4.6	95.4	100

*Note:* Yes = error of exclusion = poor who do not receive transfers.  
 No = the poor who receive transfers.

Applying is therefore crucial to receiving social assistance transfers. But why did 95 percent of the excluded poor fail to apply for MOP? Table 10 shows some of the reasons given by the poor, and by the excluded poor. Among both all poor and the excluded poor, one in five believe that they do not need MOP (and presumably the other two types of social assistance too<sup>6</sup>). So these people can hardly be treated as excluded since they themselves do not believe that they need assistance. Similarly, one-fifth believe that they do not meet the criteria. The largest group—almost 40 percent of both the poor and the excluded poor—are not informed about the existence of the program. It therefore appears that lack of information about the existence of MOP is the most important reason for exclusion. An implication of this finding is, of course, that better and more widespread information is critical in order to increase the take-up rates among the poor. Finally, relatively few households adduce complicated procedure as the reason for not applying for the benefits.

**Table 10.**  
**Why Poor Do Not Apply for MOP?**

The reason for not applying for MOP	All poor	The poor excluded from three types of SA
I didn't need it	18.3	19.8
I wasn't informed such a program existed	37.8	36.9
I don't know how to apply	18.5	18.0
Administrative procedure is too complicated	5.5	5.3
I know I don't meet the criteria	18.6	19.8
I have applied earlier and was refused	1.3	0.2
Total	100	100

6 In the survey, the question was asked for MOP only.

Is failure to apply the main cause of exclusion in the case of child benefits too? We turn to this question next. Indeed, as Table 11 shows, in 83 percent of cases exclusion (poor households with children who do not receive child benefits) is due to the failure to apply. In only 17 percent of cases, the “true” error of exclusion seems to have occurred as poor households have applied for benefits and have presumably been rejected. This conclusion is also supported by the fact that the main reason for *avoiding* the error of exclusion lies in households applying for the benefit (91 percent). Thus, for child benefits, no less than for the MOP, applying is key for receiving them.

**Table 11.**  
**Child Benefits: The Excluded and Non-Excluded Poor**

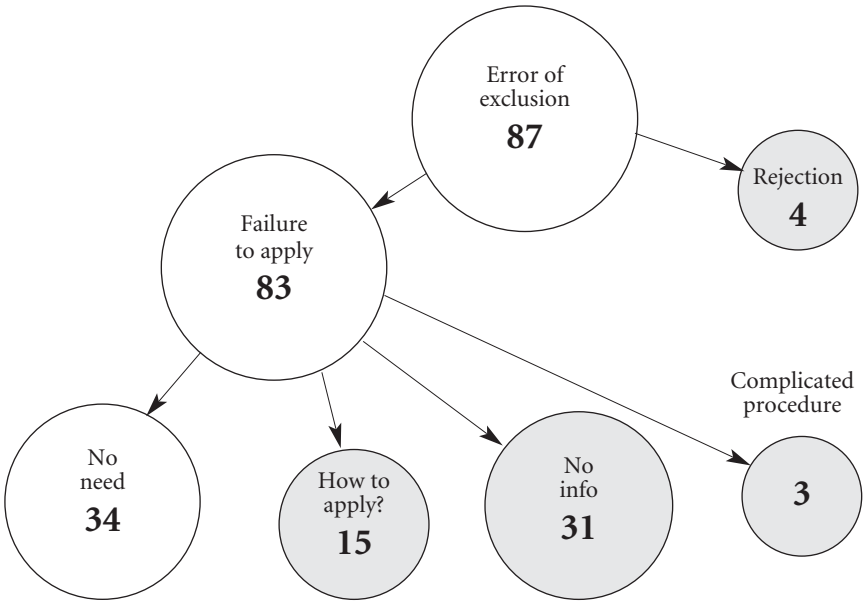
Error of exclusion	During the previous 12 months have you applied for child benefits		Total
	Yes	No	
No	90.6	9.4	100
Yes	17.1	82.9	100

*Note:* Yes = error of exclusion = poor with children who do not receive child benefits.  
No = the poor with children who receive child benefits.

Figure 8 shows how we can break the error of exclusion down into its various components. Our starting point is that 87 households out of each 100 poor households do not receive any social assistance. But, as we have seen, 95 percent of them (83 households) fail to apply for MOP. Furthermore, among these 83 poor households, 40 percent (34 households) believe that they either do not meet the criteria or think that they do not need social assistance. These people are therefore unlikely to apply even if information was more accessible and widespread. They therefore should not, strictly speaking, be treated as excluded. Only those in gray circles in Figure 8, i.e. 53 out of 100 poor households, can be truly considered as excluded. An overwhelming majority of them are excluded because of lack of information and insufficient knowledge on how to apply.

*Conclusion.* At first sight, the error of exclusion for both social assistance and child benefits seems large. It amounts to 87 percent for the former, and 55 percent for the latter. But for social assistance, more than 9/10 of the error of exclusion is due to poor households not applying. And among those who do not apply, almost one-half do not do so because they are not informed about the program (MOP). For child benefits, similarly more than 80 percent of the error of exclusion is explained by the lack of application for the benefits. We do not know why households fail to apply for child benefits (this question was not included in the Survey) but, by analogy with the MOP-related question, one cannot rule out that lack of information may be the main reason here too.

**Figure 8.**  
**Breaking Down the Error of Exclusion for MOP**  
 (total excluded poor = 87 out each 100 poor people)



## INEQUALITY

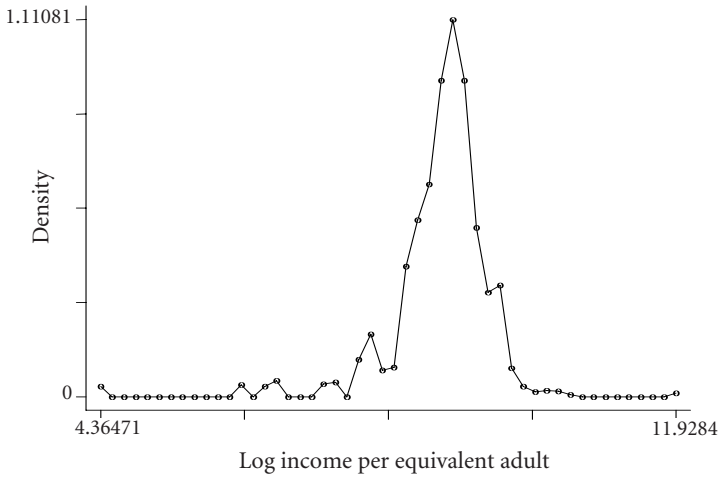
*Overall inequality of consumption and income.* The distribution of consumption per equivalent adult (CEA) follows a lognormal distribution almost perfectly, as illustrated in Figure 9. This is not the case with income which is, in its log form, skewed to the left, implying the existence of a very poor (left) tail of the distribution.

Figure 10 shows the consumption-income ratio by ventiles when individuals are ranked by their household equivalent consumption or income. First, note that, calculated across individuals (each individual counts the same), consumption is 2.3 times greater than income. This is not in contradiction with the fact that consumption (in the aggregate) is only 17 percent greater than income. This is because the consumption-income ratio is low (below 1) among the richest households. Thus as Figure 10 shows, the top 10 percent of people according to their income are the only people who make some saving. Also, these very poor according to consumption have consumption-income ratios close to 1, indicating that they have no “room” to increase their consumption; that is, their consumption is low because their income is low. This is not the case with those with low income

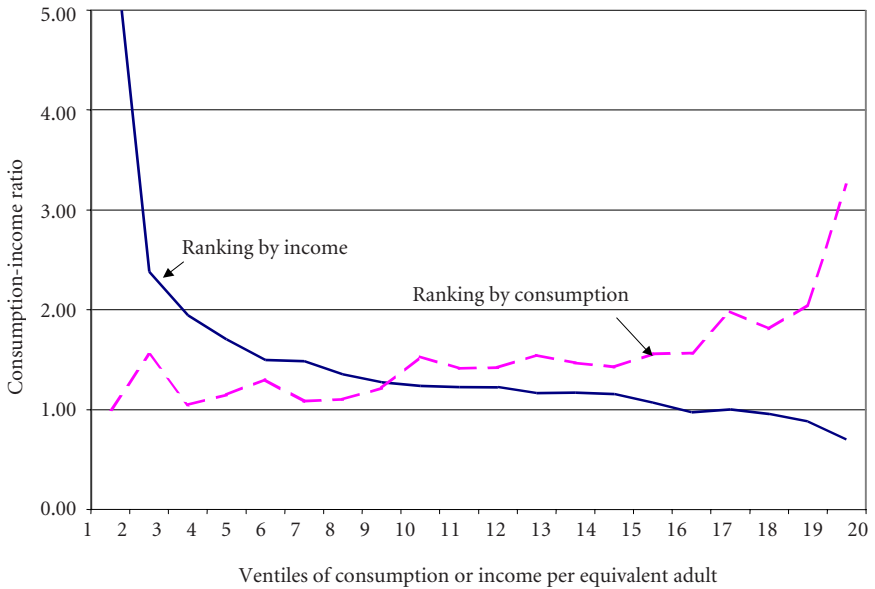
**Figure 9.**  
**Distribution of Consumption and Income per Equivalent Adult (CEA and YEA)**



*Note:* the variable is log of consumption or income per equivalent unit (both are population-weighted).



**Figure 10.**  
**Consumption-Income Ratio**



whose consumption is several-fold higher than income.<sup>7</sup> This is, by the way, one of the reasons why consumption is a better indicator of one's welfare than income. As we would expect, the consumption-income ratio monotonically decreases as income goes up. It also increases although not nearly as monotonically as consumption per equivalent adult goes up. Thus for the top 5% of the population according to their consumption, consumption is more than 3 times as high as their (reported) income.

The correlation coefficient between consumption and income per equivalent adult is 0.48, the marginal propensity to consume of one additional dinar is only 0.45,<sup>8</sup> and as we have seen before, consumption is about 17 percent greater than income. Table 1 shows the Gini coefficients for the four different definitions of welfare: income and consumption, per capita and per equivalent unit. The differences are minimal. Normally, the use of equivalent units rather than per capita measurement reduces inequality because it increases income (or consumption) of large families (since children count less than adults). As large families seem relatively poor when one uses a per capita measurement,

7 These could be households whose income is temporarily very low, in some cases close to zero (the income-poorest 1% persons have equivalent income of less than 900 dinars per month). For comparison, CEA for the poorest consumption percentile is about 2500 dinars.

8 Calculated from a simple regression of CEA on YEA and a constant.



the use of equivalence scales tends to reduce inequality. However, in our case where—as we have seen—household size is about the same at all income levels, the use of equivalence scales reduces inequality only marginally. On the other hand, the use of income rather than consumption increases inequality by about 3 Gini points: from about 30 to almost 33. This, of course, was already visible from the more skewed distribution in Figure 9. According to our preferred measure – consumption per equivalent adult – inequality measured by the Gini is slightly less than 30, a level that is about average for East European transition countries (see below).

**Table 12.**  
**Gini Coefficients**

	Per capita	Per equivalent adult
Consumption	30.0	29.7
Income	33.3	32.2

A different measure of inequality is the decile ratio, which measures the ratio between the income (consumption) of the top and bottom decile. The data are given in Annex Table A6. Since this statistic focuses only at the two ends of distribution, the differences between income and consumption results are much greater than in the case of the Gini coefficient. This is not unexpected since there are people with very high incomes (who, as we know from Figure 10, save some of their income) and there are also people with extremely low incomes (whose consumption is larger). Table 13 shows that the decile ratio is less than 7 in the case of consumption and exceeds 8 and 9 in the case of income.<sup>9</sup>

**Table 13.**  
**Decile Ratios**

	Per capita	Per equivalent adult
Consumption	6.8	6.7
Income	9.8	8.1

*Contribution to income inequality.* Total household income can be broken down into its components. In our case, we have eleven components (income sources): labor income, property income, net agricultural income (that is, total revenues minus total expenses), pensions, unemployment benefit, other social transfers, consumption in kind, school stipends, refunding of health-related expenses, imputed income

<sup>9</sup> Across the world, the average decile ratio is about 9 to 10. The bottom decile generally receives only about 1/3 of mean income, the top decile three times as much as the mean.

from consumer durables (including their depreciation), and imputed housing income (rent from owner-occupied housing) Thus we can write

$$Y = \sum_{i=1}^k s_i X_i$$

where  $Y$ =total income,  $X_i$  = different income sources (in this case  $k=11$ ), and  $s_i$  = share of  $i$ -th income source in total income.

The Gini coefficient of total income is equal to the weighted average of concentration coefficients for each source ( $C_i$ ). The weights are the income shares ( $s_i$ ). The concentration coefficient is, in terms of its calculation, the same thing as the Gini coefficient except that it shows the distribution of an income source when households or persons are ranked according to a *different* criterion (in this case, according to total income). The Gini coefficient, of course, shows the distribution of income when households are ranked according to income as well. (Thus, in the Gini coefficient, the ranking criterion and the distribution variable are the same; in the concentration coefficient, they are different.) For example, in calculating the concentration coefficient we rank all households according to their income and then look at the distribution of social assistance across these ranked households. Indeed, if social assistance is disbursed mostly to poor households, the concentration coefficient will be negative: the poor receive more of it (in absolute amounts) and social assistance will reduce overall inequality.<sup>10</sup> For such an income source whose  $C_i < 0$  we say that it is pro-poor in absolute terms: the concentration curve of such a source would lie above the 45-degree line (the line of equality). Of course, the situation is exactly the opposite for income sources that are important for the rich, as for example, income from property (see Figure 3). Their  $C_i$  will be greater than the Gini, and the concentration curve will lie below the 45 degree line. The decomposition formula for the Gini is thus

$$G = \sum_{i=1}^k s_i C_i$$

The percentage contribution of each source to total inequality will depend, of course, not only on the value of its concentration coefficient, but also on the share of the source in total income. This is obvious if we reflect that an income source that is pro-poor will not have the same effect on inequality if the source is very small, or if it accounts for a large share of total income.

Table 14 breaks down total income into its eleven components (sources) and shows their contributions to inequality.<sup>11</sup> As expected,

10 Notice the negative correlation between the ranking criterion (income) and the source (social assistance).

11 The analysis has been conducted for income per equivalent unit.

the most important source is labor income which accounts for 45.5 percent of total income. Since labor income is distributed almost exactly as total income (concentration coefficient is 33, almost the same as total income's Gini of 32.2), labor income also contributes a little less than one-half of total inequality.

**Table 14.**  
**Structure of Total Income and Sources' Contribution to Total Income Inequality**

	(1)	(2)	(3)	(4)	(5)
	Amount in dinars per equivalent unit	Share in total income (%)	Concentration coefficient	Contribution to Gini (2)*(3)	Contribution to total inequality (u %) (4)/total Gini
Labor income	3,976	45.5	33.0	15.0	47.0
Property income	331	3.8	55.3	2.1	6.6
Net agricultural income	999	11.4	46.1	5.3	16.5
Pensions	1,427	16.3	24.9	4.1	12.7
Unemployment benefit	36	0.4	-13.6	-0.1	-0.2
Other social transfers	30	0.3	30.8	0.1	0.3
Consumption in kind	1,121	12.8	27.3	3.5	11.0
Stipends	14	0.2	12.8	0.0	0.1
Health aid	19	0.2	27.8	0.1	0.2
Imputed income from consumer durables 1/	412	4.7	30.0	1.4	4.4
Imputed rent	382	4.41	0.4	0.5	1.4
Total gross income	8,747	100.0	32.23	2.2	100.0

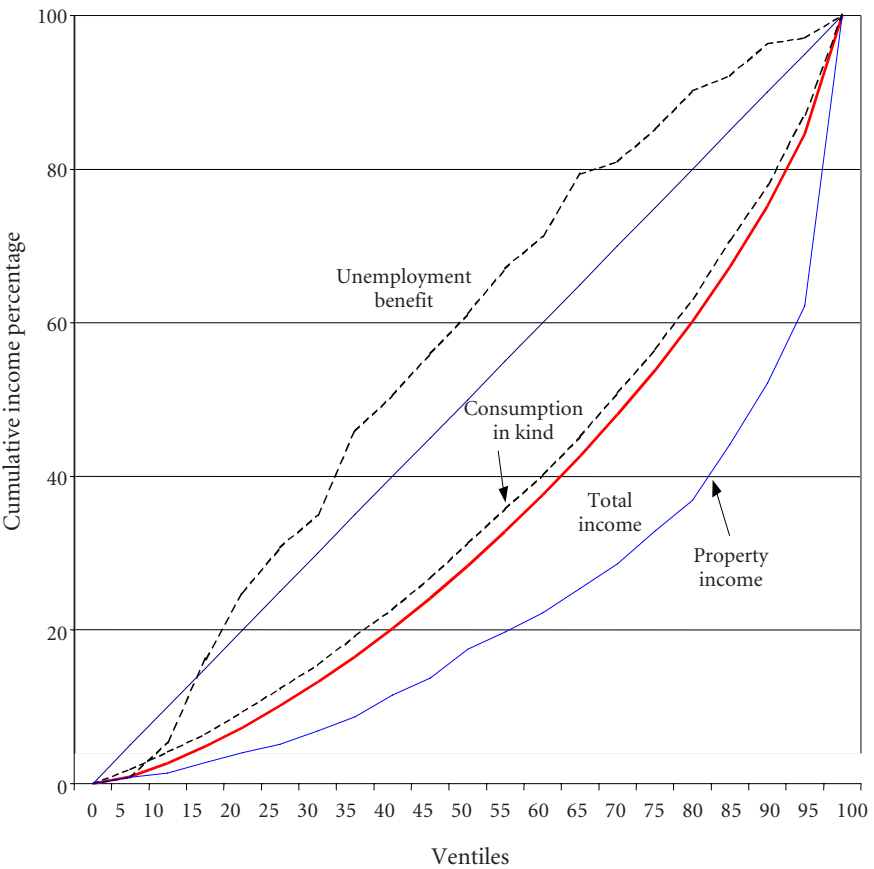
1/ Includes depreciation of consumer durables. All amounts are population-weighted.

Next come three sources, which are of approximately, equal importance: pensions (16.3 percent of total income), consumption in kind (12.8 percent) and net agricultural income (11.4 percent). Both pensions and income in kind are distributed more equally than total income and their contributions are each about 4 Gini points or about 11-12 percent of total inequality. It is interesting to note that consumption in kind, although somewhat more equally distributed than total income (see Figure 11), is not much of an equalizer, as some people might believe (or as it might have been the case in the past). Net income from agriculture has a fairly high concentration coefficient (46) and this explains more than 16 percent of total inequality.

When we therefore add these four key income sources (labor, pensions, consumption in kind and net agricultural income) we account for 85-86 percent of total income and of total inequality. Other sources

are too small to have much of an impact on inequality. Only unemployment benefits are distributed in a pro-poor fashion in the sense that poor households receive more of them in absolute amounts than rich households. Their concentration coefficient is negative, indicating that the concentration curve lies above the 45-degree line (see Figure 11), and they reduce total inequality.<sup>12</sup> This is not the case with social transfers whose net effect on inequality is zero—that is, their concentration coefficient lies very close to the line of equality.

**Figure 11.**  
**Concentration Curves**



12 Although, as the figure shows, unemployment benefits are not important for the very poor.

Finally, note that neither imputed income from durables nor imputed rent has much of an impact on inequality. Imputed income from durables has almost an identical distribution as overall income, implying that the distribution of durables is about the same as the distribution of income. But then imputed rent seems to be pro-poor in relative terms<sup>13</sup> with a concentration coefficient of only 10.4. Thus, when we add housing and durables, their distribution is less skewed than the distribution of income, an interesting and perhaps unexpected conclusion since we normally expect durables and housing (=wealth) to be more unequally distributed than income. However, it could be that privatization to tenants of the housing stock, which in the past, under socialism, was allocated rather equally, has contributed to the fact that at least housing wealth is fairly evenly distributed.

### Comparison with other countries

Table 4 shows that Serbia's income and inequality lie about the average for a group of East European transition economies. Particularly interesting for us are comparisons with neighboring countries, which have moreover had surveys very similar in design and definition of the aggregates as Serbia.<sup>14</sup> Bosnia, Macedonia, and Slovenia have lower levels of inequality, Bulgaria the same, and Croatia higher. The range spans Gini values from 26 to 36, with Serbia's (income) inequality of 33 around the mid-point of the range. Generally speaking, Central European countries (as can be seen here too) tend to have fairly low levels of inequality (under 30) while the former Soviet republics have higher levels of inequality (Lithuania and Russia close to 40). Balkan countries seem to lie somewhere between these two groups. In terms of broader international comparisons, it may be noted that 33 is also about the average level of inequality for the rich (OECD) countries. Of course, the range there too goes from the very egalitarian, Finland, Denmark, Sweden with Ginis of about 25-27 to the inegalitarian Portugal, Turkey and the United States whose Ginis reach 40.

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13 A source is pro-poor in relative terms if the share of that source in the poor's income is greater than in the income of the rich.

14 Some of the other comparisons below need to be taken with caution since the surveys and the definition of welfare aggregates may be quite different (e.g. the inclusion of imputed rent and imputed income from durables would alone add some 10 percentage points to income, and might affect the calculated inequality).

**Table 15.**  
**Comparison of Serbia with Selected East European Countries**  
 (countries ranked by the Gini coefficient; calculated on per capita basis)

Country (year)	Income or consumption per capita p.a. (in US\$)	Gini coefficient
Hungary (income; 1999)	1800	26
Slovenia (income; 1998)	4900	26
Bosnia (consumption; 2001)	1300	27
Macedonia (consumption; 1998)	1000	29
Belarus (expenditures; 1999)	630	30
<b>Serbia (consumption; 2002)</b>	<b>1630</b>	<b>30</b>
Ukraine (income; 1999)	820	30
Bulgaria (income; 1999)	820	33
Lithuania (consumption; 2000)	1200	33
<b>Serbia (income; 2002)</b>	<b>1480</b>	<b>33</b>
Croatia (consumption; 1998)	3200	36
Estonia (income; 2001)	1600	38
Russia (income; 2000)	1000	40
<i>Unweighted average</i>	<i>1360</i>	<i>32</i>

Source: World Bank database. For Bosnia, Croatia and Belarus, consumption is without imputed rent.

### III System of State Support to the Poor

#### LEGAL AND INSTITUTIONAL FRAMEWORK

The system of state support to the poor is aimed at assisting poor citizens and their families to meet their basic subsistence needs. The Ministry of Social Affairs is responsible for administering the system of state support to the poor. The system is regulated by three Republic's laws: (1) The Law on Social Protection and Provision of Social Security for Citizens ("The Official Gazette of the Republic of Serbia" no. 36/91, 33/93, 67/93, 46/94, 52/96, and 29/01, (2) The Law on Social Protection of Children ("The Official Gazette of the RS" no. 49/92, 29/93, 53/93, 67/93, 28/94, 47/94, 48/94, 35/96, and 29/01, and (3) The Law on Financial Support to Families with Children ("The Official Gazette of the RS" no. 16/02).

The Law on Financial Support to Families with Children is a new law (enacted on June 1, 2002) which covered reforms to the system of state support to the poor. The principal aim of enactment of this Law was to separate clearly instruments of social policy from population measures. According to previous legislation, these two types of policies were combined within one instrument – child allowance. Thus, maternal allowance, allowance for newborns (for necessary support), and compensation for expenses of attending pre-school institution of third and each subsequent child in the municipality with a negative population growth rate were defined as population policy measures.

Eligibility for various forms of social protection is determined and administered at the local level, through local administrative authorities (municipality, or city) and through a developed network of social and child protection, which is funded by the Republic (mostly in the case of social protection) or local administrative authorities (funding children institutions). Legislation distinguishes between two principal groups of instruments of state support to the poor, which are legally and administratively separate. The first group of instruments is instruments for providing citizens' social security and they are implemented through various social protection institutions. The second group of instruments contains those covering social protection of children, which are implemented through local administrative authorities and different child institutions.<sup>1</sup>

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1 Until 2003, child care institutions were within the remit of the Ministry of Social Affairs, after which the Ministry for Education and Sports became competent for them

*Local administrative authorities* (municipality, or city) provide funding for additional forms of state support to the poor established by law, with various types of assistance being funded from local budgets, including assistance in cash, in kind or in services: one-off assistance, subsidizing utilities, assistance in paying rent and electricity, soup kitchens, etc. In addition, with respect to entitlement to benefits for children, municipalities (or city administrations) represent the first decision point in terms of eligibility rights, and they provide funds for financing certain programs (pre-school institutions, preventive health care, vacation and recreation of children). However, it is not within the remit of local administrative authorities to decide either on the amount of assistance funded from the Republic budget, or if beneficiaries will be entitled if they meet the legal criteria.

The network of *social protection institutions* consists of three main types of institutions in the Republic of Serbia: (i) centers for social work (121), (ii) institutions for accommodation of beneficiaries<sup>2</sup>, and (iii) day care institutions and home care.<sup>3</sup> Social work centers have the most important role in bringing decisions on eligibility for one of types of social security of citizens, and they are first instance in that process. Neither centers nor local administrative authorities have discretion to decide on the assistance amount or on entitlement if beneficiaries meet prescribed conditions, but they are obliged to check on beneficiaries' material status. On the other hand, Centers of Social Work have discretion, when establishing the amount of entitlement to MOP, to include missed earnings that directly affect the MOP amount. Centers for social work employ nearly 2,500 people, of which around 90% have a University education. Although the funding available for covering administrative expenses of the centers is indexed to the growth in retail prices, a question has been posed in recent years about whether or not the funds being transferred to particular centers are sufficient for their normal operations since there is insufficient expenditure control in the field.

*Institutions for children* play an important role in implementing rights in the area of social protection of children. They include 178 pre-school institutions and 20 rest/recreation centers in Serbia.

*The Ministry of Social Affairs* is responsible for: (a) carrying out social policy in the Republic; (b) provides the majority of funds from the budget for pay-outs to beneficiaries – all types of cash assistance to

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2 Accommodation institutions include: homes for children and youth, centers for protection of nursing babies, children and youth, centers for family accommodation, shelters for children and youth, homes for disturbed children, institutions for physically handicapped children, educational institutes, shelter units, shelters, homes for retirees and elderly people, geriatric centers, homes for disabled adults, institutes for accommodation of mentally disturbed persons and mentally sick persons

3 Institutions for day care and assistance at home include: day care centers for disturbed children and youth, day care centers, institutions for day care of adults and elderly persons, centers for assistance at home, and day centers



the poor; (c) provides funds for financing social protection institutions founded by the Republic and for financing programs in pre-school institutions (educational programs for children before starting elementary school, for disturbed children, for children without parental care, and for children hospitalized for a longer period of time); and (d) supervises the expert work of local administrative authorities and institutions of social and child care.

## PRINCIPAL FORMS OF STATE SUPPORT TO THE POOR

Within the system of state support to the poor, as discussed above, there are two principal groups of instruments that are legally and administratively separated: (1) instruments providing social security for citizens and (2) instruments of social protection of children. Within each group of instruments, there are numerous different types of assistance aimed at different categories of materially vulnerable population and funded from different sources.

Apart from *cash benefits* (MOP, child allowance, parental allowance, maternity leave compensation, compensation for absence from work for taking care of child and absence from work for taking a special care of a child, maternal allowance, allowance for newborns<sup>4</sup>, caregiver's allowance, etc.), *assistance in kind* also has an important role in the system (day care for children and elderly, assistance in the cost of heating fuel and electric power, subsidizing utilities, organized meals in soup kitchens, one-off aid in kind, and other).

Different criteria apply to different types of state support to the poor. They are different for different types of assistance: fixed absolute amount (child allowance, parental allowance) that is indexed to the cost of living, the amount related to average wages in the Republic (caregiver's allowance), or variable amount – based on the supplementing of funds up to the established level of social security (family support – MOP).

Various types of state support to the poor are funded from both the Republic budget and local administrative authorities' budgets. The Republic budget funds the majority of assistance in the first instance. Budgets of local administrative authorities provide funds for the financing of various services, the one-off type of assistance and in-kind assistance. They can also fund top-ups to MOP and other types of assistance whose funding falls under the competence of the Republic.

In last several years, those who participated in the funding of support to the poor were donors, foreign governments, humanitarian and other NGOs, providing finance for different types of one-off assistance

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4 Applied on children born before enactment of the Law on Financial support to Families with Children until June 1, 2004

in kind and assistance for certain categories (for example, aid in food for pensioners, psycho-social support programs for children, etc.), and also cash benefits (MOP, child allowance, early payment of benefits to direct recipients of child allowance and maternal allowance).

The structure of funding sources for different types of state support to the poor is presented in Table 1.

## CRITERIA FOR ENTITLEMENT TO STATE SUPPORT

Criteria for implementing rights to various types of state support to the poor apply uniformly across the entire territory of the Republic.

The first and most important criterion for implementation of the right to state support to the poor is an income level that is lower than the established level of social security. There is not a uniformly established level of social security for all types of state support to the poor, and the social security level does not represent the country's official poverty line.

The social security level for entitlement to MOP represents a kind of proxy poverty line, as it is linked to average wage per employee in the municipality or city over the last 3 months. It cannot be higher than the Republic average wage per employee. Consequently, the legislated social security level results in difference in the criteria for entitlement to MOP on a geographical basis. It creates a horizontal inequality – entitlement criteria are much more restrictive in underdeveloped municipalities (cities), which causes individuals in different municipalities with the same material position to be treated differently. However, even without changing the Law on Social Protection and Provision of Social Security of Citizens, in practice, from August 2001 until December 31, 2002 through donations from Great Britain and the World Bank, the social security level was made the same for all citizens on the entire territory of the Republic. The social security level was linked to the average wage in the Republic as a whole and thus, all negative consequences of horizontal inequality in the entitlement to MOP were removed in practice. The draft Law (proposal) on Social Protection to legislate for equal criteria for entitlement to social assistance throughout Serbia is currently going through parliamentary procedures.

As for child allowance, the method of establishing the social security level has been changed by the Law on Financial Support to Families with Children – per capita income threshold is established for the whole territory of Serbia and it is indexed by living costs. Since June 1, 2002, the child allowance amount has been fixed at an absolute amount, and it has been monthly reconciled with the living cost index since then. The differentiation among areas with low and high birth rates has been abolished, and consequently the right of each third child in the family to child allowance has been abolished too.

**Table 1. Principal Types of State Support to the Poor and Funding Sources**

INSTRUMENTS FOR PROVIDING SOCIAL SECURITY OF CITIZENS	Source of funding	INSTRUMENTS OF SOCIAL CARE OF CHILDRENS	Source of funding
FUNDING: Family support – MOP	<i>The Republic budget</i>	Child allowance	<i>The Republic budget</i>
Caregiver's Allowance		Wage compensation during maternity leave, absence from work for taking care of child and absence from work for taking special care of child	
Accommodation in institution		Parental allowance	
Family accommodation		Compensation of cost for pre-school institutions for disturbed children	
Job Training		Compensation of cost for pre-school institutions for third child	
		Compensation of cost for pre-school institutions for children without parental care	
		educational program one year before beginning of elementary school in duration of 3 hrs throughout school year and for children hospitalized for long time*	
	Assistance to refugee mothers with children up to 1 y. of age		
Materials for beneficiaries for accommodation in institutions	<i>Budget of local authorities</i> (municipality, or city)	Accommodation, pre-school education, health care of children of pre-school age and accommodation of children up to 10	<i>Budget of local authorities</i> (municipality, or city)
One-off assistance		Vacation/recreation of children up to 15 yrs of age in recreational centers for children	
Soup kitchen		Subsidizing cost for children in pre-school inst, and vacation/recreation	
Subsidizing utilities		Subsidizing cost of pre-school inst. for children from materially vulnerable families	
Assistance in kind			
Providing heating fuel			
Funeral expenses			
Health care			
Solution of housing problems			
Various programs targeted to certain groups	<i>Donors, NGOs, Red Cross</i>	Various programs targeted to certain groups	<i>Donors, NGOs, Red Cross</i>

\* It will be regulated by the new law and the Ministry of Education and Sports will be responsible for administering it

Source: adapted in line with the Law on Social Protection and provision of Social Security of Citizens, the Law on Social Care of Children, the Law on Financial Support to Families with Children, and Report on Social Work Centers Activities.

An income realized below the established social security level represents a principal, but as is similar to other transitional systems,<sup>5</sup> not a sufficient precondition for entitlement to some types of state support to the poor. It is necessary that citizens, i.e. families meet a number of additional criteria referring to the ownership of significant movable assets or real estate, making income from arable land, working status of beneficiary and family members (the unemployed, children in regular education, those incapable of work, redundant workers, persons in need for assistance and attendance), interdiction of denying the entitlement to inheritance, interdiction of making agreements on lifelong support, etc.

The social protection system features mutual exclusivity of certain rights. Thus, the overall income received through regulations in the area of social security shall be counted as income for the family applying for child allowance. This does not apply to MOP, i.e. income from child allowance shall not be counted when applying for MOP.

## BENEFICIARIES

In 2002, the total number of beneficiaries of various types of state support to the poor was slightly over 823,000, meaning that over 11% of the total population of Serbia, excluding Kosovo-Metohija, were included in the system of state support to the poor.

The total number of beneficiaries has varied significantly in recent years (Table 2).

Amongst instruments of social care for children, the average monthly number of beneficiaries fell steadily during the period 1996-2000 due to irregular payouts, demographic reasons, the change in status of Kosovo-Metohija, etc. Thus, in 2000, it was 44% lower than in 1996 when the number of beneficiaries was at its peak during the period observed. Since 2000, along with more regular payments, the number of beneficiaries has increased considerably; thus, in 2002 that number was close to that in 1998. In 2002, the total number of beneficiaries was reduced by 18,500 because of the reduced number of child allowance beneficiaries (abolition of automatic entitlement to child allowance for third child). In addition, the decrease in the number of beneficiaries was caused by the abolition of some instruments of social care for children through enactment of the new Law on Financial Support to Families with Children (abolished maternal allowance, allowance for newborns and compensation for the cost of pre-school for the third child). In the first half of 2003<sup>6</sup>, the number of beneficiaries of financial

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5 B. Milanovic – Income, Inequality and Poverty During the Transition from Planned to Market Economy, World Bank, Regional and Sector Studies, 1998, p. 116

6 According to the Ministry of Social Affairs

**Table 2.**  
**No. of Beneficiaries of State Support to the Poor in the Period 1996 – 2002.**

INSTRUMENTS	1996	1997	1998	1999	2000	2001	2002
<b>Social care of children</b>	881,891	835,433	758,614	675,047	613,914	733,692	715,220
Child allowance							
Families	409,508	391,041	329,913	305,175	247,592	345,238	324,650
Children	710,820	677,213	613,537	541,657	486,138	589,584	573,187
Children in pre-school institution	69,661	74,867	76,339	74,422	75,225	76,067	75,384
Wage compensation for women in childbirth	44,410	31,775	26,181	23,636	22,361	22,988	24,491
Maternal allowance	49,076	44,724	36,380	30,250	24,966	38,259	36,154
Allowance for newborns	6,936	5,869	5,232	4,220	4,514	5,904	2834
Assistance to refugee mothers	988	985	945	818	710	890	727
Parental allowance	–	–	–	–	–	–	2443
<b>Provision of social security of citizens</b>	121,138	110,557	105,300	102,439	87,530	106,532*	108,205*
MOP							
Families	39,978	34,937	32,358	31,409	25,326	37,714*	38,310*
No. of household members	85,742	75,292	70,417	67,532	52,413	85,121	87,362
Allowance for assistance and attendance	17,426	17,295	16,901	16,902	16,825	18,664	20,243
Job training	670	670	670	670	650	650	600
Accommodation in institutions	15,200	15,200	15,212	15,235	15,494	15,462**	14,942**
Family accommodation	2,100	2,100	2,100	2,100	2,148	2,097	2,216**
<b>Total number of beneficiaries</b>	1,003,029	945,990	863,914	777,486	701,444	840,224	823,425

\* The average annual number of beneficiaries. The real number of social support instruments is higher by 11,500 families (MOP 2) which were funded by donations from August 2001 until December 2002 (these are families that meet conditions to be entitled to MOP if the social security level is linked to average wages per employee in the Republic). The table quotes the number of MOP 1 beneficiaries that receive legally guaranteed MOP amount, which is funded from the Republic budget.

\*\* Beneficiaries with refugee status are included (1,200 beneficiaries in institutions and 77 in family accommodation) and their accommodation cost is funded by UNHCR.

*Note:* Until June 1, 1998, there was no unique data base on beneficiaries, so the Ministry of Social Affairs' assessment was used for those years.

*Source:* The Ministry of Social Affairs data

support to families with children was stabilized, i.e. the number of child and parental allowances was somewhat increased.

Amongst instruments for social protection for citizens, there was also a declining trend in the number of beneficiaries between 1996 and 2000. After settlement of a significant portion of arrears and more regular payments in 2001 and 2002, the number of beneficiaries increased significantly. In 2002, 1.5% of the total population in Serbia, excluding

Kosovo-Metohija<sup>7</sup>, benefited from various types of assistance. The breakdown of beneficiaries indicates that MOP beneficiaries accounted for the highest share of beneficiaries, reaching 70% during the observed monthly period. It is even larger when we include beneficiaries who are not formally included in the system but were funded from subventions.

### COST OF STATE SUPPORT TO THE POOR

Most of the funds for financing various types of state support to the poor are provided from the Republic budget. In the period 1996-2002, 10.8% of the Republic budget on average was spent on financing instruments of state support to the poor<sup>8</sup> (see table 3). The real amount of allocation for financing state support to the poor was actually higher between August 2001 until December 2002 because, as indicated above, the increased MOP amount (compared to the Republic average) as well as MOP for beneficiaries who were not formally included in the system (since they did not meet the necessary legal eligibility conditions) were funded by donations of Great Britain (until August 2002) and the World Bank (from Aug. 2002 to Dec. 2002). Since there are no available data on how much was allocated from local budgets or from various donors' sources on the local level for different types of state support to the poor, it is not possible to establish the total cost of state support to the poor in the Republic.

The cost of state support to the poor shows considerable fluctuations in the period 1996-2002 (see table 3). It should be noted that in the period 1996-99 the real allocation was even less than quoted in Table 3 since many commitments were not realized due to the lack of funds. This caused the accumulation of arrears in 2000 – arrears of more than two years had accumulated for certain types of state support to the poor. For example, in June 2002, delays in paying out entitlements in the area of social care for children were: for child allowance – 27 months, maternal allowance – 23 months, allowance for newborns – 6 months, wage compensation for women in childbirth – owners of enterprises and shops – 4 months, and wage compensation during maternity leave – 3 months.

Due to obligations of the Republic of Serbia for child allowance and maternal allowance under the earlier Law on Social Protection of Children, the Law on First Emission of Long-term Bonds of the Republic of Serbia should be applied (“The Official Gazette of the RS no. 25/2000). Thus, child allowance shall be paid for entitlement that beneficiaries had between August 1, 1998 and June 30, 2000. Total

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7 There are no accurate data on the number of beneficiaries of various types of in-kind state support to the poor and of other forms of support funded at the local level

8 Not including the year 2000

arrears on child allowance and maternal allowance obligations amounted to 3,459 million YUD.

Thanks to efforts of the Government of Serbia and donations by governments of other countries, arrears were significantly paid off between December 2000 and the end of 2001.

The breakdown of costs of state support to the poor that are funded from the Republic budget points to the fact that the majority of funds are allocated for instruments of social care for children. In the period 1996-2002, these funds accounted for 78.3% of the cost of state support to the poor. In 2001, the cost of funding instruments of social care of children reached nearly 84% of the total projected spending on state support to the poor, which points to the importance of this group of instruments in supporting the poor in Serbia.

**Table 3.**  
**Cost of State Support to the Poor, 1996 – 2002, in Millions YUD**

	1996	1997	1998	1999	2000	2001	2002*
Budget of the Republic of Serbia	10,232	13,826	16,811	17,638	32,703	127,340	170,000
Total projected cost of state support to the poor	1,143	1,884	1,814	1,737	3,514	12,700	15,523
Share in budget, in %	11.2	13.6	10.8	9.8	10.8	10.0	9.1
Share of cost of social care of children in total cost of state support to the poor	77.8	73.2	77.3	78.8	75.8	83.6	81.5
share of cost of provision of social security of citizens in građana u ukupnim trošk. total cost of state support to the poor	22.2	26.8	22.7	21.2	24.2	16.4	19.5

\* Projected funds. Data for other years are realized funds

Source: The Ministry of Social Affairs

The total executed amount of state support to the poor funded from the Republic budget in 2002 was almost 260 million EUR or 1.64% of the projected gross domestic product (GDP), which is a decrease compared to 2001 when it amounted to 1.74% of projected GDP. However, *per capita* transfers in Serbia, excluding Kosovo-Metohija, show a completely different trend – the *per capita* cost of state support to the poor in 2002 was nearly 35 EUR, or 106 EUR per household (in 2001, it was 25.8 EUR *per capita* and 77.9 EUR per household).



## THE MOST IMPORTANT TYPES OF STATE SUPPORT TO THE POOR

The most important types of state support to the poor, according to the number of beneficiaries and the amount of funds allocated for them, are MOP and child allowance (CA). MOP and CA beneficiaries represent 79% of the total number of beneficiaries of state support to the poor. Almost 60% of total funds from the Republic budget earmarked for financing various instruments of state support to the poor are spent on these two instruments.

### MOP

MOP is a form of state support to the poor belonging to the group of instruments of provision of social security of citizens and it is regulated by the Republic Law on Social Protection and Provision of Social Security of Citizens. MOP is a type of monthly cash benefit for poor citizens and their families who have insufficient funds to meet their basic needs. Families meeting legally established criteria are entitled to MOP. The most important criterion is that their income is below the social security level. The family consists of spouses (married or in common-law marriage), children (born in marriage or out of marriage, adopted or fostered) and relatives of direct-line (vertical) and distant relatives up to second cousins (twice removed), provided that they live in a joint household. In addition, a family member is defined to be someone without income who does not live with his/her parents until he/she gets married up to the age of 27, as well as a spouse (regardless of where he/she lives) and a parent of the child incapable of work, and parent of the child who is included in regular education.

The social security level is established as a percentage of the basis that, according to the law, represents the average wage per employee in the municipality, or city, in the previous quarter. This basis cannot be higher than the average wage per employee in the Republic in the same period. However, as mentioned earlier, from August 2001 until December 2002, it was introduced in practice, for the entire territory of the Republic, a single social security level was introduced and linked to the average wage per employee in the Republic. This had two main effects on MOP beneficiaries: (1) the MOP amount was increased for current beneficiaries formally included in the system (MOP 1), and (2) a special category was introduced – MOP 2 – citizens who do not meet the eligibility conditions (the threshold is average wages in the municipality, or city) but they have a lower level of income than the average wage per employee in the Republic, and they are not formally included in the system (but they received MOP from donors' funds).

Apart from having an income that is lower than the prescribed social security level, potential MOP beneficiaries should meet additional six criteria:

- (1) to have no other real estate but housing corresponding to individual, or family, needs (one room per family member, or two



rooms for a person receiving allowance for assistance and attendance) and a house plot of 0.5 ha. The exception is if the registry of the mortgage is approved up to the level of the market value based on MOP entitlement;

- (2) that an individual, or family member, who is capable for work, and he/she does not perform any activity, is included in regular education, registered at the Labor Bureau, and didn't refuse an offer of employment, or temporary or seasonal job, skill training, retraining, additional training or education;
- (3) that the employment of an individual, or family member, was not terminated by himself/herself, consent or fault, on the basis of disciplinary or criminal responsibility, except if 2 years have elapsed since cession of employment or if such an individual became incapable of work after the termination of employment;<sup>9</sup>
- (4) that an individual, or family member, did not sell, be given as a gift or denied the right to inherit real estate or if a period of time has elapsed when from the market value of real estate that he/she sold, gave as a gift or denied entitlement to inherit it was possible to receive income;
- (5) that an individual, or family member, does not own movable assets which can be used or sold, without jeopardizing minimum living needs, and provide funds amounting to six-times the MOP amount – if that is established at the time of applying for MOP;
- (6) that an individual, or family member, did not enter an agreement for lifetime support.

For entitlement to MOP there are no restrictions regarding nationality of particular beneficiaries, or age, although it is a rare case that MOP beneficiaries are children younger than 18 as they are under parental custody. Entitlement to MOP does not exclude the possibility of using other types of state support to the poor, such as child allowance, assistance and attendance allowance, etc. Entitlement to MOP is limited in time to 1 year, or 3 months for the employed if they receive a wage that is below the social security level. Thereafter, an individual's case is reviewed with the possibility of unlimited extension as long as an individual, or family, is in social need.

### *Volume of MOP*

The MOP amount is the difference between the social security level and an individual's or family's income. It means that for each individual, his/her monthly income is topped up to the relevant social security level. It can be concluded that the implicit tax for MOP amounts to

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9 According to Art. 14 of the Law on Social Protection and Provision of Social Security, as those incapable of work are considered: (1) women over 60 and men over 65 years of age, (2) child until age of 15, and if the child is included in regular education in secondary school – until the end of the prescribed schooling time, and (3) an individual totally incapable of work according to the regulations on pension and disability insurance

100% as each additional dinar of an individual's income leads to a reduction of MOP by that amount.

Social work centers check individual or family income by examining relevant documents and by checking on the material situation in the field.

When establishing the income of a potential beneficiary, the following income is taken into consideration: (1) average monthly income and transfers received in the previous quarter, or an average of one month or two months if there were no income or transfers for all three months; (2) income from agricultural activity in the amount of cadastre income in the current year made by owner, usufructuary or direct user; (3) income from leasing real estate or movable property; (4) income from other property rights if it is taxable; (5) income from support based on kinship and other legal basis; (6) average monthly income of unregistered activity, made in the previous quarter, based on the findings and opinion of the authority that decides on the entitlement; (7) for citizens who perform independent activity, the amount used as the basis for calculation of payments for pension/incapacity insurance for the current year is used as income; and (8) for the employed, earnings received are taken into consideration – the minimum amount in the case of guaranteed net wages.

For establishing the income level of a potential beneficiary, the following income *is not taken* into consideration: (1) child allowance, (2) caregiver's allowance, (3) compensation for physical infirmity, (4) money received as awards or final payment as part of a retirement package, and (5) transfers related to a student's standard of living.

The MOP amount is reconciled monthly with the growth in wages in the municipality, or city, with the average wage in the Republic for the relevant quarter representing a ceiling. The MOP amount for a specific case depends on two criteria – family size and the beneficiary's place of residence. However, by introducing a unique social security level and provision of donors' funds for this purpose from August 2001 until December 2002, in practice MOP depends only on family size and income. In 2003, the place of residence is again an important factor for the MOP amount, as the law has not been changed and there is no donor funding for financing MOP up to the uniform social security level (i.e. the average wage per employee in the Republic).

The family social security level *per capita* drops with an increase in the number of family members, from 16% to 6.4% (and even less) of the average wage per employee in the Republic for families with 5 or more members (see Table 4). Thus, multi-member families without children are more vulnerable from the point of view of satisfying the basic living needs of all members of the family, whereas families with children receive child allowance.

In March 2003, the social security level for a one-member family amounted to 2,446.72 YUD, or around 38.5 EUR.

**Table 4.**  
**Social Security Level for MOP**

Family size	Family social security level established by law, in % of average wage per employee	Per capita social security level, in % of average wage per employee
Single	16	16
2-member family	22	11
3-member family	28	9.3
4-member family	30	7.5
Family with 5 and more members	32	6.4 and less

Source: The Ministry of Social Affairs data

The MOP amount in 2002 was between 440 and 2,230 YUD for single-member families, depending on the municipality. In December, the average MOP amount for single-member families was 1,092 YUD or 17.5 EUR. The MOP amount *per capita* significantly drops with an increase in the number of family members, as indicated in Table 5, which presents the monthly range of MOP per family depending on the family size in the period 2001-02.

**Table 5.**  
**MOP Amount per Family, 2001 – 2002.**

Family size	March 2001		December 2002		
	Amount (YUD)	Amount (EUR)	Amount (YUD)	Amount (EUR)	Per capita amount (YUD)
1 member	181.5 – 1,233	3 – 20.55	440 – 2,230	7.3 – 37.16	440 – 2,230
2 members	254.1 – 1,726.2	4.25 – 28.75	600 – 3,060	10 – 51	300 – 1,530
3 members	326.7 – 2,219.4	5.45 – 37	765 – 3,900	12.75 – 65	255 – 1,300
4 members	344.85 – 2,342.7	5.75 – 39	820 – 4,170	13.67 – 69.5	205 – 1,042.5
5 and more members	363 – 2,466	6 – 41.1	875 – 4,450	14.6 – 74.2	175 – 890

Source: The Ministry of Social Affairs data

Table 5 data indicate that in 2002, compared to 2001, the amount of MOP paid increased in real terms, due to the real growth in average wages in Serbia during the observed period.

### *Beneficiaries*

In the period 1996-2002, the number of MOP beneficiaries fluctuated considerably. From 1996 until 2000, the number of MOP beneficiaries was steadily falling; by November 2000, it was less than 36.7% in relation to 1996 (see Table 6). At the beginning of December 2000,

arrears amounted to almost 20 monthly payments. However, after settling 14 months of arrears in December 2000 and reintroducing MOP payments on a regular basis, the number of beneficiaries increased significantly as of 2001. In 2002, the number of beneficiaries was close to the number in 1996. If we remember that the real number of beneficiaries is higher by 12,000 families (beneficiaries who are not formally included in the system but are financed from donor funds), it means that the number of beneficiaries is significantly above the level in 1996 when the largest number of MOP beneficiaries was recorded.

In 2002, 38,797 families received MOP (MOP 1 – funded from the Republic budget; MOP 2 – increased amount up to the Republic average, funded by donors). This number represents 1.6% of the total number of households in Serbia, not counting Kosovo-Metohija,<sup>10</sup> i.e. 50,280 (including 11,483 families whose benefits were entirely funded by donors), which represents 2.05% of the total number of households in Serbia, not counting Kosovo-Metohija. The total number of beneficiaries in 2002 was 88,483 (MOP 1), which represents just under 1.2% of the total population of Serbia excluding Kosovo-Metohija.<sup>11</sup> This number should be supplemented by MOP 2 beneficiaries numbering 27,672 in December 2002. That gives the real number of 116,155 MOP beneficiaries who meet the eligibility requirements conditions for MOP if amendments to the Law link the social security level to the average wage per employee in Serbia.

**Table 6.**  
**Number of MOP Beneficiaries Funded from the Budget , 1996-2002.**

No. of beneficiaries	1996*	1997*	1998*	1999*	2000*	2001**	2002**
No. of families	39,978	34,937	32,358	31,409	30,736	37,714	38,797
No. of beneficiaries	85,742	75,292	70,417	67,532	66,560	85,121	88,483

\* data from Dec.

\*\* average monthly number

Source: The Ministry of Social Affairs

The most important group of beneficiaries entitled to MOP is the unemployed and the incapable of work, which constitutes more than 96% of the total number (see Table 7). Share of the unemployed is the highest, at over 61%, and those incapable of work almost 35%. If the structure of entitlement holders in 2000 is compared to that for 2001, it is noteworthy that there is a slight change in the structure of beneficiaries in the direction of reduced relative participation of the employed and incapable of work and a significant increase in the participation of the unemployed. That was probably caused by the fact that in the observed period the minimum wage was above the social security level.

10 calculated according to the 2001 census

11 calculated according to the 2001 census

**Table 7.**  
MOP Beneficiaries according to Socio-Economic Status, 1998-2002.

Socio-economic status of beneficiaries	1998	%	1999	%	2000	%	2001	%	2002	%
Employed	877	2.7	771	2.5	827	2.7	294	0.78	144	0.37
Independent activity	80	0.3	79	0.2	88	0.3	122	0.32	115	0.30
Farmers	308	0.9	297	0.9	338	1.1	348	0.92	348	0.90
Retired	202	0.6	214	0.7	223	0.7	308	0.82	211	0.54
Unemployed	16,287	50.3	15,934	50.7	15,769	51.3	22,385	59.35	23,995	61.85
Children	401	1.2	364	1.2	329	1.0	401	1.06	414	1.07
Incapable of work	14,133	43.7	13,678	43.6	13,081	42.6	13,762	36.49	13,465	34.71
Others	70	0.2	72	0.2	81	0.3	94	0.25	105	0.27
<b>Total</b>	<b>32,358</b>	<b>100</b>	<b>31,409</b>	<b>100</b>	<b>30,736</b>	<b>100</b>	<b>37,714</b>	<b>100</b>	<b>38,797</b>	<b>100</b>

Source: The Ministry of Social Affairs

The distribution of the total number of MOP beneficiaries according to socio-economic status indicates that, apart from the unemployed, children represent the most important group of MOP beneficiaries. The relative participation of this group of beneficiaries was larger than 35% in 2002 (see Table 8).

**Table 8.**  
MOP Beneficiaries according to Social-Economic Status in 2002

Social-economic status of beneficiaries	No. of beneficiaries	Participation (%)
Employed	226	0.26
Independent activities	115	0.13
Farmers	657	0.74
Retired	313	0.35
Unemployed	37,407	42.28
Children	17,813	20.13
Incapable of work	31,441	35.53
Others	511	0.58
<b>Total</b>	<b>88,483</b>	<b>100.00</b>

Source: The Ministry of Social Affairs

Regarding the age structure of MOP beneficiaries, in 2002 children represented the highest share in the total number of MOP beneficiaries – the share of beneficiaries up to 20 years of age in the total number of beneficiaries is somewhat over 40% (Table 9). Important age groups are beneficiaries over 60 years of age (13.99%) and those between 30 and 40 (13.93%).

**Table 9.**  
MOP Beneficiary Structure according to the Age, 2001 – 2002.

Age of beneficiaries	Participation in % (Feb. 2001)	Participation in % (2002)
Up to 7 years of age	12.9	16.1
7-20	22.6	23.4
21-30	10.4	12.3
31-40	13.4	13.9
41-50	12.4	12.4
51–60	8.6	7.9
Over 60 years of age	19.7	14.0
<b>Total</b>	100	100

Source: The Ministry of Social Affairs

If we compare the structure of MOP beneficiaries in February 2001 to that in 2002, it is evident that the relative participation of children increased as a share of the total number of beneficiaries by around 5%, as did beneficiaries between 20 and 30. At the same time, the participation of older beneficiaries (over 60) significantly decreased, as did those between 50 and 60, albeit by a smaller percentage.

The structure of MOP beneficiaries according to family size in 2002 indicates that single people represent an important group of beneficiaries with a 46% share in the total number (see Table 10a). However, data for the two successive years (2001 and 2002) also indicate that within the observed period the relative participation of one-member households considerably decreased in the total number of beneficiaries (by 8%) and simultaneously, the participation of multi-member families (families with 3 or more members) increased.

**Table 10.a**  
MOP Beneficiary Structure according to Family Size, 2001 – 2002.

Family size	Participation in % (Feb. 2001)	Participation in % (2002)
1 member	54	46
2 members	18	18.40
3 members	11	13.17
4 members	9	11.89
5 or members	8	10.54
<b>Total</b>	100	100

Source: The Ministry of Social Affairs data

There are differences in the structure of the total number of MOP beneficiaries according to family size between data from the Ministry of Social Affairs (Table 10a) and the MOP sample (Table 10b).

**Table 10b.**  
**Structure of MOP Beneficiaries according to the Family Size in 2002**

Family size	Participation in %
1 member	26.43
2 members	18.83
3 members	16.70
4 members	17.10
5 and over 5 members	20.94
<b>Total</b>	100

*Source: AZS*

If characteristics of beneficiary age and family size are cross-linked (Table 11), then the MOP beneficiary structure indicates that in most cases individual MOP beneficiaries (80% of the total number of beneficiaries) are people older than 46, and that 43% of the total number of beneficiaries are individuals older than 65. In a smaller number of cases the unemployed are an issue, whereas those incapable of work constitute the majority<sup>12</sup>. The structure of beneficiaries of 4-member, 5-member, and larger households according to age indicates that these are usually families with children where beneficiaries are between 20 and 35 years of age.

The structure of MOP beneficiaries according to age and socio-economic status leads to the conclusion that they are mainly unemployed individuals.

The structure of MOP beneficiaries by the principal regions of Serbia is presented in Table 12. Most of MOP beneficiaries live in central Serbia, which is understandable, as it is the biggest region. Over one half of beneficiaries come from central Serbia, around one-quarter from Vojvodina, and 23% from Belgrade.

According to Table 12, it is evident that wealthier regions (Belgrade and Vojvodina) have disproportionally more beneficiaries of social assistance than poorer central Serbia. This comes as a consequence of the previously mentioned system in which the poverty line is established according to the average wage in municipality, and thus, poor regions are discriminated against.

<sup>12</sup> As per structure of MOP beneficiaries according to age and social-economic status. Source: The Ministry of Social Affairs

**Table 11.**  
**Structure of MOP Beneficiaries according to Age and Family Size**  
**in December 2002**

Beneficiary age	Number of family members					Total
	1 member	2 members	3 members	4 members	5/more members	
Up to 7 years of age	103	1,293	2,307	3,334	3,946	10,893
7 to 14	66	1,633	2,863	5,120	8,254	17,936
15 to 19	89	1,065	1,713	2,080	3,072	8,019
20 to 35	1,558	3,090	4,986	5,820	5,158	20,612
36 to 45	2,172	2,043	2,568	3,272	3,470	13,525
46 to 65	7,095	4,446	2,495	1,508	1,3971	6,941
Over 65 years of age	8,256	1,997	345	128	202	10,928
<b>Total</b>	19,339	15,567	17,277	21,262	25,499	98,944

Source: The Ministry of Social Affairs

**Table 12.**  
**Structure of MOP Beneficiaries and Population according to Region in 2002.**

Region	Structure of MOP beneficiaries, in %	Population structure, in %
Belgrade	22.7	17.4
Vojvodina	26.02	2.4
Central Serbia	51.3	60.2
<b>total</b>	100	100

Sources: AZS; census 2002

A larger number of women receive MOP compared to men. Table 13 also points to a high correlation between the educational level of MOP beneficiaries and the number of MOP beneficiaries. Namely, the number of MOP beneficiaries rapidly falls with increases in educational level. Over 80% of MOP beneficiaries have some (including those who have completed) elementary education, while only 1% has completed university or junior college education.

Households with children receive slightly more MOP compared to households without children, as they constitute a little over one-half of the total number of households containing MOP beneficiaries (see Table 14). Yet, bearing in mind that households with children constitute only a little over one-third of the total number of households, we may draw the conclusion that MOP targets households with children compared to those without children.



**Table 13.**  
**Structure of MOP Beneficiaries according to Gender and Educational Level in 2002**

	<b>Participation in %</b>
<b>Gender</b>	
Male	45.55
Female	54.45
<b>Educational level</b>	
Uncompleted elementary school	56.64
Elementary school	23.87
Secondary school	18.18
Junior college	0.48
University	0.83
<b>Total</b>	100

Source: AZS

**Table 14.**  
**Structure of Household Type Receiving MOP in 2002**

<b>Households</b>	<b>Participation in %</b>
Households with children	52.57
Households without children	47.43
<b>Total</b>	100

Source: AZS

### *Funding of MOP*

The MOP amount guaranteed by law is funded from the Republic budget as a whole, but local administrative authorities make additional payments if they have funds available. Also, in the period between August 2001 and December 2002 part of MOP was financed by donations (increased MOP amount for 54,897 families and full amount of increased MOP for 11,483 families). Almost 703,000 EUR was allocated from donations for this purpose. There are not up-to-date data at the Republic level on funds allocated for this purpose at the local level.

In the period 1998-2000, the average share of MOP in overall expenditures for the provision of social security amounted to 12.6%, and in 2002, it increased to 26.6% (see Table 15). Until 2000, funds for financing MOP increased more slowly compared to the growth in expenditures for state support to the poor, which indicates that its share in overall expenditure of state support to the poor was actually decreasing. Nevertheless, since 2001, a more rapid growth of funds for financing

MOP has taken place in relation to the growth in overall expenditure of state support to the poor since their share in this expenditure has increased. Such an increase in funds for financing MOP can be explained by the increased number of beneficiaries caused by more regular payments.

**Table 15.**  
**Expenditure for MOP, 1998 – 2002**  
 In million YUD

	1998	1999	2000	2001*	2002*
Republic budget	16,811	17,638	32,703	107,600	170,000
Expenditure for social security	411.1	369.1	849.2	1,700	3,000
share in budget (%)	2.4	2.1	2.6	1.6	1.8
MOP	63.5	52.36	68.6	516	799
share in budget	0.4	0.3	0.2	0.5	0.47
share in u soc. security	15.5	14.2	8.1	30.4	26.6
share in expenditure for state support to the poor	3.5	3	1.95	4.1	5.5

\*Note: data for 2001/2002. Represent projected funds, whereas realised funds are quoted for other years

Source: the Ministry of Social Affairs

### *Administrative characteristics*

In the first instance the administrative responsibility for approving entitlement to MOP rests with social protection institutions, i.e. social work centers. Citizens (families) submit their applications to social work centers at their place of residence. Along with their application, they are obliged to submit papers on the number of family members, income, ownership of real estate and movable assets (on the basis of certificates from the Tax Office) and land (certificate from the Land Registry). Based on a review of the submitted documents and possible checks on a family's material status in the field (rarely), employees of social work centers make decisions on applications, i.e. on entitlement. In doing so, they have no discretion to decide on the MOP amount, but they can do so directly through calculation of missed earnings. Decisions on approvals are sent to the Ministry of Social Affairs, which makes benefit payments directly to beneficiaries. Based on these decisions, the Ministry enters data on new beneficiaries into the database of MOP beneficiaries. Most of the data on a beneficiary's characteristics remain at the local level – at social work centers.

If the Center for Social Work rejects an application, it is possible to lodge an appeal (based on a review of the material status of the potential beneficiary in the field). That is the Ministry of Social Affairs, the

City Secretariat for Children and Social Protection if the applicant's residence is in Belgrade, or to the competent Provincial authority if the applicant's residence is in Vojvodina. A review of eligibility is performed annually, except for those beneficiaries who are employed for whom checking on a possible change in material status is done every 3 months. In recent years, checking on the spot is increasingly rare due to a lack of funds for this purpose.

### **Child allowance**

Child allowance is a type of state support to the poor belonging to the group of instruments of social protection of children. It is regulated by the Law on Financial Support to Families with Children. Until June 1, 2002, the right to child allowance was regulated by the Law on Social Protection of Children and it was an instrument of both social policy and population policy (without an unconditional right to child allowance for the third child). Nevertheless, child allowance became an instrument primarily of social policy after enactment of the new law.

Child allowance is a form of monthly cash benefit to the family with children with an aim to support the improvement of living conditions for each child who lives and goes to school in the Republic. The main precondition for being entitled to child allowance in the Republic is the poor material status of the family, guardian or foster parent. In practice, it means that the benefit is paid to families with a total monthly *per capita* income, after deduction of taxes and other duties, is less than 3,054.73 YUD (in May 2003) in the quarter prior to the month in which application is submitted. This threshold is increased by an additional 20% for single parents, guardians, foster parents, and parents of a disturbed child who is not placed in an institution.

Along with the conditions already mentioned, an applicant must fulfil an additional criterion: that cadastre income *per capita* is no greater than 3% of the average cadastre income per 1 ha of arable land in the previous year or if income is earned on land smaller than 0.5 ha on which a house for living has been built. If the family does not have any other income, then the financial threshold for entitlement is 7% of the average cadastre income per 1 ha of arable land per family member in the previous year. The Minister of Social Affairs establishes the nominal amount of the monthly threshold on the basis of the increase in living costs. In addition, calculation of family income includes income received from other social transfers.

The right to child allowance can only be applied for the first four children in the family. Foster parents and guardians are also entitled for first four children, counting their own children and children without parental care. The right to child allowance can be given to any national or foreign citizen (if stipulated by an international agreement) for children who live and go to school in Serbia (if not otherwise stipulated by an international agreement). The right to child allowance is limited in time to a maximum of 19 years of age if they are in regular

education. For disturbed children, this right applies to age 26 years, i.e. until the child is in an educational or job training program.

### *Volume of child allowance*

The amount of child allowance is fixed and absolute, following enactment of the Law on Financial Support to Families with Children. The Minister of Social Affairs of Serbia establishes the nominal amount of child allowance. In June 2002, the established level of child allowance was 900 YUD, and in April 2003, it amounted to 998.40 YUD. Child allowance is monthly adjusted to the cost of living index. The child allowance amount does not depend on the sequence of births of children (as it was the case in the previous law), but it depends in a specific case on the child's status. The allowance is increased by an additional 30% for a child with single parent and for a disturbed child.

### *Beneficiaries of child allowance*

Child allowance beneficiaries represent the most important group of beneficiaries of social protection with an average participation rate of 80% in the period 1996 – May 2002 (see Table 16). A change in the number of beneficiaries in the period 1996-2000 points to two sub-periods. First, until 2000, the number of beneficiaries (families and children) was steadily falling; by 2000, it was 31% lower than in 1996.

Secondly, following payments of a significant portion of arrears in December 2000 and improved regularity in payments as of 2001, the number of beneficiaries started to increase considerably. In 2002, the number of children who received an entitlement increased by 80,000. Thus, the average number of children receiving child allowance was 573,187 per month, or 36.5% of the total population up to 18 years of age or 7.8% of the total population of Serbia, without Kosovo-Metohija.<sup>13</sup>

In May 2002, the share of families with one or two children was nearly 78% of the total number of families (Table 17). The beneficiary structure according to family size in November 2002 was somewhat changed in relation to that in May 2002 due to the fact that in the second half of 2002 only families with a maximum of 4 children were entitled to child allowance, so the relative share of all families slightly increased. In addition, the number of families containing child allowance beneficiaries was significantly reduced in the second half of 2002. However, it should be noted that quite a number of new applications were only processed in the second half of that year, which might explain the decreased number of beneficiaries.

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13 data on population are from the Federal Statistics Authority Population and Natural Movements of Population in FRY in the 20th and the beginning of 21st century, no. 040/2001

**Table 16.**  
Average Monthly No. of Child Allowance Beneficiary in Period 1996 – 2002.

Entitlement	1996	1997	1998	1999	2000	2001	2002
Total no. of beneficiaries of social care of children	881,891	835,433	758,614	675,047	613,914	733,692	715,220
<i>Child allowance</i>							
No. of families	409,508	391,041	329,913	305,175	247,592	345,238	324,650
No. of children	710,820	677,213	613,537	541,657	486,138	589,584	573,187

Source: The Ministry of Social Affairs data and reports

**Table 17.**  
Structure of Total No. of Child Allowance Beneficiaries in 2002

Veličina porodice	January-May 2002		June-November 2002	
	No. of children	Relative share (%)	No. of children	Relative share (%)
Families with 1 child	172,284	25.3	225,314	46.98
Families with 2 children	340,606	50.0	186,659	38.92
Families with 3 children	109,965	16.1	55,633	11.60
Families with 4 children	39,632	5.8	11,990	2.50
Families with 5 children	9,750	1.4	–	–
Families with 6 children	4,686	0.7	–	–
Families with 7 children	2,464	0.4	–	–
Families with 8 children	1,256	0.2	–	–
Families with 9 children	270	0.0	–	–
Families with 10 children	150	0.0	–	–
Families with 11 children	55	0.0	–	–
<b>Total</b>	681,118	100	479,596	100

Source: The Ministry of Social Affairs data and reports

**Table 18.**  
No. of Beneficiaries – Children Receiving Increased Amount in November 2002

Child status	No. of beneficiaries
Children without parental care	47,786
Disturbed children	4,080
<b>Total</b>	51,866

Source: The Ministry of Social Affairs

**Table 19.**  
**Structure of Child Allowance Beneficiaries by District in 2002**

DISTRICT	Population	Children up to 18	Children receiving CA	% of children receiving CA
North-Bačka	200,140	41,705	12,180	29.21
Middle-Banat	208,456	43,703	15,801	36.16
North-Banat	165,881	34,691	10,256	29.56
South-Banat	313,937	66,786	22,587	33.82
West-Bačka	214,011	43,887	14,727	33.56
South-Bačka	593,666	128,431	36,108	28.11
Srem	335,901	74,713	23,809	31.87
VOJVODINA	2,031,992	433,916	135,468	31.22
Mačva	329,625	71,419	25,972	36.37
Kolubara	192,204	39,158	9,942	25.39
Podunavlje	210,290	46,315	18,435	39.8
Braničevo	200,503	41,050	5,687	13.85
Šumadija	298,778	61,439	21,539	35.06
Pomoravlje	227,435	45,095	14,001	31.05
Bor	146,551	29,184	7,035	24.11
Zaječar	137,561	23,193	5,652	24.37
Zlatibor	313,396	70,116	31,106	44.36
Morava	224,772	45,778	17,682	38.63
Raška	291,230	74,023	28,653	38.71
Rasina	270,810	53,371	20,592	38.58
Nišava	370,388	70,752	24,51	334.65
Toplica	102,075	21,804	10,084	46.25
Pirot	105,654	19,395	10,211	52.65
Jablanica	240,923	52,523	22,295	42.45
Pčinja	227,690	62,837	23,978	38.16
BELGRADE	1,576,124	309,342	48,795	15.77
SERBIA PROPER	5,466,009	1,136,794	346,172	30.45
TOTAL SERBIA	7,498,001	1,570,710	496,723	32

Source: The Ministry of Social Affairs

Around 11% of the total number of beneficiaries received the increased amount in November 2002. The disaggregation of their status is presented in Table 18.

The child allowance beneficiary structure by district in 2002 (Table 19) indicates that in Serbia out of the total number of beneficiaries under 18 is 32%. In poor districts, Pirot, Toplica, Zlatibor, the share is much higher than the average – from 44% to 52%. In Vojvodina, a

higher concentration of child allowance beneficiaries is recorded only in Middle-Banat district. On the other hand, the smallest number of child allowance beneficiaries in relation to the total population of children up to 18 is recorded in Branicevo district (13.8%) and Belgrade (15.8%).

#### *Funding of child allowance*

Child allowances are funded completely from the Republic budget. Significant funds are allocated for this purpose as a share of funding for child care instruments (nearly 54% on average for the observed period), as well as within total expenditure for state support to the poor (around 42% in average). Expenditures indicate that since 1999, the share of expenditure for funding child allowance out of total expenditure for state support to the poor has been steadily increasing. This points to the importance of this type of assistance to the poor in Serbia.

The range of expenditures for funding child allowances in the period 1998-2000 is presented in Table 20.

**Table 20.**  
**Realized Expenditures for Child Allowances, 1998–2002, in million YUD**

	1998	1999	2000	2001	2002*
Budget of Republic of Serbia	16,810.7	17,638.5	127,339.9	170,000	
Social care of children	1,534.0	1,027.9	2,664.5	9,600.7	12,523
Share in budget (%)	10.1%	3.9%		7.5%	7.4%
Child allowance	823.0	350.9	1,330.4	6,436.2	8,350
share in budget	4.9%	2.0%		5.05%	4.91%
share in expenditures for social child care	42.3%	25.1%	37.86%	50.7%	53.8%
share in expenditures of state support to the poor	45.4%	20.2%	37.9%	50.7%	53.8%

\* projected funds

Source: The Ministry of Social Affairs

Monthly funds allocated for child allowance transfers amounted to nearly 11 million EUR in May 2002. Following adoption of the Law on Financial Support to Families with Children, monthly funds allocated for child allowance transfer have been reduced by over 10%; thus, in September 2002, they amounted to less than 10 million EUR (Table 21).

**Table 21.**  
**Monthly Child Allowance Amount per Family in 2002, millions**

	May 2002		November 2002	
	DIN	EUR*	DIN	EUR**
Monthly expenditures for funding CA	651.4	10.9	605.2	9.8

\* exchange rate of 1 EUR = 60 YUD was used for the calculation

\*\* exchange rate of 1 EUR = 62 YUD was used for the calculation

Source: The Ministry of Social Affairs data and reports

### *Administrative Features*

In the first instance the administrative responsibility for approving entitlement to child allowance rests with local administrative authorities – municipalities. Applications are submitted to municipalities where applicants have their residence. Decision on eligibility is issued on the basis of review of extensive documentation. If the applicant is a child in a family containing both parents, it is necessary to submit <sup>14</sup> different documents.<sup>14</sup> The number of required documents increases for more children or when additional documents are needed for disturbed children, single parents, foster parents or guardians.<sup>15</sup> In order to reduce possible errors as much as possible the new law has introduced thorough checks into the family's status in accordance with the Law on Social Care of Children, as there is no checking of material status of beneficiaries in the field.

A review of eligibility is performed twice a year. Positive decisions are submitted to the Ministry of Social Affairs, which makes plans accordingly and transfers funds directly to beneficiaries.

14 It is envisaged by the Law to submit the following documents: birth certificate for all children, FRY citizenship certificate, copies of ID cards of all adult members, copies of verified medical cards, certificate of income in the last 3 months prior to the month in which the application is submitted for each household member earning income, certificate on cadastre income in the previous year for each household member earning income in this way, statement on joint household, statement on taking direct care of a child, certificate on regular attending school for the school child, evidence on ownership of real estate (Land Registry certificate – title deed, purchasing contract, tax papers, apartment lease), statement on not owning liquid means or cash

15 To prove a particular status, it is necessary to submit the following documents: certificate issued by a competent medical institution on the reasons for irregular education attendance, document on classification of disturbed child, document on the parental right extension, evidence proving single parent status (death certificate for other parent, evidence of entrusting child to one parent after divorce or cession of common law marriage or birth certificate for children whose paternity has not been established, certificate for military authorities, certificate of penal-correctional institution), proof of unemployment (certificate, labor card), evidence of foster care or guardianship (document issued by the competent guardianship authority), and copy of current account card



## CONCLUSION

The aim of the system of state support to the poor in Serbia is to assist poor citizens and their families when they are in need of social support, i.e. when they need assistance by the state in meeting their principal living needs. It is a part of the social sector, which falls under competence of the Ministry of Social Affairs.

The system of state support to the poor in Serbia includes a considerable number of different types of assistance to the poor (as many as 26). They are legally and administratively divided into two groups of instruments: (1) instruments for the provision of social security of citizens, and (2) instruments for the social protection of children, i.e. financial support to families with children.

Rights to various types of state support to the poor are established and implemented on the local level, through local administrative authorities (municipality or city) and through a developed network of institutions of social and child care, which are founded by the Republic (in most cases) or by local administrative authorities in charge of child care institutions. Instruments for the provision of social security of citizens are implemented through social care institutions, whereas instruments for social care of children – through local administrative authorities and child care institutions.

Criteria for entitlement to different types of state support to the poor are in practice uniformly regulated across the territory of the Republic. The first and the most important criterion for implementing one of the entitlements to state support to the poor is having an income level that is lower than the established social security level. There is no unique social security level for all types of state support to the poor. Apart from low income, there are a number of additional criteria. These criteria refer to certain limitations regarding possession of considerable real estate and movable assets, income from arable land, from employment of the beneficiary and his/her family members (the unemployed, children regularly attending school, those incapable of work, redundant workers, individuals in need of assistance and attendance), prohibiting denial of the right to inheritance, etc.

In the second half of 2002, the total number of beneficiaries of different types of state support to the poor amounted to over 800,000 or more than 11% of the total population of Serbia, without Kosovo-Metohija.

Funds for financing state support to the poor are provided by various sources: the largest part comes from the Republic budget, then local administrative authorities' budgets, and donors' funds. Executed expenditures for state support to the poor (from the Republic budget) were almost 260 million EUR in 2002 or 1.64% of the projected GDP. *Per capita* expenditures for state support to the poor amounted to 35 EUR in 2002, or around 106 EUR per household. There are no available data on local level expenditures for financing various types of state support to the poor.

The most important types of state support to the poor, both according to the beneficiary number and allocated amount, are family support (MOP) and child allowance. MOP and child allowance beneficiaries constitute around 79% of the total number of beneficiaries of various types of state support to the poor. The two instruments account for almost 60% of total funds from the Republic budget earmarked for the financing of various instruments of state support to the poor.

In 2002, 38,310 citizens received MOP (the Republic budget amount guaranteed by law), meaning more than 50,000 families (if we include families that are funded from donations). The MOP amount was between 7 EUR for individuals to 74 EUR for households with 5 or more members. In December 2002, the average MOP amount for individuals was 1,092 YUD. The most important groups of MOP beneficiaries, according to the socio-economic status, are the unemployed (43.2%), children (35.5%), and the incapable of work (20.13%). According to age, the distribution is: children up to age of 20 (over 40%), elderly over 60 (13.99%), and beneficiaries between 20 and 30 (13.93%). The most important group of MOP beneficiaries according to education is beneficiaries with some or completed elementary education (80%); according to gender – women (nearly 55%); and according to family size – single-member households or individuals (46%). The majority of beneficiaries live in central Serbia (over 50%), one quarter in Vojvodina, and 23% in Belgrade. Amongst multi-member households, MOP beneficiaries are mostly households with children.

By the end of 2002, the average number of child allowance beneficiaries amounted to 261,337 families per month, i.e. 479,596 children. In April 2003, child allowance amounted to 998.40 YUD. Out of the total number of children-beneficiaries, 11% of them are children without parental care and disturbed children. Almost one half of the total number of child allowance beneficiaries comes from families with one child (47%). In relation to the total number of children of age up to 18, most of child allowance beneficiaries live in Pirot, Toplica and Zlatibor districts (44-52%), and the fewer of them in Branicevo district (13.85%) and Belgrade (15.77%).

It can be concluded that the system of state support to the poor in Serbia has features of both centralized and decentralized systems. In terms of funding sources, criteria for eligibility/entitlement, and amounts, the system of state support to the poor is completely centralized. However, given the well developed institution network and the important role of social care institutions and local administrative authorities who decide on entitlements, the system has at the same time characteristics of a decentralized system. The existing degree of decentralization of the system provides important advantages in carrying out social policy. Those advantages are: more efficient financial control (all transfers are directly remitted by the Ministry of Social Affairs to beneficiaries' accounts), use of limited funds for this purpose (the Ministry is the only competent authority for implementing social

policy), and equal rights of all citizens under social protection (uniform criteria for the whole Republic). On the other hand, legal and administrative separation of instruments for social support to the family and programs of child care, as well as for financial support to families with children, facilitates more efficient management of cash methods of state support to the poor.

## IV Proposal of Reforms of Financial Assistance to the Poor

### INTRODUCTION

There are many poor people in Serbia. A deep economic crisis in the nineties, which has reduced the country's GDP by half, has pushed some people below the poverty line, and some below subsistence level. Instead of earlier certainty and safety, uncertainty and insecurity dominated. Employment itself was not a guarantee of being paid, and being paid was not a guarantee to reaching the survival minimum at a time of declining salaries and high inflation. Among vulnerable groups, the status of pensioners seemed to be better as they received their pensions on almost regular basis, and the average pension previously, at least at times, reached the average salary level.

During the past ten years (up to and including the year 2000), principal mechanisms of support to the poor were:

- Guaranteed employment, meaning protection of employees from layoffs even when there was no more need for their work, but with low salaries and delays in paying out salaries,
- Maintaining prices of principal goods (bread, flour, oil, sugar, electric power, utilities, etc) at a low level, together with shortages and autoselection (the poor had to queue up in long lines early in the morning, whilst the well-to-do obtained goods on the black market at higher prices),
- Modest system of social assistance to the poor, with no regular pay-outs, and a rather extensive child allowance system, but also with no regular pay outs,
- International humanitarian aid which, in recent years, has included refugees, IDPs, pensioners with low pensions, and
- Greater tolerance of the gray economy where many citizens found a source of income and goods at lower prices or products that they otherwise could not find in stores.

Various family arrangements have contributed to poor individuals' survival, with the better off sharing with relatives having very little – through rural-urban links, by parents helping out their children, or vice-versa, or by means of cash remittances from abroad.

By the end of 2000, Serbia began implementing a process of transition, moving towards political democracy and introducing a modern market economy model. Such changes have caused a fundamentally

change in the approach to social policy, including the one towards poor citizens.

Absolute job security does not exist anymore. The new Labor Law has significantly liberalized the ability to make redundancies, in line with market economic principles. During 2002, many jobs were lost, especially in companies experiencing bankruptcy and in a few large enterprises undergoing restructuring. However, the number of newly employed is not large, as the restructuring of a prevailing part of the economy has not started yet. Thus, there have been almost no layoffs in Government-owned enterprises and those with mixed ownership. Prices of most goods have been liberalized, meaning that the previously low prices for basic goods have significantly increased. This has meant that a very expensive and economically inefficient method of supporting the poor has been abandoned. The social transfer system (social assistance and child allowance) has been partly reformed by developing the new Law on Financial Support to Families with Children. The rights of the poor have increased to some extent, and two-year payment arrears have been paid. In the last two years, donor assistance has increased and has considerably mitigated the effects of poverty. It is probable that the extent of humanitarian assistance will be scaled back, thus potentially hindering poverty reduction efforts. The extent of the gray economy has been significantly reduced in some segments although it is still widespread and represents an important income source for citizens.

### THE CURRENT SOCIAL PROTECTION SITUATION

The two most important social protection programs in Serbia aimed at reducing poverty are child allowances and social assistance (“Family Assistance – MOP”). The main objective of both programs is to provide a minimum level of income for poor families, especially for those with children.

**Table 1.**  
Number of Social Transfer Beneficiaries (000)

No. of individuals	2000	2001	2002
Social assistance (MOP)	67	115	125
Child allowance	494	665	497

*Note:* all data are from December of the relevant year

*Source:* The Ministry of Social Affairs

Other social programs include accommodation in institutions, the Transitional Fund, the Innovation Fund, parental allowance, attendance and assistance allowance, and others, which also reach the poor,

but they are not exclusively aimed for them as they are covering other types of risk.

### Child allowances

The system of child allowances is financially the largest program of state support to the poor, and is 3-4 times larger than the social assistance program. Its aim is to support poor families with children and to create conditions for the normal development of children.

Poverty amongst children is not particularly high – at 10.4%, it stands at the average level of the entire population of Serbia. Child poverty levels are below the average level in Belgrade (6.8%), Vojvodina (7.6%), and eastern Serbia (9.7%), whilst it is above average in central Serbia (11.2%), western Serbia (14.5%), and southeast Serbia (16.8%). In Serbia, poverty increases in line with the number of children in the family: the poverty rate of children in households with one child amounts to 7.5%, it is 8.7% in households with two children, and 18.9% in households with three children. However, inequality (measured by consumption) among all children is moderate and the Gini coefficient stands at 28.8, somewhat lower than for the overall population.

The right to child allowance is given to those households with children whose total income per household member is below the established threshold, which was YUD 3,021 in March 2003<sup>1</sup>; the threshold is 20% higher for single-parent households. There is a single income threshold applying throughout Serbia, index-linked to the cost of living. Another requirement is the lack of ownership of real estate, apart from necessary housing, with an exception for agricultural households, where agricultural buildings are included. A family is entitled to child allowance for its first four children.

In the child allowance program, economies of scale are not assumed, but the same threshold is applicable to all family members, which increases the number of families eligible for child allowance. This results from the view that this program should include broader tiers of the population, including families with lower medium income.

This child allowance system was established by the new *Law on Financial Support to Families with Children*, which has been in force since mid-2002. This Law has abolished the previous long-standing system, which had a differentiated income threshold linked to the average municipal wage; the population component was emphasized creating a difference between areas in Serbia with high and low birth rates.

The new child allowance system has achieved a more accurate identification of poor families; the rights of all poor citizens of Serbia have been leveled; and the real benefit value has been maintained through

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1 For income from agriculture, the percentage of average cadastre income per hectare is: 7% for pure agricultural households, and 3% for mixed ones.

indexation of both the income threshold and child allowance by means of the cost of living.

The amount of child allowance for all children (for the first four children in the family) was YUD 978 per month in December 2002. This amount increases by 30% for children of single parents. It should be noted that the amount paid for child allowance is not differentiated either by an unfavorable social position of the household, or by a child's age; a fixed amount is paid.

The number of beneficiaries of child allowance has increased from 494,000 children at the end of 2000 to 665,000 at the end of 2001, an increase of 35%. This is because of greater interest in child allowances from families with children due to the payment of more regular and timely benefits following the settling of two-year arrears in benefit payments. In the second half of 2002, the number of children included in child allowance was decreased due to the introduction of a moderate asset threshold, an increase in real incomes, and the removal of the system of making higher payments for more births (the third and subsequent children are no longer entitled to child allowance regardless of household income). At present, every third child in Serbia receives child allowance.

The poor with a newborn are well assisted with parental allowance, which was introduced in 2002 as a population measure. It is paid to all parents except those who are wealthy practically. The amounts paid are 55,000, 98,000, and 130,000 YUD for the second, the third, and the fourth child in the family (March 2003).

### **Social assistance**

The number of citizens receiving social assistance is not significant. That number was reduced during the nineties to 67,000 beneficiaries (Dec. 2002). A fall in the number of beneficiaries was certainly not due to the reduction in poverty in Serbia, but due to a restrictive policy within the system of social protection and inability to finance such a modest assistance. In the last two years, the number of beneficiaries of social assistance has increased: to 115,000 in Dec. 2001 and 125,000 in Dec. 2002. That came partly as a result of a supplementary program of social assistance funded by donations (28,000 in Dec. 2002), and partly as a result of regular payments, which stimulated the interest of the poor. Total payments for social assistance amount to 117 million YUD per month (Dec. 2002).

The amount paid out for social assistance is modest. In December 2002, the average amount per person was 1,092 YUD. Transfers of that amount can only insignificantly improve the financial situation of the poor.

The social assistance program is based on calculating the overall level of a family's income and, if additional criteria are met (modest assets, cooperation with the Labor Bureau, etc.), on topping up this income to the level of the poverty line established by law. The income threshold



for entitlement to social assistance is low even for single person households and amounts to 16% of gross wages in the municipality. This leads to the relatively low legal threshold of 2,447 YUD in March 2003 in the relatively richer parts of Serbia, and to an even lower level in municipalities with lower average earnings. The establishment of a separate poverty line for each municipality based on average wages represents a flaw in the social assistance program, as it undermines the principle of equality of all citizens of Serbia. At the same time, it introduced discrimination into the system for citizens from poorer parts of Serbia. Apart from this, with an established relative poverty line, the number of poor can be considered to be a given, unrelated to changes in income levels. These imperfections should be rectified through amendments to the law, which are already in the parliamentary procedure, and which establish an absolute poverty line (expressed in YUD) that is equal for the entire territory of Serbia and indexed by the living cost.

Problems of the system include: (i) an inability to include income from gray economy, which is widespread in Serbia; as well as in the relatively assumed economies of scale within a household, which puts numerous families in an unfavorable position<sup>2</sup>. Namely, if we mark the income threshold of the single person household with 1, then inclusion of additional household members brings an increase of such threshold by 0,375 for the second and third member, and by 0,125 for the fourth and fifth member, whilst the sixth and seventh member are not taken into account.

Social assistance is, in practice, well targeted to the poorest individuals. The empirical analysis has indicated that social assistance is the most successfully targeted type of social transfer in Serbia (52% of funds are received by poor citizens), and that it is better targeted than in some other countries in the region<sup>3</sup>.

The predominant groups of social assistance beneficiaries are the unemployed, those incapable of working, and their children. Other categories, such as the employed, pensioners, or farmers, are represented with a minimum number among social assistance beneficiaries. More than half beneficiaries have not completed elementary school education. As for family size, one-member families are predominant (around one half), which comes as a result of decreasing chances of families with more members through the assumed high economies of scale within the household.

In sum, the social assistance system in Serbia provides modest coverage, is restrictive in terms of normative standards, reasonably well targeted to the poorest, favors small families and includes mostly those less educated, the unemployed and people incapable of work.

**Payment of arrears.** In the area of social protection, by 2000 significant arrears in social assistance, child allowance and other transfers had

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2 Compensation for families with children is provided by child allowance.

3 Chapter Two of this study.



built up, accumulated over the previous two years. Given that the first two years of transition are the most difficult for the poor, it is necessary to direct as many funds as possible towards them. Thus, the first thing that was done was to ensure that regular benefit payments were made from the budget of Serbia in for social protection (on a monthly basis), and the Fund for Onetime Assistance. All donors' funds are being directed through this Fund and, through it, arrears are being paid, including 22-26 months of unpaid child allowances, social assistance, and attendance assistance, as well as one-time transfers to all child allowance beneficiaries, single parents whose children are beneficiaries of child allowance, and on two occasions, to social assistance beneficiaries and recipients of caregivers' allowance. Apart from that, the Fund provided in the period longer than a year, on a regular basis, social assistance to 12,000 poor families who were ineligible for social assistance only because of the locally-determined nature of the income threshold in municipalities. 46,000 poorest families were temporarily supported from budgetary funds at the time of price increase in electricity prices, and donors' funds paid for a year-long accumulated overdue electricity payments for social assistance beneficiaries.

The **Transitional Fund** is an extraordinary social protection program aimed at larger enterprises being restructured or entering bankruptcy: the Government of Serbia pays from it either a lump-sum or in a small number of installments to redundant employees an amount of around 100 for each year of service. In 2002, 57,000 employees were paid off in this fashion, for which 7 billion YUD were spent. In fact, this is an option that laid-off employees may choose instead of regular unemployment compensation. The idea is to give the opportunity, even with a small amount of money, to employees to start up a small private business. Experience shows that it does not happen very often, but the cash received is used by beneficiaries to meet their subsistence needs for several months.

## REFORM PROPOSALS

The previous CLDS Poverty Study<sup>4</sup> suggested numerous changes to the child allowance and social assistance systems, such as, for both programs, establishing a single poverty line for the whole of Serbia (instead of different ones for different municipalities), replacing the relative poverty line (in terms of average wages) with the absolute poverty line expressed in YUD and indexed to the cost of living. It was also suggested the population feature of child allowance be transferred to parental allowance, and thus concentrating the child allowance program on meeting social need through removing the link between child

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4 B. Bogicevic, G. Krstic and B. Mijatovic – *Poverty in Serbia and Reform of Governmental Support for the Poor*, CLDS, 2002

allowance benefit and the number of births.<sup>5</sup> Accordingly, these proposals will not be extensively discussed in this Study, but they will be mentioned in summary, and we will concentrate on discussing other reform proposals.

## **Social assistance**

This section will discuss potential improvements in key elements of social assistance (MOP), such as the poverty line, equivalence scale, position of those capable of work, and comprehensiveness of the types of income included in the total amount of household income.

The social assistance program should be expanded and financially strengthened, so it can be a principal instrument of the state in terms of poverty reduction. MOP is the best administered and targeted poverty reduction policy in Serbia and it is the only program with the exclusive aim of mitigating the consequences of poverty. On the other hand, MOP is modest in coverage and the financial resources are significantly smaller than similar programs in other countries in transition. The main method of strengthening the social assistance program is to ease the criteria for eligibility – primarily by raising the income threshold (poverty line) and increasing the equivalence scale coefficient.

### *Poverty line*

Reassessing the poverty line that is incorporated in the Law on Social Security is certainly justified when considerable systematic reforms are at issue, and particularly if the intention is to shift the balance of budgetary policy for mitigating poverty in favor of social assistance. Of course, by raising the poverty line, the pool of potential beneficiaries is larger and more budgetary funds are required.

The poverty line used for analysis in this Study can certainly be a candidate for the line, which could be the basis for the new law because of its previously mentioned methodological benefits. However, it is too high – it amounts to 4,489 YUD for a single person household, and the existing one, at YUD 2,280 in June 2002, is much lower. Due to this high level, approximately 18.7% of the population of Serbia has an income level below the line of 4,489 YUD, and the average income of the second decile for the first (equivalent) adult in the household (4,379 YUD) amounts to approximately this poverty line. The average income of the first decile is much lower and it amounts to only 2,569 YUD for the first (primary) adult.

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5 Some of these suggestions are incorporated in the new Law on Financial Support to Families with Children, adopted in 2002, whilst others are included in the proposal of the Government of Serbia on amendments and supplements to the Law on Social Protection and Providing social Security to Citizens, which is in the legislative procedure in the Parliament of Serbia.

Taking into consideration underdeclarations of income in the survey and reductions in the number of potential beneficiaries due to failures to meet other conditions for eligibility for social assistance (assets, the Labor Bureau programs, and so forth), the number of beneficiaries would be less than 18.7% of the population, but higher than the current number; social assistance payments would be considerably higher per beneficiary, as the average poverty gap would be increased. The combined effect of the increased number of beneficiaries and considerably higher payments per beneficiary would result in a significant increase in budgetary expenditure for social assistance, which would probably be unsustainable for the current level of budgetary resources.

There is an interesting way of making a downward correction in the poverty line. Household consumption, as well as the poverty line, which is based on consumption, includes all resources, including in-kind consumption, income from the gray economy, assistance to households in cash and in-kind, and in this case the flow of services coming from property (real estate, durables, etc.). As these categories are not, and cannot for technical and conceptual reasons, be included in the calculation of the income threshold for social assistance eligibility, it is possible to exclude them from the poverty line and thus decrease it without harming potential beneficiaries' social assistance rights. In other words, the average household would declare part of its resources for the calculation of a lower income threshold, while it would not declare the rest (in kind consumption, assistance, imputed rents); nonetheless, the household uses these other resources to increase its household consumption.

If in-kind assistance to the household and imputed rent amounting to 924 YUD (the average amount in the poorest decile) are excluded from the calculations, the poverty line would be decreased from 4,489 to 3,565 YUD. It means that the poverty line of 4,489 YUD from the Survey on Living Standards (AZS) would be brought down to its equivalent level in the other coordinate system – one that is suitable for legislative purpose.

There are two problems with this concept:

- The poverty line (income threshold) is still high – 50% higher than that specified in the existing law,
- It is not realistic to suppose that these criteria apply to each household, namely that each household has exactly 924 YUD in resources that are excluded from the calculations. This leveling out to an average would affect those poor who have in-kind assistance and imputed rents which are below average.

In order to check these assumptions, we have performed simulations using the Living Standards Survey (AZS) by comparing the results of two simulations: (i) with a poverty line of 3,565 YUD; and (ii) the referential simulation which (tries to) reproduce the current regulations (as applied in May/June 2002).

The referential simulation is based on:

- the poverty line differentiated across municipalities, according to salaries at the time,
- coefficients of economies of scale from the existing law,
- limits on assets, such as land, real estate and vehicle ownership.

The referential simulation has produced the following results: the number of households eligible for social assistance would be 104,000, with 275,000 household members, and the amount needed to fund social assistance would be 266 million YUD. By contrast, the number of actual social assistance beneficiaries is approximately 50% less, which can be explained, at least partly, by the following:

1. underestimation of declared income in the survey (already discussed), so that the number of the poor in terms of income is smaller in actuality than that suggested by the survey data,
2. part of those eligible for social assistance do not apply for various reasons: stigma, not being informed, and similar,
3. errors of simulation in failing to reproduce actual conditions, including all additional legal conditions for program eligibility.

Even apart from the previously mentioned difference between the results of the referential simulation results and the actual data, it can be noted that the simulation error is equal in all simulations, i.e. that it is not biased, so that a comparison of the two simulation results at least approximately reflects the relationship between the actual condition and the condition that would occur through the policy being discussed.

The introduction of a poverty line of 3,565 YUD across the entire territory of Serbia, would increase the number of beneficiaries by 60% compared to the referential simulation and raise the poverty gap by 36%, which together would result in an increase in budgetary expenditure by 114%.

The third option for the selection of the poverty line is its calculation based on both the fiscal position of Serbia and social assistance policy. This method certainly has a realistic approach, as it provides a lower poverty line although an objection can be raised – that it does not achieve the poverty line on which this Study is based. Anyhow, there is an answer to that: the aim of social assistance cannot be uprooting poverty in Serbia, but it is assistance to the poorest among the poor in order to provide them with a minimum existence.

Raising the poverty line by 10 and 20% above the current level of 2,280 YUD (16% of the Republic average of gross earnings) would result in changes shown in the next table. Prior to this, we note that this change consists of two components: the first one is unification of the poverty line across all municipalities at a level of 2,280 YUD (which is 16% of average gross earnings in Serbia at the time). It would not have any effect in richer municipalities, as the poverty line in these was already at that level. Lifting the poverty line to 2,280 YUD in poorer municipalities would result in an increased number of beneficiaries. The second component would result in an increased number of beneficiaries in all municipalities due to the higher poverty line.

**Table 2.**  
**Effects of the Poverty Line Change (in %)**

Poverty line	Transfer amount	No. of households	Budget
Municipal average	100	100	100
2280	106	110	116
+10% = 2508	113	116	131
+20% = 2736	118	125	147

The first step – setting a uniform poverty line at 16% of the average gross salary in Serbia, i.e. 2,280 YUD – would increase spending on social assistance by 16%, which represents a combined result of the increased number of covered households by 10% and increased average income deficit by 6%. The second step – additional lifting of the poverty line by 10 or 20% in relation to the general poverty line – would result in an increase in expenditure of 31 or 47% in relation to the initial position.

It is important to note that raising the poverty line of 2,280 YUD by 10 or 20% would cause a slight increase in expenditure on social assistance – by 13 or 27%, which is a relatively small increase. Even the number of covered households grows in a slower pace – only by 6 or 11%. These results indicate that the population density around such poverty line is not high, so it is possible to raise the existing poverty line considerably without resulting in significant growth in the number of beneficiaries and expenditures, but to be fiscally affordable.

#### *The equivalence scale*

The poverty line cannot be, in any case, the same for single-member and multi-member households, but it should be adjusted according to household size and characteristics, so that for each additional household member the poverty line would be increased to a certain extent, but what is the appropriate amount? Should the lifting of the poverty line be proportional to the number of household members? So, if the poverty line for a one-member household is for instance 1,000 YUD, does it mean that for a two-member household it should be 2,000 or perhaps only 1,700? It would be reasonable to assume (according to standard theory of economics supported by empirical work) that in order to maintain the same level of welfare, the expenditure per household member required would tend to fall with an increase in the number of household members. In other words, there are economies of scale in households, so that for each additional member less money is needed to maintain the achieved level of welfare.

Economies of scale occur because certain goods that are used in a household have characteristics which make them different from usual goods, like:

- non-exclusivity, i.e. if some item is available for one individual, it is available for others too, and
- non-rival consumption, i.e. consumption of a particular item by one individual does not affect the consumption level of others.<sup>6</sup>

For example, if there is a light bulb in a room, then it can be equally used by one individual or more individuals, with no additional cost. There are many such goods in a household, such as utilities, car, newspapers, TV set, and so forth. Other types of goods, such as food and beverages, exhibit characteristics of exclusivity and rival consumption, i.e. consumption by one individual excludes others and diminishes their consumption. Goods of transitional character also exhibit both exclusivity and rival consumption.

Economies of scale in households with equal individuals (for example, they are all adult men with equal characteristics) means that for maintaining the achieved level of welfare, the average expenditure (or necessary income) is decreased per household member. However, if individuals are not equal, but differ in sex, age, and other characteristics, additional complications occur, as the marginal consumption needs of each will be different (i.e. the consumption needs of a toddler, teenager, adult female and elderly person will be different)

When assessing the needs of individuals living together in a household, it is necessary to take into consideration two components: 1) economies of scale, which indicates that the marginal cost for an additional individual tends to fall, and 2) demographic structure of the household, as consumption needs for different individuals are different. On the other hand, cross-linking these two components, with differentiation for each of them, would produce a large number of possible combinations of characteristics; these would not enable: a) empirical assessment of coefficientstoo many variables), and b) their incorporation into the relevant law (too complex). Hence, it is necessary to simplify the concept to a certain extent according to the needs of empirical assessment and an understanding of the law on benefits for potential beneficiaries.

There are a number of methods for undertaking an empirical assessment of equivalence scale, but no single one is particularly satisfactory.<sup>7</sup> There are two principal groups of methods: firstly, those based on econometric evaluation of data on expenditure/income of households from surveys, and secondly, those based on expert opinion.

Within the first group, the methodology based on the Engel Rule is often used, as it is in the first chapter of this Study, but its main

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6 In economic theory, such goods are usually called public goods

7 See A. Deaton – *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*, John Hopkins University press, 1997, Section 4.3



weakness is in the assumption on which it is based – the share of food in total spending is an accurate expression of welfare: as the share increases, the level of welfare falls, and vice-versa. There are good reasons for further discussion of this assumption.

In the first chapter of this Study, equivalence scales for the population of Serbia have been established by means of the empiric evaluation of the Engel type based on the AZS in 2002:

$$\text{Equivalence scale} = 1 + 0.81 * (\text{adults} - 1) + 0.24 * \text{children (0-6)} + 0.75 * \text{children (7-18)}.$$

This scale is suitable for analytical purposes, but it does not meet the needs of this chapter – to suggest directions for reform of the Law on Social Security. That is because:

- it is based on the numerical analysis of household *consumption* and the poverty line defined according to *consumption*. Consumption of a household cannot be assessed in the current legally-regulated procedure for establishing eligibility for social assistance. By law, it is possible to monitor only the household *income* as an indicator of the living standard level, which can be, at least to a degree, detected by means of documentation and by direct insight into the household;
- it is overly simplified, as it does not take economies of scale sufficiently into account, i.e. less expenditure/income is needed to maintain the same welfare level for each additional household member. Namely, it only recognizes the first and the second adult, and for subsequent adults, it counts the same level of consumption as for the second adult. Or, it counts the same level of consumption of the second child and other children from the same group as for the first child. Consequently, it looks more like a scale of demographic composition of the household than of real economies of scale. On the other hand, for the purpose of the new law, it is necessary to diversify the scale to a larger extent in order to respect different situations in differently sized households;
- it is calculated on the basis of the entire population, and for the purpose of legislation, it would be better if it is assessed only on the basis of data on the poor portion of the population – the portion which is eligible for social assistance and other transfers to the poor, because the equivalence scale may (and does) differ between the wealthier and the poor strata. An attempt to establish the equivalence scale by the same method, only for the poorest 30 and 40% of the population from AZS, did not result in an acceptable outcome.

Using the Engel statistical method, assessments of some alternative specifications of equivalence scales have been performed. Some of them are not statistically significant (negative sign, coefficient >1 for household members of lower order, etc.), while some which were statistically significant are given in the next table:

**Table 3.**  
**Some of Equivalence Scales**

Household type	1st	2nd	3rd	4th	5th
Only adults	1	0,79	0,72	0,69	0,65
Only adults (MOP basis)	1	0,79	0,72	0,68	0,66
With no difference between adults and children	1	0,78	0,68	0,63	0,57

*Note:* the MOP basis is a special survey whose participants are members of 500 households receiving social assistance.

From the table, we can draw the following conclusions:

- that the results are mutually very similar,
- that economies of scale is very low for the third and subsequent family members, and
- that inclusion of children makes economies of scale stronger to a certain extent, but does not change the results significantly.

One of the alternative calculation methods of the equivalence scale is based on a subjective assessment of participants on the absolute minimum income needed for meeting household subsistence needs, which was one of the questions in the AZS questionnaire. As expected, the survey replies suggested that significantly more funds are necessary than the poverty line used in this Study, which means that two-thirds of the population of Serbia, according to the assessment of participants, was below this subjective poverty line. Also as expected, households with lower income assessed the minimum subsistence level to be lower than households with a higher income level, for the same household size.

The responses in AZS on the minimum subsistence level were used for the assessment of the *subjective equivalence scale* for additional household members. The new scale was calculated in the following way: firstly, for each household type (no. of adults and no. of children), a threshold was designed against which the necessary and declared (available) household income is leveled to an average by means of regression of the needed income on the available one. Thus, a subjective poverty line is obtained for each household type: if the declared income is higher than the threshold, then the average household of the given type is not considered as poor, and if it is higher, then it feels poor. For example, by comparing subjective poverty lines for a one-member adult household to 2-, 3- and four- member adult households, a subjective assessment on additional cost for one adult is obtained. Similarly, by comparing subjective poverty lines for a given household of adults to households with an equal number of adults and 1, 2 or 3 children, a subjective assessment on additional cost for one child is obtained.

The results of the assessment based on responses in the AZS are given in the following table:



**Table 4.**  
**Proposal of the Equivalence Scale**

Subjective equivalence scale				Current scale
Adults	Scale	Children	Scale	
1st	1.00			1
2nd	0.54	1st	0.52	0.38
3rd	0.43	2nd	0.32	0.38
4th	0.39	3rd	0.10	0.13

We note that:

1. coefficients for economies of scale are falling, which is in line with the concept of economies of scale,
2. coefficients for adults are higher than for children, which is in line with assessments from other countries; more rapid decreases in the coefficients for children is a consequence of the fact that more children in one household can use the same things (clothes, footwear, toys, textbooks, etc.),
3. coefficients are lower than those calculated for the Engel method,
4. coefficients are higher than against the current Law on Social Protection (last column of Table 4).

Let us see what would be the effects of introducing a subjective scale on a threshold for particular households differ in size.

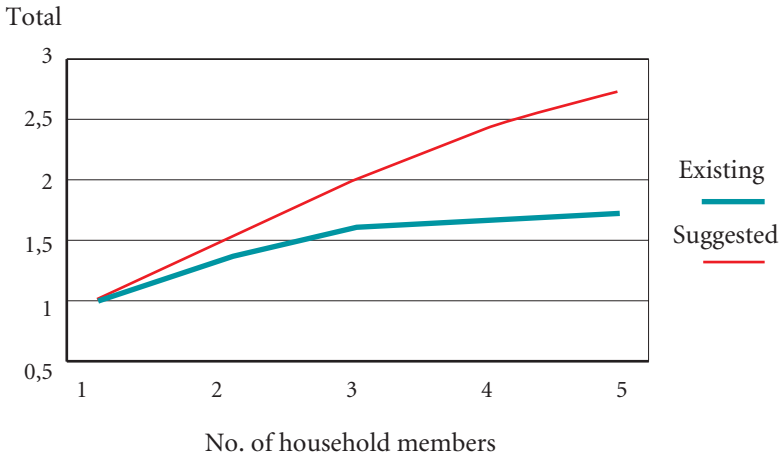
With one-member households, of course, there would not be any changes, and with two-member households, the difference would be marginally in favor of the new equivalence scale. With further increases in the number of household members, the difference would grow rapidly. This means that two-member households would benefit from this change, since coefficients would grow at an above average rate for subsequent household members.

A related and simplified specification of the equivalence scale of the same subjective method containing only the 1st adult, other adults and children (meaning that it does not distinguish between adults and children) produced the following results: 1st adult – 1, other adults – 0.52, children – 0.35. These assessments are practically equal to the new version of the OSCE equivalence scale (other adults – 0.5, children – 0.3).

Decisions on the selection of the equivalence scale is basically arbitrary because, as was noted, all methodologies have strengths and weaknesses. Consequently, the selection of methodology cannot be based on methodological characteristics of the particular model, but on some other criteria.

We propose that the subjective scale referred to in Table 4 for the equivalence scale should be incorporated into the new Law on Social Protection, because:

**Figure 1.**  
Suggested and Existing Equivalence Scale



- it includes all necessary components of a good equivalence scale: both economies of scale and demographic structure of the household,
- it corresponds to the needs of the law : it is neither too simple, nor too complex; it is able to reflect all important household characteristics and also to be understandable for its beneficiaries,
- it is higher in value than the current scale from the existing Law on Social Protection, which overestimates economies of scale and, to a certain extent, discriminates against households with more members. In line with that, the proposed equivalence scale is more realistic and would provide better results on the minimum number of households with a higher number of members,
- it better reflects the limited budgetary possibilities than alternative specifications assessed by Engel’s method, which, since they have higher values, would result in much greater budgetary obligations towards beneficiaries,
- it is established on the basis of citizens’ opinion, so it is “democratic” in character, which gives it an advantage over alternative scales. In other words, if the scale meets other necessary conditions (and this one does), then its advantage is based on the fact that it is in accordance with Serb citizens’ own assessment of how much additional costs are caused by additional individuals in the household.

We have assessed effective changes of the equivalence scale by means of simulations based on AZS. For the referential scale, the first used a poverty line of 2,280 YUD and an equivalence scale from the existing law; the second combined the same poverty line with the newly proposed equivalence scale. The results are presented in the following table:

**Table 5.**  
**Effects of Change of the Equivalence Scale, in %**

Equivalence scale	Deficit	No. of households	Budget
Existing	100	100	100
Proposed	114	111	126

We can see that the replacement of the existing equivalence scale would bring an increase of 11% in the number of households eligible for social assistance and the deficit in their average income would increase by 14%, which would result in increased expenditure for social assistance by 26%. As expected, multi-member households would benefit significantly by this replacement, and accordingly, the average number of household members eligible for social assistance would be increased from 2.65 to 2.83.

*Combination of the increased poverty line and changed equivalence scale*

In previous chapters, changes have been suggested in both the poverty line and the equivalence scale, and assessments of their separate effects have been presented. In this chapter, we will show the results of simultaneous application of both changes by means of the AZS simulation.

**Table 6.**  
**Effects of Change of Equivalence Scale and Poverty Line**

Equivalence scale	Poverty line	No. of households	No. of individuals	Transfer per person	Total transfers
Existing	Municipal	100	100	100	100
Proposed	2280	122	131	112	146
Proposed	2508	132	143	117	167
Proposed	2736	144	155	123	190
Proposed	3565	185	200	146	291

We have compared the results of the referential simulation (the existing equivalence scale and poverty line across municipalities) with four alternatives containing the newly proposed equivalence scale and the four previously mentioned poverty lines.

Of course, a more favorable equivalence scales and higher poverty lines result in more households and individuals included in the program, and higher transfer amounts per person (and household). The final outcome is an even more rapid increase of budgetary funds for financing certain variances of the social assistance program.

## *Position of citizens capable of work*

Any transfer, including social assistance, usually causes a certain reaction by its beneficiaries, and here we refer to the impact of social assistance transfers on potential job offers. If social assistance is high enough to provide a normal or, at least, modest standard of living, then a beneficiary who is capable of work will need to assess whether it is more worthwhile for him to try to find employment and earn money, while risking losing social assistance, or to remain unemployed and lose potential earnings, but keep social assistance. The result of this assessment depends on individual preferences, on the amount of social assistance, and the amount of (potential) earnings in the labor market. It is quite possible that, at least with a number of beneficiaries, this assessment results in avoiding attempts at finding employment and a decrease in job offers, which on aggregate could lead to a decrease in the overall number of jobs in the economy and potentially lower gross domestic product.

This can be a serious problem as proved by experience of countries with developed welfare state where a serious negative impact has been found to take place on economic performance. Thus, in European countries, (too) high social protection and generous unemployment compensation has contributed to high unemployment (around 10% over a long period of time) and increased wages for less-skilled workers. It appears that many individuals assess that it is more worthwhile to be unemployed and receive high compensation than to accept a job which is less attractive than their old one. Similar experience, though to a smaller extent, can be found in the USA. For this and similar reasons, over the last ten years, the process of reducing the size of the welfare state and its associated institutions welfare state has begun, which should result in a more flexible labor market and higher employment. This process has occurred in EU countries in recent years, significantly reducing unemployment.

Social assistance is rather modest in Serbia, so the incentive for avoiding employment is low. Yet, it does not mean that this will be the case in the future because, along with economic development, social assistance will grow in real terms and accordingly cause negative effects on incentives for taking up employment. Secondly, particular reforms that are being discussed in this Study may increase the need for social assistance and result in negative incentives to beneficiaries in terms of looking for employment.

Let us discuss some possible remedies for the problem of the trade-off between earnings and social assistance and for its potential negative effects on the readiness of an individual to enter the labor market.

1. In many countries, standard conditions for eligibility for social assistance refer to the readiness of the individual capable of work to find employment or to be included in specific labor market programs

(e.g. training). To be specific, an individual shall lose his/her right to social assistance if he/she:

- refuses to accept an employment offered to him/her by the Labor Bureau,
- refuses to be included in skill-improvement programs that are organized by the Labor Bureau,
- refuses to be included in socially useful activities (arranging parks, taking care of children, etc.), such as those which are requested, for example, in the USA.

There are also attempts in Serbia to introduce incentives, through legal means, for individuals receiving social assistance to find jobs. That is a provision of the Law on Social Protection, which rules that a person capable of work who refuses to take up the offered job or refuses to be included in Labor Bureau programs shall not be entitled to social assistance. However, it seems that such provisions are not effective for the following reasons:

- in Serbia, labor bureaus seldom mediate in finding jobs and even more rarely are they able to offer any kind of job to social assistance beneficiaries,
- until recently, additional training and retraining programs were scarce, so they could not be used as a key condition; lately, opportunities for this type of activity have been significantly increased, but it is based mainly on donors' funding and the question is if a sufficiently high level will be maintained for a longer period of time.

The idea of socially useful work as a prerequisite for social assistance is very good, but its relevance is questionable for Serbia since its implementation presupposes a developed system of social institutions which does not yet exist in the country.

We may conclude that the working conditions should definitely be kept for eligibility of those capable of work for social assistance, but without expecting sufficient impact on take-up of job offers.

2. A radical solution to the problem, as applied in Estonia, suggests the complete exclusion of an unemployed individual who is capable of work from the income threshold calculation and social assistance amount, as if he/she were absent from the labor market. This makes assessment of the eligibility of a family for social assistance more difficult because a particular income level is associated with fewer members and thus decreases the income threshold and thereby the social assistance amount for the eligible family (since the difference between the threshold and the given income is decreased). Of course, the goal of this measure is not to worsen the economic situation of the whole family, but to give incentives to look for job to individuals who are capable of work.

Exclusion of individuals capable of work from the right to social assistance can certainly be the solution to our problem as such an individual does not receive social assistance, so new employment does not

mean any loss for him/her and his/her family. The difficulty here is as follows: it affects those who want to find employment, but they need some material support to survive, at least temporarily while they look for a job.

3. A more moderate variation on the previous solution is the following one: an individual capable of work is entitled to social assistance for a certain period of time after which he/she loses it. The idea is to provide basic social security to each individual without income for a period of time when he/she will have time to look for employment, and after that he/she will be forced to address his/her lack of employment by revoking social assistance, or to accept the consequences. This system is applied in the USA and it has led to good results: unemployment among social assistance beneficiaries has significantly decreased.

Obviously, it is not possible to adjust the length of time in which an individual capable of work can exercise the right to social assistance according to a realistic time period within which to find a job, as circumstances differ for different individuals and can change rapidly. Consequently, a “protected” period should be established.

4. In practice, when approving social assistance in Serbia, one other method has been used: adding to the real household income two other measurable incomes: “missed earnings”, which individuals capable of work could have made (in agriculture or the gray economy) but did not, and minimum wages guaranteed by law, which they also did not receive. The purpose of the missed earnings is obviously to decrease the number of those social assistance beneficiaries who are capable of work, and the purpose of guaranteed wages was to transfer the problem of insufficient real wages on to employees and employers, with the rationale that the law provided/prescribed minimum wages sufficient for survival for everyone, and that right had to be implemented.

Difficulties with defining a measurable level of income are obvious, for example, with missed earnings; if this calculation assesses the income threshold, which is normal, then this method is the same as exclusion of the individual capable of work from the right to social assistance even when he needs it for survival. On the other hand, this method has been applied selectively, both in geographical terms and in terms of the eligibility of individuals, which is difficult to justify and leads to the exclusion of some individuals from the right to social assistance (i.e., it limits the number of exclusions). As for guaranteed wages, the principal idea here is incorrect, meaning that the provision of the law on the mandatory payment of guaranteed wages is sufficient protection of employees’ social position, i.e. that the enterprise can and has to pay; but very often that has not been the case, because in the past years it was a usual practice in many enterprises for salaries to be paid late or not at all. It means that employees did not receive even the assumed minimum guaranteed wages.

5. The previously mentioned methods were based on the “stick” principle in terms of giving incentives to working activities through punitive measures. The opposite system, based on the “carrot” principle, is also possible, whereby the social assistance beneficiary capable of work is rewarded if he/she finds a job. The problem with the standard system is as follows: each dinar (YUD) of newly received earning means losing one dinar of social assistance, so the (implicit) tax at the time of taking on employment amounts to 100%, which represents a disincentive for finding a job. It is possible to diminish this steep tax rate through the deduction of a part of the income of the newly employed person, when calculating the income on which entitlement to social assistance depends. In this way, social assistance beneficiaries are encouraged to find employment, as they will not be in the position that 100% of their new income is calculated for eligibility for social assistance and thus implicitly taxed at 100%. This method is used in Bulgaria.

Difficulties with this method for solving the problem are three-fold: firstly, this type of incentive for employment cannot be provided over the long run (for example, a year or more), as it will negate the main objective of social assistance – supporting those without sufficient income; secondly, if the duration of such assistance is limited to a shorter time period, then there is the issue of the level of incentive for employment; and thirdly, positive incentives produce new costs – differently from negative (punitive) ones, which actually save on public expenditures.

6. The selection of the appropriate method for giving incentives to find employment to poor citizens capable to work through the social assistance system, should take into consideration existing policies within the system of unemployment protection and other related programs (for example, the Transition Fund), as such policies also support those who have lost their jobs and who are threatened by poverty.

All of those who have lost their jobs enjoy the right to unemployment compensation. The duration of this compensation depends on the previous length of service, and it is rather generous: up to 24 months for the older unemployed. In this way, the new unemployed are provided with some income while looking for a job, i.e. they are not immediately without any income. To be frank, it appears that the state is not able to pay out legally entitled compensation for the unemployed and that arrears are increasing.

Employees who are going to lose their job have an extraordinary right to choose between unemployment compensation and a one-time payment from the Transition Fund, and they usually opt for the second one. However, this money tends not to last long, and they often quickly are left with no funds, and thus become candidates for social assistance. This raises the question of whether it is appropriate to include them in the social assistance program, as this tends to reward their short-term profligacy, particularly in relation to those who receive



unemployment compensation (equal funds but spread over the long run).

The third category of people capable of work are those who have never been employed, at least not formally, and who, consequently, have no right to unemployment compensation. If they are poor, they are eligible for social assistance indefinitely.

7. The previously mentioned options have their pros and cons. Probably, the best option is the one that provides temporary support to the poor who are capable to work because:

- it gives incentives for employment, as social assistance is temporary, and it represents an improvement over the existing policy of indefinite entitlement,
- it provides a minimum income for those who are not eligible for unemployment compensation, although there is a question of whether or not the same thing should be provided for those who receive (long term) unemployment benefit or resources from the Transitional Fund; yet, in order to keep the universality of rules, it would probably be recommended to differentiate the conditions for acquiring the right to social assistance – between those who have been receiving transfers on account of losing their job and those who have not,
- it saves budgetary funds, which can be used for providing assistance to those who are really vulnerable and incapable.

Such a system of truly providing incentives for employment to individuals capable of work probably is not necessary to be applied immediately because the existing income threshold of social assistance beneficiaries is low, so that the number of those who are eligible is not large. Yet, if the income threshold will be raised in the future, then, sooner or later, the problem of dealing with the capable of work will be relevant.

*The list of income for MOP (or how certain categories of recipients can benefit)*

The list of the types of household income that is taken into consideration when calculating the income threshold is both a technical and conceptual question of utmost importance for eligibility for social assistance. The exclusion of certain types of income from this list represents an advantage for those households which have them because it represents an equivalent increase in the threshold based on *overall* income, and makes it easier to become eligible for social assistance.

Let us first list all the different types of income. They include:

- 1) all legal and commercial income, i.e. that counted as income for income tax purposes,
- 2) income from unregistered activities (gray economy), and
- 3) income from social transfers, such as pensions and allowance for the disabled, foster parent's allowance, transfers in line with regulations on war invalids, parental allowance, attendance and



assistance allowance, compensation for physical impairment, unemployment benefit, child allowance, transfers from relatives who are legally obliged to render support, the severance payments, and compensation from social programs.

For the income threshold calculation, the existing Law on Social Security excludes the following categories of income: child allowance, attendance and assistance allowance, transfers for physical impairment, transfers based on bonuses and termination pay when retiring, and transfers related to students' living allowance.

In principle, it would be normal for all household income to be included in the threshold calculation for eligibility for social assistance. Social assistance is targeted to the poorest, so all others who do not belong to that category, according to their income, should not receive it. Possible exceptions to the rule of calculating all income should be firmly established.

There are two important questions here:

- 1) whether to include in the list of income for calculation of the threshold amounts received from child allowance and various types of support to the disabled; and
- 2) how to treat substantial one-off payments, such as parental allowance and severance payments in the case of redundancy.

Adv.1. Possible benefits for children (families with children) and the disabled can be justified by reasons of social policy. Namely, children or families with children enjoy special state assistance, which is above the level of support for similar families without children. The same need for special assistance also applies to the disabled with an additional reason – the higher living cost of families with disabled members in terms of greater levels of direct (care, drugs, aids) and indirect (engagement of a family member which leads to income loss on the other side, etc.).

Within the state financial support system, care for children is implemented in the best manner through special instruments established for that purpose: child allowance, maternal allowance, sick leave allowance, tax policies, etc. Provision of benefits for children within various social programs, even in those aimed for other purposes, is not the best way of support – it is much better to achieve the desired level through specialized programs and preserve the universality of other programs, especially social assistance as a “residual” program. Consequently, income from child allowance should not be excluded from the income that is used for calculating the threshold for social assistance, but should be used to find compensation elsewhere in the system of acquiring the right to child allowance (to be discussed later).

The situation is somewhat different for entitlement of families with a disabled member. While children do not add additional costs in relation to adults and the state wants to offer them strong protection because they are children, the disabled are in a different situation because they need additional support not based on a special privilege

(like children), but due to additional costs caused by their condition and the need of equalizing their position with other beneficiaries.

The answer to the question of how to treat income from different sources of benefit for the disabled cannot be offered in this Study before a detailed research of overall system of protection of the disabled in Serbia is conducted, as this issue is very complex and thus far insufficiently investigated.

Adv.2. High one-off transfers, such as parental allowance or redundancy payments, should not be calculated on the basis of one month or one quarter, as that could potentially distort a person's circumstances and thus be unfair. This would mean that an individual would receive social assistance even though he earned a considerable income in the previous month/quarter, which led to an increase in his/her living standard for several months to come.

An appropriate solution to this problem is in "time-demarkation" (a term used in bookkeeping), meaning extending one-off income throughout a longer period of time. So, for example, this period of time could be 24 months for maternal allowance, and 12 months for redundancy payments. The reason for such differentiation is the differing amount of payments.

### **Child allowances**

Basically, there is a conceptual dilemma about the desired feature of child allowance, and the right to child allowance and coverage. Its amount depends on the answer to this dilemma, based on a number of factors. There are two essentially different models – one with wide coverage, and the second with a narrow range of coverage.

**Firstly, universal child allowance.** The central idea is that all children should realistically be covered by the child allowance program based on the obligation of the state to provide the proper conditions for ensuring a child's well-being. Thus, child allowance should be a universal benefit funded from the state budget based on the principal of transferring resources from people without children to those with children. The child allowance program would not be directed towards the poor and specially linked to poverty mitigation despite the fact that poor families would have the same entitlement to this benefit as other well-to-do families. The concept of child allowance is historical (e.g. France) and it is usually based on the need for a population policy in countries with low fertility. Given that it is not linked to poverty, i.e. that the right to benefits does not depend on the level of family income, universal child allowance does not provoke a stigma or psychological resistance towards procedures of application for social assistance, which might otherwise occur with middle class members.

In this model, the amount of child allowance does not depend on family income, and it either is equal for all children, or depends on the sequence of births in the family and to the children's ages. The lack of

linkage between the allowance amount and a family's income is implicitly based on the idea that the state equally funds the cost of upbringing each child, i.e. it does not supplement the family budget in the amount necessary to cover family expenditure for children.

**Secondly, child allowance for the poorer classes.** The basic idea behind this model is completely different: the attempt here is to give financial support to those who need it the most – poor families. Since budget funds are always limited, they should be allocated in the most rational way according to established priorities. Instead of distributing the available funds to a vast number of children, as in the previous model, they are, according to this model, targeted towards those from poor families but in a higher amount, which could better meet the needs of these children than child allowance with the unique amount, as in the previous model.

One of the basic elements of the child allowance model with the more narrow coverage is the standard theory of the declining marginal use of money. Namely, each additional unit of resource brings less benefit to individuals with a higher level of income than to those with lower income. It further means that the same child allowance amount brings less benefit, measured in terms of the amount of goods and services able to be purchased with it, to middle class members than to the poor. Thus, if the objective of social policy is to maximize people's welfare, then, given a fixed overall social transfer level, such objective, will be more easily achieved by targeting the poor than by a universal transfer to all citizens.

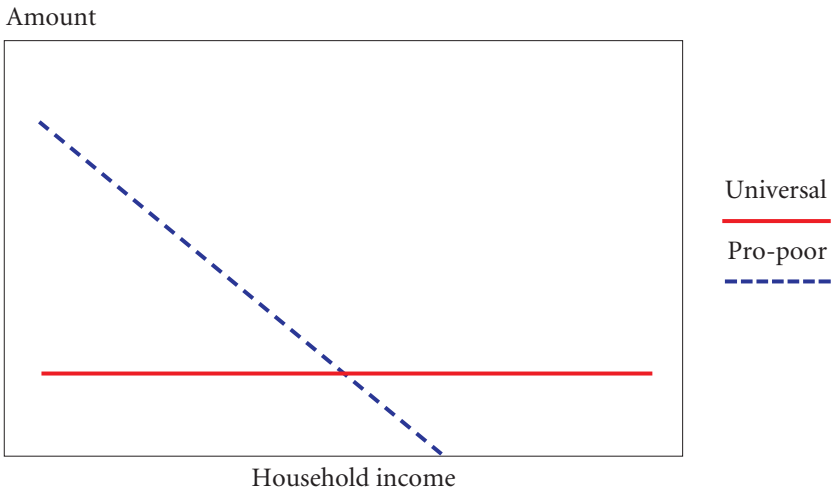
According to this model, the child allowance amount cannot be the same for all those eligible, but it has to take into account family income according to the principle that child allowance is higher for those with lower incomes. In this case, as with social assistance, the best concept is that of topping-up the family's resources, whereby the state provides a transfer to the family in the amount representing the difference between calculated necessary funds for one child and the available own funds of the family. Of course, this model can take into account important differences in the cost of children of particular categories (age, sequence of births, etc) through particular policies when establishing the appropriate level of benefit amounts.

A summary of these two models of child allowance is presented in the next graph.

With the universal benefit model, the coverage of children is wide, and the child allowance amount is fixed. On the other hand, with the targeted model, coverage is much narrower and the child allowance amount is different and usually much higher than with universal model.

Of course, it is also possible to have mixed regimes between the two models, combining elements of both models. One variation in the first model is restrictions in the right to child allowance in such a way that children from the wealthiest social classes will not be covered, but the income from child allowance does not represent a significant item in their family budgets anyway. Thus, the coverage would be restricted to

**Figure 2.**  
**Two Models of Child Allowance**



an extent – for example, to a minimum of 2/3 of the total number of children. The intention of such narrowing of coverage is to save budgetary funds along with a belief that it will not cause negative social and population effects since child allowance is transferred to all those families for which it makes sense in financial terms.

The child allowance model existing in Serbia now represents a combination of the two models. It had been intended to be wide in coverage, originally among the employed both in and out of the economy (based on employment insurance), and later, as of 1992, in the general population. The child allowance amount is fixed and does not depend on any other criteria except meeting the income threshold and other general conditions. Anyhow, the economic and financial crisis during the 1990s decreased the threshold level and consequently the coverage of children. In 2002, an additional considerable increase occurred when the growth of real income and the introduction of assets as criteria for eligibility caused a drop in the number of children covered by child allowance from 665,000 in December 2001 to 497,000 in December 2002, which represents one-third of the total number of children in Serbia.

A relatively low income threshold for child allowance is more in line with the second model as it confirms its orientation towards poor strata of society: from low middle income levels to the poorest citizens.

Any discussion about reforms of social transfers, particularly, child allowance, undoubtedly leads to the re-examination of the principal basis of child allowance, the largest and most important transfer.

Further in this text, we will present two options for reform of the child allowance system: firstly, improvement of the existing model, and secondly, a radical solution – integration of social assistance and child allowance into a single social transfer, which could be termed family allowance.

### *Type of child allowance*

Child allowance in Serbia is paid out in a fixed amount, which is equal for all children included in this program, i.e. for all children who are entitled to it. (The only exception is households with a single parent and children with special needs). In other words, when establishing the child allowance amount, neither household income nor the child's age is taken into consideration, nor any other characteristic except for the fact that the household meets the conditions for eligibility for child allowance. Thus, only two situations are possible: either the household is eligible for child allowance or it is not. If it is, it receives the same amount for each child, as established by law (around 1,000 YUD).

This type of benefit is widely applied in many countries in the world. Some other countries have introduced child allowance that grows with the sequence of births (i.e. it is higher for the third child than for the second one, etc) as part of its population policy to give incentives for more children, in response to a politically unacceptable slowing in the birth rate. However, we note that neither type takes the family's social status (i.e. income level), nor differing costs of supporting certain categories of children into account in the calculation of child allowance. The basis of such approach is, as indicated, the idea of universal child allowance and the intention of the state to equally assist in each child's upbringing.

Yet, the idea of an equal amount of child allowance can be questioned:

- even if we stick to universal child allowance, the question is whether the amount should be equal or not. One of the advantages of for equality is the concept of the state's provision of equal support for each child, but the question is: what is the meaning of *equal support* – is it the state's equal contribution expressed in nominal terms or is it a partial leveling of living conditions for each child? If it is the former, then the state aims to provide the same amount of purchasing power (goods and services) and does not try to directly influence uniformity; it considers that the goal is achieved if it has facilitated each child to purchase part of the consumer basket, regardless of all other circumstances. If the latter (the aligning of consumption), then it is necessary to approve a higher level of child allowance to a child from a poor family in order to make him even partially closer in living standard to the child from well-to-do family,
- an important weakness of the equal child allowance concept within a universal child allowance program (with wide coverage) is the fact that, to wealthier families, the child allowance received means little or nothing for maintaining or improving their living standards – such a small amount to richer families is marginal and almost negligible in overall consumption. Consequently, resources spent on transfers to the wealthy cannot be considered as well employed. On the other hand, the same amount trans-

ferred to the poorest implicates a considerable improvement in their living standards, meaning that it provides much higher marginal benefit for these families compared to wealthier ones. The basis of the difference is the long time well known idea of declining use of money, which states that the increment in benefits gained by additional consumption is a function of the consumption level or income. In another words, one dinar (YUD) transferred to a poor person increases his welfare (and overall welfare) more than a dinar given to a rich person; maximization of welfare should be an objective of social policy,

- the equal child allowance concept neglects the different costs associated ( ) with different children, even if differences in income are disregarded. Namely, elder children require greater levels of expenditure than younger children as the former have higher consumption requirements than younger children, with the latter “inheriting” some goods from their elder siblings. These demographic differences within a family simply cry for relevant handling.

Thus, a weakness of the equal child allowance concept is that it provides equally for different children. This characteristic becomes especially prominent when the child allowance concept is not universal but targeted to poorer families, as is the case in Serbia. Then, there is no sense in neglecting the level of poverty and allocating the same child allowance to all children. The right solution is in differentiating child allowance. Slovenia and Croatia are among those that take into account household social status and differentiate child allowance amount according to household income.

There are two methods for differentiating child allowance:

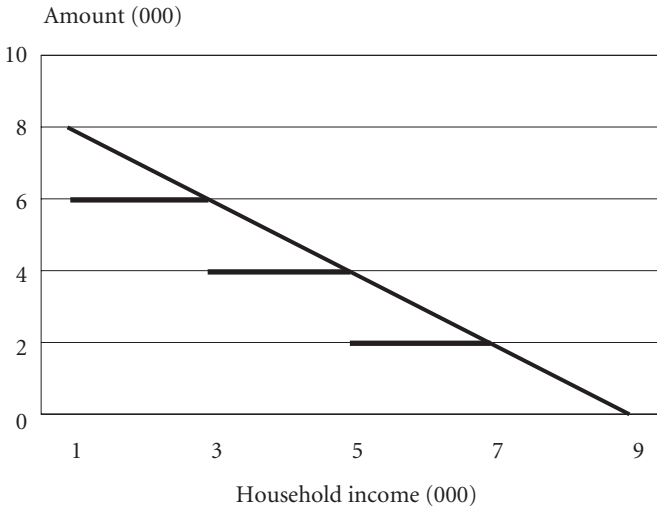
- a. firstly, paying out the difference between the income threshold for child allowance and overall family income – this is a technique that is used for social assistance benefit,
- b. secondly, paying different child allowance amounts, depending on family income.

We can note the main features of these two types in the following graph.

The sloping line represents the child allowance amount according to the method of supplementing the original household income up to a given threshold (Option A). The line has a 45 degree downward slope; thus, the child allowance amount decreases by 1 YUD for each dinar of growth in family income, which is in line with the idea of assessing family income when establishing the child allowance amount. Thus, a household with an income of 1,000 YUD receives child allowance of 8,000 YUD, the household with 4,000 income receives 5,000 YUD, and the household with 9,000 income does not receive any allowance.

An advantage of the method of topping-up benefits is a direct reflection of household income in the child allowance amount (in the opposite direction, of course) and in the fact that it provides the same income level to each household with particular demographic characteristics.

**Figure 3.**  
**Two Types of Child Allowance**  
 Supplementing and Categories



In the previous graph, three horizontal lines represent three different levels of child allowance depending on household income (Option B). The poorest households receive child allowance of 6,000 YUD, those medium poor – 4,000 YUD, and the least poor – 2,000 YUD.<sup>8</sup>

This method of child allowance actually approximates the top-up benefit method in a rough way. Here, the child allowance amount does not change gradually in the proportion of 1 YUD of income/1 YUD of child allowance, as is the case with topping-up benefits. The amount of child allowance is kept constant in a certain band of changes in income, after which it increases substantially. However, the (rough) link between household income and the amount of child allowance remains. It is certainly possible to increase the number of categories of child assistance levels, and in this way to diminish the “error” in relation to the method of topping-up benefits. Then, the question of whether or not to use the latter method may be posed. The second characteristic of this method is that, through leveling to an average, it decreases the highest child allowances from the topping-up model, and increases the lowest ones, as shown in the previous graph.

A variation of the previous model would be to establish categories of the child allowance amounts, but these should not approximate the top-up model. Using values from the previous diagram, three categories could be established with the following child allowance amounts: 3,000; 2,000; and 1,000 YUD. More realistic figures, based on the existing system, would be 1,500; 1,000 (the current amount); and 500 YUD.

<sup>8</sup> The quoted child allowance amounts are for illustration only



Actually, this model would simply be an extension of the existing child allowance model, which is not very sensitive to changes in the household income, with a partial adjustment in the form of differentiation, but not taking into account the family income and bringing it to the threshold level (directly as with supplementing or roughly as with the first sub-variation of the category model).

Choosing the payment model certainly depends on the child allowance concept discussed earlier.

### *The equivalence scale and the poverty line*

The philosophy of child allowance is connected to the question of whether to apply the equivalence scale (perhaps the one for social assistance) to child allowances too. As a reminder, according to the existing Law on Financial Support to Families with Children, economies of scale are not used when calculating the household threshold for eligibility, but the threshold is calculated on the basis of household per capita income (the same threshold is used for each member, i.e. the coefficient equals 1 for everybody). With this policy, the poverty line for multi-member households is increased over that used for one-member household.

On the other hand, one reason to use the equivalence scale to establish entitlement to child allowance is that it would take into account the real vulnerability of the household based on the existing economies of scale in expenditures for sustenance and different demographic characteristics of the family. The existing policy of using per capita increases in the threshold level is contradictory to this.

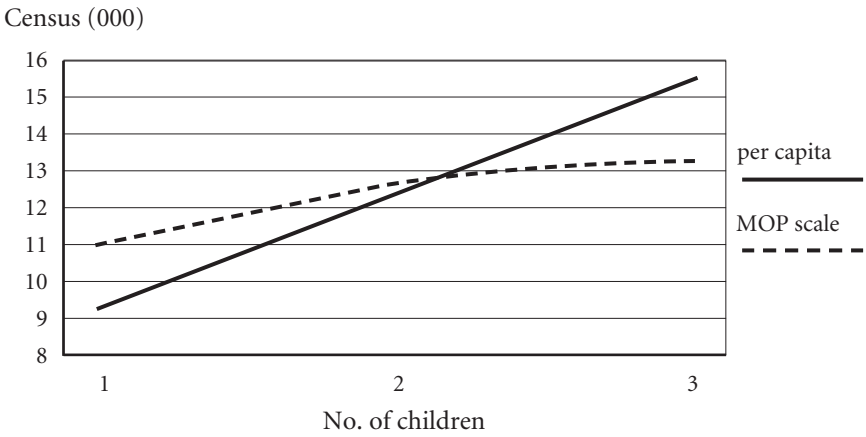
If the equivalence scale was introduced without any other changes in child allowances, it would certainly make it more difficult to qualify for this transfer. It would also decrease the number of child allowance beneficiaries, since in each household with children the income threshold would be lower. Since the decrease in the number of child allowance beneficiaries is not the aim of the review of the introduction of economies of scale, it is necessary to include a compensatory mechanism, which would facilitate eligibility in the system with the equivalence scale. This mechanism would be to raise the income threshold to such an extent that it is necessary to compensate the negative impact of the introduction of the equivalence scale for the number of child allowance beneficiaries.

The following graph illustrates the combined effects of: 1) the introduction of the newly proposed equivalence scale from the social assistance into the child allowance program, and 2) a compensatory increase in the income threshold with child allowance.

The results are clear – for a three-member household with one child it would be easier to be eligible for child allowance compared to the system with an equivalence scale and higher threshold, whereas this would be more difficult for five-member households with more children compared to the existing policy. It is easy to find the cause of this



**Figure 4.**  
**Child Allowance**  
 Effects of the Changed Equivalent Scale and Treshold



– the use of the equivalence scale would take away less from households with fewer children than from those with more children. That is because of higher coefficients for children at the lower end of the birth sequence than for those at the higher end, whilst all households would benefit to the same extent from the higher threshold. However, this outcome can (and should) be viewed from the other side – five-member families with 3 children are, according to the present system (without an equivalence scale), privileged compared to families with one child, as they benefit more from the non-existence of the equivalence scale.

We can confirm this effect in the simulation performed by AZS. The assumptions behind the simulations were:

- maintaining the same level of expenditures for child allowance, which means (because of keeping the existing amount for one allowance) maintaining the same coverage (number) of children in the child allowance program,
- introduction of the newly proposed equivalence scale for social assistance, and
- appropriate increase in the income threshold.

Which is better? If the existing instruments are adjusted in such a way that the number of children receiving child allowances remains the same, then we believe it is better to introduce the equivalence scale in the child allowance program because it is fair to take into account significantly falling expenditures of multi-member households. That is why the previously mentioned structural changes are also just because, according to the current system of child allowance, households with more children benefit, as it is appropriate that economies of scale are not taken into consideration.

Thus, the following changes are recommended:

1. introduction of the equivalence scale into the threshold calculation for child allowance, i.e. similar to that proposed for social assistance,
2. increase in the income threshold for entitlement to child allowance.

The effects of the proposed change of the equivalence scale are shown in the following table:

**Table 7.**  
**Effects of Introducing the Equivalence Scale**

Equivalence scale	Poverty line	No. of families
Per capita	100	100
Proposed	165	104

In order to evaluate the effects of introducing an equivalence scale in the child allowance program, two AZS simulations have been undertaken: the first with the existing policy (a poverty line of 2,750 YUD and with a per capita equivalence scale); and the second with the newly proposed equivalence scale and with a requirement of no change in the number of children (and thus the expenditure amount). The results are as follows: increase in the poverty line by 65% (from 2,750 to 4,500 YUD) and a 4% increase the number of families entitled to child allowance, which is (due to the same number of covered children) equivalent to a decrease in the average number of children in the family entitled to child allowance. In reality, this number is decreased from 1.83 to 1.77, which only confirmed our previous discussion that the proposed change would make families with fewer children better off.

### **Family allowance**

Further improvements in social transfers could be carried out by merging social assistance and child allowance into a single transfer whose aim would be to support all poor households, especially households with children.<sup>9</sup>

Family allowance would use existing administrative procedures existing, that is, the previously mentioned policies for social assistance would also be valid for family allowance. An important difference would be introduced to one element, and that is **specialy favorable coefficients of the equivalence scale for children**, so that families with children can easily be entitled to family allowance and receive additional funds in relation to families without children with an equal number of family members. Thus, the principal idea behind child

<sup>9</sup> *Making Transition Work For Everyone*, World Bank, 2001, p. 301

allowance is maintained – enabling a more favorable position for children and families with children even when they are not considered to be the poorest citizens. These coefficients could possibly be differentiated according to the sequence of births of children, which would take into account differences in the actual cost of supporting those children.

There are numerous reasons in favor of integration of the two types of social transfer:

- the amalgamation of child allowance and social assistance would improve targeting based on introducing child allowance (a program that is weaker in targeting but much bigger) to the social assistance program (a very well targeted program, both nationally as well as regionally). The difference in targeting efficiency comes as a result, above all, of different administrative and professional capacities of the two services implementing these programs (due to the two types of administrative tasks being different by law, as field work is not envisaged in the area of child allowance),
- there is need for the increased sensitivity of the system to the income of the poor in order that the less poor receive less and more to those who are poorer. With the existing system, these social transfers (social assistance + child allowance) are relatively non-elastic in relation to family income. Namely, they are elastic enough with the poorest (those who receive social assistance), but they are absolutely non-elastic with the somewhat better off poor who receive child allowance but do not receive social assistance<sup>10</sup> (see next graph).
- Both existing programs have the same objective – mitigation of poverty – after the law in 2002 removed a significant part of the population component from the child allowance program (i.e. the child allowance's reliance on the sequence of births of children, different conditions for entitlement in areas with low and high birth rates, etc.),
- Integration of the two programs would significantly contribute to improvements in administrative efficiency – through avoiding the duplication of the processing of households included in both programs, the integration of the databases, simplification of procedures, better insight into household social status, diminishing costs for both administration and beneficiaries, etc.,
- Avoiding certain conceptual issues associated with separate programs, e.g. how to regulate their mutual relations, i.e. how to handle children in the social assistance program, and whether to include income from one program into the income list of the other one when establishing threshold, etc.

Integration of the two programs is facilitated by a number of factors:

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10 According to the existing policy, these two transfers, if observed together, are relatively non-elastic in relation to the income scale of the poor due to fixed level of child allowances. Elasticity could, however, be increase by switching child allowance from a fixed amount to a differentiated amount.

- Both programs are based on the same methodology of establishing eligibility – household resources are assessed and compared to the income and asset threshold taking into account the number of household members; many procedures and definitions are already the same, or are becoming similar between the two programs,
- The basis for paying transfers, while currently different between the two types of transfer (social assistance, paying a top-up, and child allowance, paying a fixed amount), can be equalized by a change in child allowance payment terms by moving towards top-up payments, as was suggested in the previous chapter,
- Both transfers are currently handled by the same ministry, so that:
  - 1) problems of poor inter-sector coordination cannot occur, and
  - 2) the two services (social work centers and child allowance services) can merge and improve administrative capacity.

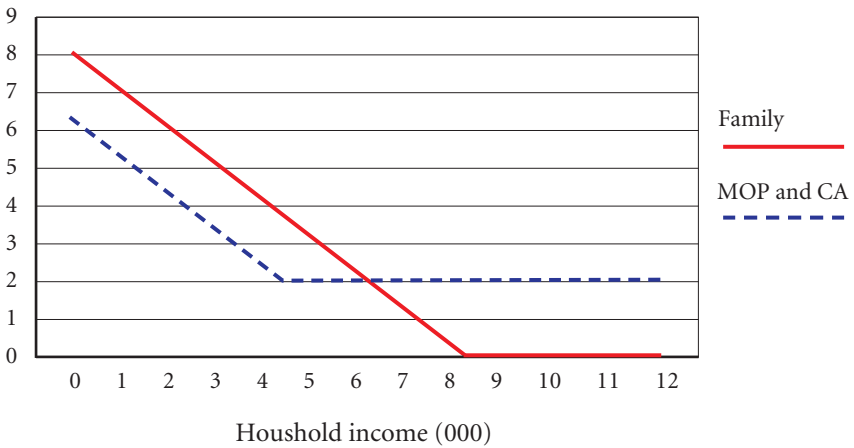
There are also arguments against the integration of the existing programs:

1. problems of insufficient administrative capacities would arise from handling new claims that such integration may bring. At present, the social assistance program is relatively well administered by social work centers. The child allowance program is not as well administered by municipal services for child allowance due to the previously mentioned policies (this poor targeting may be deemed acceptable given that child allowances eventually reach families with children even when targeting is not good, as is the case). A future system of family allowance should be administered by social work centers, which would be above their capacity, in the short term, at least, given the increased number of beneficiaries in relation to the number of social assistance beneficiaries. The integration of social work centers and municipal services for child allowance is possible but it is not feasible within the short term due to many reasons – the most important of which is space limitations in social work centers,
2. there is a chance that in developing a new law in future, the initial concept of family allowance may be distorted away from the interests of children. It is possible that the political process of developing the law may lead to the abolition or reduction of benefits that are proposed here for children (through particularly favorable coefficients in the equivalence scale). In order to avoid this danger, it is better to keep child allowances as a separate program,
3. there is concern that some of the current child allowance beneficiaries from the (lower) middle classes will avoid applying for family allowance due to the possible shame (stigma) that they might feel because of this program's emphasized orientation towards the poor. However, this potential problem is unlikely to occur, or not to a large extent, because family allowance beneficiaries will not come from the middle class but exclusively from the poor strata of society. Of course, prior to this, it is necessary

to resolve a conceptual dilemma (already mentioned) about the extent of the program's coverage of children – whether its goal is wide coverage, including the middle class, or it is directed only to children from poor families (as the current social assistance program is now).

**Figure 5.**  
**Four-Member Family**

Total transfers (000)



Comparisons between the current system (social assistance + child allowance) and the proposed family allowance is given for a four-member family (2 adults + 2 children) in the following graph:

It should be noted that transfers, according to the present system (MOP + child allowance), are non-elastic in relation to income, except for the lowest income level where these two incomes are added; above an income level of 3,300 only two child allowances are paid in the same amount. It can be observed that in the integrated child allowance system there is a strong elasticity of transfers to family income – more is provided for the poorest families than in the present system (2,000 YUD more), and the better-off poor get 2,000 less, i.e. nothing.

The general outcome is that the number of families covered by an integrated system would be less than against the two separated systems, but that the poor would get more benefits.

An attempt to validate this reasoning has been made by means of AZS simulations. The referential simulation is a combination of the already analysed referential simulations of social assistance and child allowance: the legislated thresholds (2,280 for social assistance and 2,750 for child allowance), the official equivalence scale for social assistance and the per capita scale for child allowance, other filters, social assistance payments through income top-ups and child allowance paid

in fixed amounts; total expenditure for both social assistance and child allowances would be 490 million YUD per month.

Alternative simulations with family allowance as the only instrument are based on the following assumptions:

- a threshold of 2,280 YUD,
- the equivalence scale from social assistance regulations. These two conditions should keep the poorest citizens (social assistance beneficiaries with no children) at the same level of rights and benefits,
- significantly increased coefficients of the equivalence scale for children. Two variations were developed: in the first one, each child's coefficient was topped up by an equal amount (additive method), and in the second one, each child's coefficient was increased by an equal percentage (multiplicity method),
- total expenditure for the family allowance was the same as for the two programs that are to be abolished – 490 million YUD.

The objective of the simulation was to determine the necessary adjustment to the equivalence scale coefficients for children for expenditure on the family allowance to be within an overall budget of 490 million YUD per month.

The results of this simulation indicate that the additive adjustment should be 1.05, and 2.05 for the multiplicative adjustment.

**Table 8.**  
**Effects of Introducing Family Allowance (in 000)**

	No. of households	No. of household members	No. of adults	No. of children
Existing child allowance +MOP	178	588	385	203
Family allowance, additive coeff.	137	399	272	128
Family allowance, multipl.coeff.	144	406	276	130

As shown, this confirms the earlier argument that introducing family allowance would reduce the number of children and adults eligible for the program.

Table 8 presents comparisons of the effects of introducing family allowance in relation to the summary results of the child allowance and social assistance programs (= 100).

The effects of introducing family allowance, in relation to the existing instruments (child allowance and social assistance), would be:

- there would be no change in the status of current beneficiaries of social assistance without children – the same families and individuals would switch to the family allowance program in the same number and with the same amounts both for households and for individuals,
- the number of households with children would be reduced by 37% in the family allowance program, as well as the number of covered children in relation to the current combination of the

**Table 9.**  
**Relative Effects of Introducing Family Allowance**

Chld. Allow.+MOP=100	FAMILY ALLOWANCE – additively		
	Families with no children	Families with children	All
No. of families	100	63	77
No. of members	100	60	68
No. of children		63	63
Transfer per family	100	158	130
Transfer per member	100	166	147

*Note:* the results of the simulation with multiplicity coefficient are very similar

child allowance and social assistance programs. All families with children in the current social assistance program would move to the family allowance program (this is not shown in the previous table) and the entire adjustment in the number would be felt by current child allowance beneficiaries who do not receive social assistance, i.e. those who are among the better off (in the previous graph, those are households of child allowance beneficiaries with an income level above 8,000 YUD),

- the average transfer per household with children would be increased in the family allowance program by 58% in relation to the current situation, and by 66% for individuals. Thus, the reduction in the number of beneficiaries of transfers would be compensated by a significant increase in transfers – to the poorest of poor citizens,
- if all beneficiaries are included (without distinguishing between families with or without children), the number of households covered would be reduced by 23%, individuals by 32%, and children by 37%, whereas the average transfer would be increased by 30% for households and by 47% for household members.

Overall, the simulation has confirmed that replacing child allowance and social assistance with a family allowance would bring about a reduction in the number of beneficiaries and an increase in transfer per one beneficiary, which is a positive benefit to the poor.

The effects of raising the poverty line along with introducing a family allowance are presented in the table 10.

**Table 10.**  
**Effect of Raising the Poverty Line by 10 and 20%**

Poverty line	No. of households	No. of members	No. of children	Total transfers
2280	100	100	100	100
2508	105	105	105	115
2736	118	118	118	131

Raising the poverty line by 10 and 20% would lead to a moderate increase in the number of households, all members and children, by 5 and 18% respectively in relation to the referential simulation (with the poverty line at 2,280 YUD). The amount of total transfers, would be 15 and 31% higher respectively due to the growth in the average income deficit per household. We can see that in the last simulation the number of children would increase by 18% in relation to the referential simulation, but it would be one-quarter lower in relation to the current number covered by child allowance.



# Annex

**Table A1.**  
**Minimum Consumption Basket from AZS, FSO and RZS,**  
**Kg/Four-Member Household/Month**

	Lsms min.	RSZ basket	WFP basket	FSO basket
White bread	15.7	33.0	31.4	26.0
Semi-white bread	10.5	0.0	0.0	0.0
Whole meal. rye. integral bread	4.1	0.0	0.0	0.0
Baked goods	1.4	0.0	0.0	1.0
Other kinds of bread	0.3	0.0	0.0	0.5
Wheat and rye flour and semolina	6.9	5.0	10.2	4.0
Maize flour and maize	0.6	0.0	1.8	0.0
Flour products and paste products	1.1	1.0	0.7	1.5
Rice	1.1	1.0	0.7	0.0
Frozen pastry	0.1	0.0	0.0	0.5
Potatoes	12.2	15.0	9.5	14.5
Beans. dried peas. broad bean and lentil	3.0	1.0	1.1	1.0
Onions. garlic and leek	4.0	3.1	2.6	3.5
Carrot. greens. celery. beet	1.3	2.1	1.5	2.0
Cabbage. kale. escarole. broccoli	4.5	3.5	2.2	5.0
Spinach. mangle fresh and frozen	0.9	0.0	4.4	1.0
Cucumber	2.8	3.0	0.0	4.0
Tomatoes (fresh)	2.1	4.0	1.1	4.0
Peppers (fresh and frozen)	1.3	2.0	1.8	4.0
Lettuce	0.0	0.0	1.1	3.0
Peas. string beans. fresh and frozen	2.0	2.5	1.5	6.5
Mushrooms	0.2	0.0	0.0	0.0
Other fresh vegetables	0.3	0.0	1.5	4.0
Pickled vegetables	0.5	0.0	0.0	1.5
Manufactured (ketchup. canned)	0.3	0.0	0.0	0.3
Apples	1.5	0.0	1.5	8.0
Pear	0.0	0.0	0.4	2.0
Plum	0.0	0.0	0.0	0.5

	Lsms min.	RSZ basket	WFP basket	FSO basket
Grapes	<b>0.0</b>	0.0	0.0	2.0
Other fresh fruit	<b>1.1</b>	3.0	0.0	2.0
Orange. lemon. tangerine	<b>0.4</b>	0.3	0.4	2.0
Other citrus fruit. bananas. pineapple	<b>0.3</b>	2.4	0.0	1.0
Walnut. hazelnut and almond	<b>0.0</b>	0.0	0.0	0.8
Jam. stewed fruit. marmalade	<b>1.0</b>	1.0	0.0	1.5
Beef (with and without bones)	<b>0.1</b>	0.0	0.7	0.0
Baby beef (with and without bones)	<b>0.4</b>	0.8	0.0	1.5
Pork (with and without bones)	<b>1.5</b>	2.0	1.8	2.5
Mutton. lamb and goat	<b>0.2</b>	0.0	0.0	0.5
Poultry	<b>3.9</b>	4.0	2.6	4.0
Other fresh meat and offals	<b>0.2</b>	2.0	0.0	1.0
Dried and cooked bacon	<b>0.4</b>	0.0	0.4	0.0
Dried meat	<b>0.7</b>	0.0	0.0	0.0
Salami and sausages -various kinds	<b>0.7</b>	0.8	0.4	2.0
Hot dogs. bratwurst	<b>0.2</b>	0.0	0.0	0.5
Other sausage products	<b>0.2</b>	1.0	0.0	0.0
Canned meat and meat products	<b>0.1</b>	0.0	0.0	0.0
Fresh and frozen freshwater fish	<b>0.3</b>	1.0	0.4	1.0
Fresh and frozen salt-water fish	<b>0.1</b>	0.0	0.0	0.0
Fish products	<b>0.2</b>	0.0	0.0	0.0
Pig fats. leaf fat. suet	<b>1.3</b>	0.0	2.2	2.0
Edible oil	<b>3.6</b>	5.0	1.8	2.5
Margarine	<b>0.3</b>	0.5	0.0	0.0
Fresh milk	<b>19.2</b>	20.0	20.1	31.0
Sour milk and yogurt	<b>2.8</b>	4.0	1.5	15.0
Home-made cheese (all kinds)	<b>2.4</b>	2.0	1.8	2.5
Other cheeses (caciocavallo)	<b>0.2</b>	0.0	0.0	2.0
Butter	<b>0.0</b>	0.0	0.0	0.5
"Kajmak". cream. sour cream	<b>0.3</b>	0.0	0.0	0.0
Ice-cream	<b>0.2</b>	0.0	0.0	0.0
Eggs (chicken and other)	<b>88.9</b>	90.0	41.2	90.0
Sugar (refined. lump sugar. icing)	<b>3.0</b>	3.0	2.6	4.0
Salt	<b>0.8</b>	0.3	0.0	0.5
Honey	<b>0.1</b>	0.0	0.0	0.5
Chocolate - all kinds	<b>0.2</b>	0.0	0.0	0.5
Cookies. biscuits	<b>0.2</b>	1.0	0.4	1.0
Coffee (green. roasted. ground)	<b>1.0</b>	0.6	0.7	1.0
Spices	<b>0.2</b>	0.3	0.0	0.2

	Lsms min.	RSZ basket	WFP basket	FSO basket
Mayonnaise. mustard. ketchup	<b>0.2</b>	0.0	0.0	0.1
Instant pudding. creams	<b>0.5</b>	0.0	0.0	0.0
Wine	<b>0.4</b>	0.0	0.0	0.0
Beer	<b>2.9</b>	2.0	0.0	0.0
Other alcoholic drinks	<b>0.0</b>	0.0	0.0	0.0
Mineral water. carbonated/ non-carbonated	<b>3.0</b>	3.0	0.0	15.0
Carbonated and non-carbonated soft drinks	<b>2.9</b>	0.0	0.0	0.0
Natural fruit juices (from concentrate)	<b>1.8</b>	1.5	0.0	1.5

**Table A2. Poverty Regressions**

	Determinants ln(consumption per consumption units) (estimated coefficients and standard errors of regressions)				
	10%	25%	50%	75%	90%
% children 0-6 in household	.552 (.112) **	.593 (.086) **	.541 (.074) **	.597 (.093) **	.478 (.120) **
% children 7-14 in household	-.177 (.091)	-.169 (.069) *	.149 (.059)	-.162 (.075) *	-.114 (.097)
% children 15-18 in household	.024 (.107)	.080 (.081)	.039 (.068)	-.032 (.084)	.064 (.110)
% adults 19-25 in household	.206 (.079) **	.234 (.060) **	.243 (.053) **	.143 (.066) *	.185 (.088) *
% adults 26-45 in household	.182 (.053) **	.200 (.040) **	.180 (.035) **	.105 (.044) *	.152 (.057) **
% adults 65+ in household	-.099 (.041) *	-.157 (.029) **	-.149 (.026) **	-.158 (.031) **	-.113 (.039) **
Ln(No. of members in household)	-.177 (.028) **	-.220 (.022) **	-.220 (.020) **	-.219 (.025) **	-.276 (.032) **
Age of household head	-.001 (.002)	-.002 (.001)	-.003 (.001) **	-.004 (.001) **	-.005 (.002) **
Women household head	.023 (.027)	-.002 (.020)	.011 (.018)	.006 (.022)	.019 (.028)
Uncompleted elementary school	-.312 (.035) **	-.251 (.025) **	-.267 (.022) **	-.224 (.025) **	-.221 (.033) **
Elementary school	-.248 (.029) **	-.219 (.021) **	-.213 (.017) **	-.192 (.021) **	-.220 (.027) **
Jr. college	.106 (.042) *	.089 (.031) **	.124 (.025) **	.121 (.033) **	.145 (.044) **
University	.272 (.037) **	.270 (.028) **	.287 (.024) **	.291 (.034) **	.241 (.038) **
Employers and self-employed	.057 (.059)	.037 (.045)	.096 (.040) *	.112 (.048) *	.010 (.057)
Farmers	-.035 (.068)	-.035 (.051)	.028 (.051)	-.004 (.064)	.121 (.088)
Other active	.049 (.125)	.045 (.112)	.038 (.117)	.117 (.114)	.271 (.140)
Unemployed	-.092 (.052)	-.082 (.040) *	-.060 (.031)	-.058 (.041)	-.120 (.051) *
Pensioners	-.070 (.034) *	-.035 (.024)	-.018 (.021)	-.015 (.026)	.004 (.033)

Other non-active	-.291	(.053)	**	-.145	(.038)	**	-.092	(.040)	*	.005	(.053)
% employers and self-employed in HH	-.066	(.062)		-.026	(.044)		.021	(.050)		.241	(.060)
% farmers in HH	.096	(.078)		.011	(.055)		-.001	(.071)		-.033	(.095)
% other active in HH	-.255	(.098)	**	-.074	(.081)		-.082	(.082)		.108	(.103)
% unemployed in HH	-.213	(.046)	**	-.264	(.027)	**	-.280	(.035)	**	-.204	(.046)
% employed in a private reg. firm	.165	(.029)	**	.168	(.019)	**	.188	(.022)	**	.193	(.030)
% employed in a private unreg. firm	.012	(.037)		.034	(.024)		.074	(.027)	**	.053	(.033)
% employed in other sectors	.123	(.075)		.019	(.051)		.029	(.060)		.022	(.077)
Belgrade – rural	-.146	(.060)	*	-.136	(.040)	**	-.103	(.051)	*	-.093	(.061)
Vojvodina – urban	.048	(.035)		.037	(.021)		.016	(.028)		.036	(.035)
Vojvodina – rural	-.016	(.041)		.005	(.025)		-.016	(.031)		.068	(.040)
West Serbia – urban	-.012	(.054)		.009	(.039)		.016	(.041)		.070	(.053)
West Serbia – rural	-.022	(.051)		-.030	(.036)		-.067	(.036)		-.042	(.045)
Central Serbia – urban	.029	(.042)		.021	(.025)		.001	(.032)		.069	(.041)
Central Serbia- rural	-.033	(.044)		.040	(.028)		.039	(.033)		.101	(.043)
East Serbia – urban	-.008	(.051)		-.001	(.039)		-.024	(.041)		.013	(.051)
East Serbia – rural	-.063	(.052)		.093	(.037)	*	.132	(.038)	**	.215	(.050)
SE Serbia – urban	-.073	(.043)		-.094	(.026)	**	-.108	(.035)	**	-.113	(.043)
SE Serbia – rural	-.172	(.046)	**	-.154	(.029)	**	-.144	(.035)	**	-.112	(.044)
Constant	8.851	(.088)	**	9.471	(.062)	**	9.863	(.065)	**	1.141	(.088)

Note: \* indicates 5% confidence level  
\*\* indicates 1% confidence level

**Table A3. Determinants of Poverty Index**

Probit estimates					Number of obs = 6386 LR chi <sup>2</sup> (37) = 622.02 Prob. (P) > chi <sup>2</sup> = 0,0000 Pseudo R <sup>2</sup> = 0.1467		
likelihood = -1808.5726							
poor	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
sage06	-.2319377	.044181	-5.17	.000	.040181	-.318531	-.145344
sage714	.0264856	.0294438	.90	.369	.060316	-.031223	.084194
sage1518	-.039011	.0351938	-1.11	.268	.038054	-.10799	.029968
sage1925	.0718904	.0276973	-2.59	.009	.07815	-.126176	-.017605
sage2645	-.0659527	.0190245	-3.44	.001	.224838	-.10324	-.028665
sage65	.0411135	.0122621	3.36	.001	.265899	.01708	.065147
lhhsz	.0505031	.0095655	5.25	.000	.974352	.031755	.069251
hdage	-.0003591	.0004501	-.80	.425	56.3835	-.001241	.000523
hdfemale*	-.0005147	.0087041	-.06	.953	.242773	-.017574	.016545
hdedprmi*	.1362852	.0170055	1.33	.000	.20917	.102955	.169615
hdedprmc*	.0997134	.0133895	9.21	.000	.1933	.073471	.125956
hdedhigh*	-.0422523	.0104185	-2.88	.004	.061404	-.062672	-.021832
hdeduniv*	-.0658326	.0072342	-4.29	.000	.082753	-.080011	-.051654
hdlfp2*	-.002017	.0207775	-.10	.923	.052356	-.04274	.038706
hdlfp3*	.0135496	.0255347	.56	.573	.072928	-.036498	.063597
hdlfp4*	.0106463	.0518145	.22	.828	.005374	-.090908	.112201
hdlfp5*	.0432136	.0211257	2.39	.017	.061133	.001808	.084619
hdlfp6*	-.0057195	.0106914	-.53	.594	.428763	-.026674	.015235
hdlfp7*	.0866519	.0252366	4.41	.000	.048379	.037189	.136115
slfp2	.0360491	.0208948	1.72	.085	.068352	-.004904	.077002
slfp3	-.0380304	.025036	-1.52	.128	.068302	-.0871	.011039
slfp4	.0347097	.0331153	1.05	.295	.016563	-.030195	.099615
slfp5	.0712284	.012857	5.55	.000	.143585	.046029	.096428
sowpr	-.0430658	.0094661	-4.53	.000	.236035	-.061619	-.024513
sowpru	-.0102119	.0101303	-1.01	.314	.138165	-.030067	.009643
sowoth	-.0639895	.0302024	-2.11	.034	.019431	-.123185	-.004794
strata2*	.0259029	.0208782	1.39	.166	.037292	-.015018	.066823
strata3*	-.0249965	.0096155	-2.33	.020	.171331	-.043843	-.00615
strata4*	-.0155008	.0107187	-1.34	.180	.117878	-.036509	.005507
strata5*	-.0033383	.0166997	-.20	.844	.039914	-.036069	.029393
strata6*	-.014838	.0121085	-1.13	.259	.068575	-.03857	.008894
strata7*	-.023236	.0114282	-1.77	.076	0.07928	-.045635	-.000837
strata8*	-.016201	.0116526	-1.27	.204	.076607	-.03904	.006638
strata9*	-.0110474	.0152447	-.68	.497	.044948	-.040926	.018832
strata10*	-.025716	.0115787	-1.87	.061	.045325	-.04841	-.003022
strata11*	-.0074693	.0142786	-.50	.615	.065335	-.035455	.020516
strata12*	.0386832	.0175187	2.55	.011	.072206	.004347	.073019
obs. P	.1031322				pred. P	.0678863 (for x-bar)	

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

**Table A4. Determinants of Poverty Depth**

Tobit estimates					Number of obs = 6386	
Log likelihood = -6950.0812					LR chi²(37) = 644.28	
					Prob. > chi² = 0.0000	
					Pseudo R² = 0.0443	
pgap	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sage06	-2963.628	565.8006	-5.238	.000	-4072.788	-1854.468
sage714	482.8021	361.5969	1.335	.182	-226.0499	191.654
sage1518	-405.3198	433.9875	-.934	.350	-1256.082	445.4421
sage1925	-903.6037	344.9968	-2.619	.009	-1579.914	-227.2935
sage2645	-773.099	237.2339	-3.259	.001	-1238.158	-308.0405
sage65	469.08	151.5832	3.095	.002	171.9258	766.2342
lhhsz	604.5613	119.3185	5.067	.000	37.6568	838.4658
hdage	-4.240037	5.517625	-.768	.442	-15.05644	6.57637
hdfemale	-18.2966	107.2357	-.171	.865	-228.5147	191.9215
hdedprmi	25.043	122.7061	1.187	.000	1009.498	49.588
hdedprmc	961.0704	106.4302	9.030	.000	752.4312	1169.71
hdedhigh	-726.3718	246.9059	-2.942	.003	-121.391	-242.353
hdeduniv	-1388.363	326.8202	-4.248	.000	-2029.041	-747.6847
hdlfp2	-9.255053	264.7766	-.035	.972	-528.3065	509.7964
hdlfp3	144.8337	281.2101	.515	.607	-406.4331	696.1005
hdlfp4	313.5224	559.6278	.560	.575	-783.5371	41.582
hdlfp5	372.0954	187.4269	1.985	.047	4.675297	739.5155
hdlfp6	-32.67179	133.2269	-.245	.806	-293.8415	228.498
hdlfp7	864.7713	175.9568	4.915	.000	519.8367	209.706
slfp2	408.7332	258.9264	1.579	.114	-98.84989	916.3163
slfp3	-467.7784	31.4082	-1.507	.132	-1076.283	14.7265
slfp4	437.5797	409.2316	1.069	.285	-364.6525	239.812
slfp5	909.5314	158.7514	5.729	.000	598.3251	22.738
sowpr	-587.7194	118.6461	-4.954	.000	-82.3058	-355.133
sowpru	-149.3575	123.7978	-1.206	.228	-392.0431	93.32808
sowoth	-73.8417	366.9066	-1.992	.046	-145.102	-11.58091
strata2	364.9614	203.7721	1.791	.073	-34.50066	764.4236
strata3	-344.9532	149.1361	-2.313	.021	-637.3103	-52.59604
strata4	-147.3542	153.8397	-.958	.338	-448.9319	54.2236
strata5	-86.17152	216.9615	-.397	.691	-511.4894	339.1463
strata6	-9.65639	175.3215	-.517	.605	-434.3458	253.033
strata7	-318.6599	186.098	-1.712	.087	-683.4748	46.15493
strata8	-169.4389	171.6722	-.987	.324	-505.9743	167.0965
strata9	-147.555	215.178	-.686	.493	-569.3766	274.2666
strata10	-20.4133	196.7671	-1.019	.308	-586.1433	185.3168
strata11	-83.01664	192.0371	-.432	.666	-459.4742	293.4409
strata12	427.619	159.3356	2.684	.007	115.2674	739.9706
_cons	-2824.775	334.4544	-8.446	.000	-348.418	-2169.131
_se	1681.105	55.77286				

**Table A5. Determinants of Severity of Poverty**

Tobit estimates					Number of obs. = 6386	
Log likelihood = -11868.271					LR chi <sup>2</sup> (37) = 626.88	
					Prob. > chi <sup>2</sup> = 0.0000	
					Pseudo R <sup>2</sup> = 0.0257	
psev	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sage06	-5428310	1069821	-5.074	.000	-7525521	-3331099
sage714	978284.5	682957.8	1.432	.152	-360543.4	2317112
sage1518	-739867	821262.3	-.901	.368	-2349818	870084.3
sage1925	-1739820	65393.1	-2.661	.008	-3021744	-457895.8
sage2645	-1436190	44828.1	-3.204	.001	-2314970	-557409.9
sage65	769322.3	286087.5	2.689	.007	208494.2	1330150
lhhsz	1077271	225069	4.786	.000	636059.7	1518482
hdage	-8218.502	10421.42	-.789	.430	-28648	12211
hdfemale	-46042.62	202747.3	-.227	.820	-443495.9	35141.6
hdedprmi	2360914	231092.7	1.216	.000	1907894	2813934
hdedprmc	1748482	200928.2	8.702	.000	1354595	2142370
hdedhigh	-1339027	470311.1	-2.847	.004	-2260996	-417058.9
hdeduniv	-2560411	623363.1	-4.107	.000	-3782413	-1338409
hdlfp2	79993.85	499831.6	.160	.873	-899844.8	1059832
hdlfp3	303599.8	531435.6	.571	.568	-738193.3	1345393
hdlfp4	1064492	1027184	1.036	.300	-949135.1	3078119
hdlfp5	647066.5	35513.7	1.822	.068	-49109.67	1343243
hdlfp6	-28841.07	252159.3	-.114	.909	-523158.5	465476.3
hdlfp7	1713113	331073.1	5.174	.000	1064098	2362128
slfp2	738544.3	489959.5	1.507	.132	-221941.8	1699030
slfp3	-870486.9	586266.6	-1.485	.138	-2019767	278793.5
slfp4	766032.4	772077.4	.992	.321	-747500	2279565
slfp5	1691457	299711.5	5.644	.000	1103921	2278993
sowpr	-1109041	224425.1	-4.942	.000	-1548990	-669091.9
sowpru	-292634.9	233673.9	-1.252	.210	-750714.6	165444.8
sowoth	-1281513	68868.7	-1.861	.063	-2631559	68533.82
strata2	706084	384567.4	1.836	.066	-47797.93	1459966
strata3	-68965.8	283528.6	-2.432	.015	-1245463	-133839
strata4	-208873.5	290254.1	-.720	.472	-777869.4	360122.5
strata5	-251434.5	413921.3	-.607	.544	-1062860	559991
strata6	-156035.8	331425.8	-.471	.638	-805742.3	49367.7
strata7	-618328.1	353536	-1.749	.080	-1311378	74721.83
strata8	-350636.6	325304	-1.078	.281	-988342.3	287069.1
strata9	-264445	407169.1	-.649	.516	-1062634	533743.9
strata10	-250114.1	369336.7	-.677	.498	-974138.6	47391.5
strata11	-17818.6	364575.6	-.489	.625	-892871.8	53651.6
strata12	76792.1	301299.9	2.549	.011	17727.5	1358570
_cons	-5309853	629118.4	-8.440	.000	-6543137	-4076568
_se	3145314	99689.1				



**Table A6.**  
**Consumption and Income by Deciles (Using Different Welfare Aggregates and Ranking Criteria)**

	Consumption per capita	Consumption per equivalent unit	Income per capita	Income per equivalent unit
First (bottom)	2856	3488	1948	2551
Second	4120	5018	3400	4341
Third	4920	5991	4256	5428
Fourth	5764	6980	5030	6314
Fifth	6605	8000	5874	7319
Sixth	7459	9045	6745	8212
Seventh	8526	10275	7729	9245
Eighth	9923	12001	9053	10537
Ninth	12045	14691	11065	12855
Tenth (top)	19559	23383	19178	20657
Average	8177	9883	7427	8744
Top decile– –bottom decile	6.8	6.7	9.8	8.1

*Note:* Amounts in April-June 2002 dinars.

**Table A7. Structure of Income by Income Ventile (Ranking According to YEA)**

	YEA	workEA	propEA	farmEA	pensEA	unimplEA	socialEA	naturalEA	schoolEA	healthEA	durablesEA	rentEA
1	1595,6	391	52.8	63.1	194.0	5.7	6.3	418.3	9.0	3.3	191.8	260.4
2	3009,8	1152	37.9	208.2	561.2	33.2	7.9	496.7	5.6	16.3	230.0	261.0
3	3824,3	1646	92.4	255.8	656.9	77.9	10.8	528.0	6.8	6.6	230.2	313.0
4	4375,6	1889	85.4	312.8	801.4	61.5	12.9	652.5	22.5	5.7	238.3	293.6
5	4912,3	2199	70.5	306.4	1030.4	43.1	14.6	671.9	10.6	7.4	239.9	318.1
6	5411,7	2414	118.7	386.8	1139.0	30.5	10.5	703.5	6.9	11.5	243.9	346.2
7	5899,2	2641	120.6	457.6	1102.2	78.8	39.3	833.0	5.5	8.1	275.4	337.8
8	6367,7	2833	187.0	508.3	1318.4	33.3	22.2	793.4	3.0	17.3	291.6	359.9
9	6854,0	3257	144.4	546.2	1275.6	39.0	13.2	904.5	16.3	21.9	269.1	367.1
10	7340,9	3313	246.3	721.9	1314.3	37.3	33.6	1008.5	15.7	12.9	265.3	371.6
11	7826,9	3650	152.4	811.8	1374.6	42.7	28.3	1011.7	24.6	14.5	329.8	386.7
12	8293,8	3941	165.7	795.7	1497.4	30.5	21.3	988.8	19.0	10.9	413.1	410.6
13	8855,0	4111	208.9	967.5	1518.1	57.6	28.8	1132.1	17.1	23.5	362.9	428.2
14	9461,6	4467	212.4	928.8	1740.7	12.2	25.7	1258.4	24.0	15.9	337.6	438.7
15	10193,9	4587	288.5	1204.0	1818.4	29.9	34.4	1270.1	21.7	35.3	477.8	427.1
16	11124,8	5049	256.4	1408.9	1959.7	36.7	35.0	1493.8	12.2	31.6	413.7	428.2
17	12331,2	5659	487.2	1608.3	1853.8	13.8	31.2	1654.7	13.7	19.5	560.7	429.6
18	13959,9	7202	525.5	1628.8	1851.3	29.9	36.9	1662.1	5.5	45.6	542.6	429.4
19	16421,3	8030	668.1	2314.2	2022.2	5.5	58.5	2050.0	7.7	41.0	688.4	535.3
20	26873,2	11103	2505.1	4545.5	3523.3	21.0	88.0	2893.5	32.5	21.4	1635.8	503.9
mean	8774,4	3975,8	331.1	998.6	1427.3	36.0	28.0	1121.1	14.0	18.5	411.8	382.3

*Note:* All values are population-weighted.