

HBS 2007 poverty and living conditions

**The BiH
Household
Budget
Survey
2007**



Bosnia and Herzegovina
Agency for Statistics
of Bosnia and Herzegovina

Federation of
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Federal Office of Statistics

Republika Srpska
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ACRONYMS

APG	Average poverty gap
BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
BD	Brcko District of Bosnia and Herzegovina
COICOP	Classification of individual consumption by purpose
DFID	Department for International Development
EA	Enumeration area
FBiH	Federation of Bosnia and Herzegovina
FHH	Female-headed households
FOS	Federal Office of Statistics
FPL	Food poverty line
GE	Generalised entropy
GDP	Gross domestic product
GPL	General poverty line
HBS	Household Budget Survey
HC	Head-count
HCI	Head-count Index
ISTAT	Italian National Institute of Statistics
kcal	Kilocalorie
KM	Convertible Mark
LSE	London School of Economics
LSMS	Living Standards Measurement Survey
MHH	Male-headed household
OECD	Organisation for Economic Co-operation and Development
PCE	Per capita expenditure
PG	Poverty gap
PPP	Purchasing Power Parity
PSU	Primary sampling units
RS	Republika Srpska
RSIS	Republika Srpska Institute for Statistics
SPG	Squared poverty gap
TGP	Total poverty gap
UK	United Kingdom
USD	United States dollar
WB	World Bank

1. Introduction

The 2007 Household Budget Survey [HBS] for Bosnia and Herzegovina [BiH] was implemented in partnership by the Agency for Statistics of Bosnia and Herzegovina [BHAS], the Federal Office of Statistics [FOS] and the Republika Srpska Institute for Statistics [RSIS]. Financial support for the survey was provided by the Government of the United Kingdom and the Department for International Development of the United Kingdom [DFID UK], and the Government of Italy and the Direzione Generale per la Cooperazione allo Sviluppo of the Italian Ministry of Foreign Affairs. The London School of Economics [LSE] Consortium and the Italian National Institute of Statistics [ISTAT] provided technical assistance.

This volume describes a series of measures and indicators of poverty in BiH using the HBS 2007 data set and presents a preliminary poverty profile at the level of the country and of each Entity (i.e. Republika Srpska [RS] and the Federation of BiH [FBiH]) and the Brcko District of BiH [BD]. All the results presented here are closely linked to the analysis of the main HBS 2007 presentation volume.

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Poverty analyses and profiles are usually done through multi-purpose household surveys, which provide information on a variety of issues from social and economic perspectives. Yet, unlike the Living Standard Measurement Survey [LSMS], the HBS is not a multi-topic household survey, it covers a limited amount of information on education, labour, and the family status of all individuals, and provides detailed information on all expenditures of the household unit.¹ A thorough and in-depth analysis of the living conditions in the country—which includes quantitative and qualitative information on standards of living and social conditions—is therefore not possible with the data available from the HBS. The household questionnaire and the individual questions included in it were designed to address the specific situation of the country and at the same time conform and comply with European standards on household expenditure surveys. And yet, the HBS does provide a meaningful insight into the characteristics of poverty—as defined by a level of expenditure below a certain threshold—which is the first step for a full comprehension of the main features of social exclusion, deprivation and economic vulnerability that have to be addressed by any concerned evidence-based policy making.

To construct a poverty measure for BiH we follow the method used by the World Bank [WB] and described in the WB Bosnia and Herzegovina Poverty Assessment (2003). This is done through several steps. We begin by defining a measure of material well-being, using household consumption. To do that, we construct consumption aggregates for each household and adjust them for spatial price differences and adult equivalent scales. Then, we calculate poverty thresholds and analyse the resulting poverty rates of the surveyed population.

¹ For all the definitions regarding the status variables, a detailed explanation is contained in the main presentation volume.

2. The standard of living and the construction of consumption aggregates and poverty thresholds

Material well-being should be measured in a way that indicates the standard of living that people experience. And yet, as we know, this is difficult to measure and it is generally assumed that a material well-being is a function of the goods and services that people consume. As different individuals consume different goods and services in different quantities, it is assumed that the monetary value of goods and services indicates the level of well-being (“utility”) they produce. Therefore, if two different bundles of goods and services have different monetary values, it is assumed that the most expensive will give a higher level of material well-being to the consumer. Goods and services are bought to be consumed: the cost of a consumption bundle is therefore an indicator of utility according to a money metric (a monetary measure). How much an individual spent is thus considered an indicator of how much that individual consumes, i.e. what level of well-being is going to be attained from that consumption. This way material well-being, i.e. the standard of living, can be expressed in Convertible Marks [KM], Euros, US Dollars or any other currency.

Obviously, there are several assumptions behind this way of proceeding, that we will not discuss here (see e.g. Deaton (1997)). A crucial assumption is also that all goods and services that are purchased are also consumed (they are not stored away nor is there delayed consumption in the future), so that by measuring the level of expenditure of individuals we are able to infer their level of consumption. In this sense, poverty is measured as that level of consumption (expenditure) that does not reach a certain level under which the consumption bundle is insufficient to produce a minimum and acceptable level of material well-being. Yet, consumption (expenditure) patterns vary between individuals due to their different endowments, in terms of wealth or income. If one individual owns a house, then that individual will have no need to pay rent. There are aspects and factors that contribute to material well-being—like social capital, culture, the environment—that are difficult to measure and that are not necessarily captured by consumption expenditure. It is for this reason that some authors prefer income or wealth as a better indicator of the standard of living of individuals. Income is an indicator of the “potentials” that individuals have to enhance their welfare (the range of all possible choices rather than their actual choices), including non-material aspects such as leisure. Yet, income is possibly more difficult to detect and to measure than consumption expenditure, and it is therefore usually not used for the purpose of calculating poverty and material well-being levels. Also, income (revenues) is usually more volatile and erratic (it may change considerably from one period to another), while consumption patterns are generally steadier, as individuals naturally tend to smooth over time variations in their incomes over more regular consumption habits. In this sense, consumption is generally a better indicator of the standard of living of an individual, especially in transition countries.

Consumption expenditure as captured by a survey instrument such as the HBS will be subject to some limitations that have to be dealt with. First, only consumption during the survey reference period is measured. However, unlike food, durable goods and housing are consumed over longer periods of time. Thus, for such items, only the imputed value of the consumption flow associated with their possession is included. Second, while it is generally true that a higher consumption expenditure corresponds to a higher standard of living, there are items, like health expenditure, for which this is not generally so. Third, differences in prices for the same goods and services in different areas of the country will be reflected in different levels of expenditure for possibly the same amount of goods and services. The spatial differences in prices will have to be taken into account if the expenditure levels of different households in different parts of the country will have to be compared.

Household consumption expenditure can be calculated as captured by the HBS in such a way that households can thus be ranked according to their level of expenditure. Consumption aggregates will have to be constructed reflecting the consumption patterns of the population, adjusted for price differentials and used to rank household expenditure. As different households will have different consumption patterns, the consumption aggregates have to be constructed so that for some items there will be households with possibly

zero consumption, depending on their level of income and wealth: their consumption expenditure patterns thus reveal and are used as an indicator of their standard of living.

Once households are ranked according to their expenditure levels, they can be classified into categories such as “poor” and “non-poor” by defining poverty thresholds under which a given level of consumption expenditure is supposed to correspond to a status of *poverty*. Poverty is obviously a complex and multifaceted concept and, as Amartya Sen has argued, cannot be reduced to a monetary issue only. And yet, as we said above, the concept of poverty we are referring to here is the lack of a minimum level of material well-being corresponding to a given level of consumption expenditure, which is called the *poverty threshold*. A poverty threshold is a value of consumption expenditure below which a household would be considered to be poor by the society in which that household lives. Such given levels of consumption are defined in a variety of ways, and the most common ones are defined either in relative or absolute terms.

Relative poverty is defined as a level of consumption expenditure that is lower than a certain threshold depending on the overall consumption expenditure patterns of the whole population. Once all households are ranked according to their expenditure levels, a certain fraction of the median expenditure value will indicate the arbitrary threshold below which households are considered as poor, as their consumption expenditure does not reach that certain level. Thus, households are considered as poor relative to others: if for instance median expenditure rises because only the middle-to high income have higher expenditure levels, then the poverty threshold will rise and so will the number of those households that are considered as poor. Obviously, poverty rates for two countries with different median levels of expenditures—and different poverty thresholds—cannot be compared.

Absolute poverty is defined as a level of consumption expenditure that is lower than a certain threshold depending on the cost of a given consumption bundle. A consumption bundle containing goods that are minimally sufficient according to some criterion is defined, and its cost is then calculated by summing up all values obtained by multiplying quantities by prices. This cost will thus be taken as the minimum expenditure level for a household to attain a consumption pattern in line with the given “sufficiency” criterion, the arbitrary threshold below which households are considered poor, as their consumption expenditure does not reach that certain level. A “sufficiency” criterion that is used—and which we adopt below, in line with what was proposed by the WB (2003)—is that of *minimal calorie requirement* of a food consumption bundle. Individuals need food to survive—a certain number of calories, as well as vitamins and proteins—to maintain life and the energy required to live, work, and be part of the human community. Nutritionists have calculated minimum caloric requirements for individuals according to age, gender, and level of effort spent. Once a table with minimum caloric requirement is defined, the corresponding quantities can be calculated, and their cost too, in principle, by using some market price value for each item. In practice, as we will see below, this has to be adapted to the country under analysis and the actual dietary habits and conditions of individuals. The monetary value of a minimally sufficient food consumption bundle will indicate the minimum food expenditure level under which households are considered poor (food poor or extremely poor). An overall level of expenditure corresponding to a certain share of food expenditure will then define the overall poverty threshold under which households are considered as poor.

A short-cut to calculate absolute poverty rates used by the World Bank (henceforth: WB) is to define an arbitrary poverty line at one US dollar of expenditure a day (corresponding to 365 US dollars per year), which does not depend on the relative distribution of expenditures—like the food poverty line—and that can be easily used as a comparison of poverty rates among countries.

The *extreme or food poverty threshold* is thus defined as the expenditure level under which a household is considered as extremely poor—it does not attain the minimum level of consumption required to survive—. The *general poverty threshold* is also based on an absolute concept of a minimum level of expenditure, but it

relies on the concept that food is not all individuals need to maintain life. Unlike food consumption, where more or less objective measures of what is needed are available, it is not easy to define what non-food items are absolutely needed to maintain life. In this sense, attempts to construct basic non-food consumption bundles are very arbitrary and subjective. A common practice is to rely on the observed patterns of the population surveyed and then calculate an allowance for essential non-food spending that is then added to food consumption. The various ways this is done are discussed in Ravallion (1998), Deaton (1997), and Lanjouw and Lanjouw (2001).

3. Poverty rates and poverty indexes

The simplest and most common measure of poverty is the Head-count Index which is simply the percentage of the population in households whose (per capita) consumption is below the poverty line. This measure, however, says nothing about how far below the poverty line, or how poor, these individuals are. Several other measures are also used, among which are the depth and the severity of poverty.

Let us define as Y_p the poverty threshold (line) and as Y_i the expenditure level of household i in a sample of N households. The poverty line can either be relative or absolute. The number of poor households for whom Y_i is lower than Y_p can thus be calculated as the *Head-count Index*. The *poverty rate* is simply the proportion of poor households H over the total number of households N : this measure is the so-called *poverty incidence*.

$$TPG = \sum_{i=1}^H (Y_p - Y_i); \quad APG = \frac{\sum_{i=1}^H (Y_p - Y_i)}{H}$$

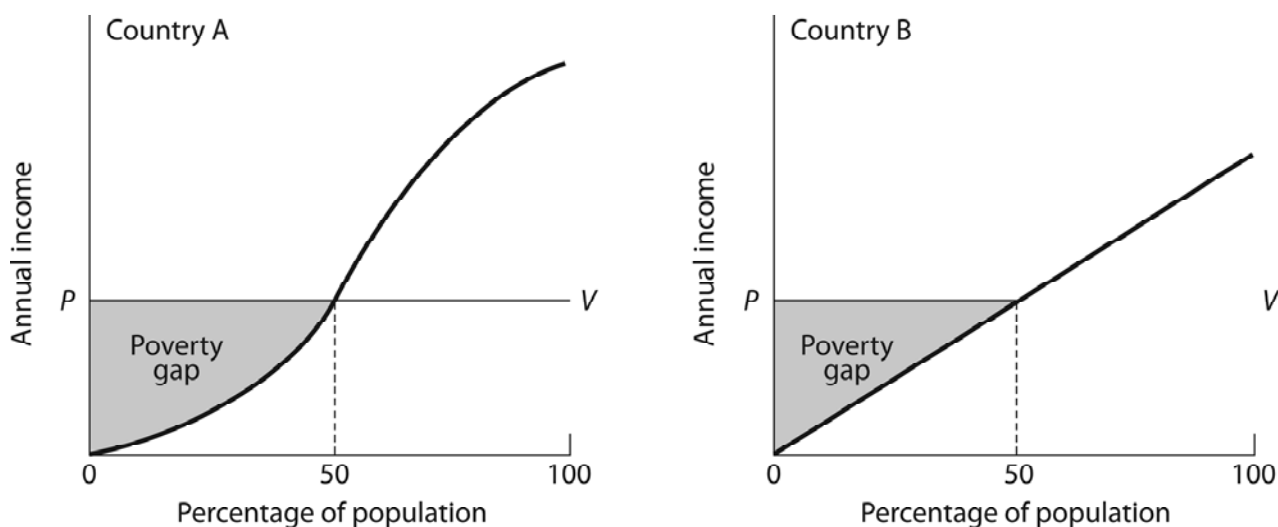
TPG is the *Total Poverty Gap*, i.e. the overall distance from the poverty threshold (the sum over all poor households of their expenditures), while APG is the *Average Poverty Gap*, which is a measure of the depth of poverty. A more general measure is that of Foster, Greer, and Thorbecke, according to which the poverty rate is only a special case:

$$P_\alpha = \frac{1}{N} \frac{\sum_{i=1}^H (Y_p - Y_i)^\alpha}{Y_p}$$

When $\alpha=0$, this is the *Poverty Head-count Index*, while when $\alpha=1$, we get the *Poverty Gap*, or how much more expenditure it would take for all households below the poverty line to spend as much as the poverty line. A value of $\alpha=2$ gives the *Squared Poverty Gap*, sometimes called the severity of poverty. The *poverty shortfall* is a poverty measure that takes into account how far poor households are, on average, below the poverty line. It can be shown that

$$P_1 = P_0 \times \text{Average Shortfall}$$

where the average shortfall is the amount, measured as a percentage of the poverty line, by which the mean consumption of poor households on average falls short of the poverty line. Two countries can have the same poverty line and yet have different poverty gaps:



4. Construction of consumption aggregates for BiH

All the measures described above impose strict requirements on the data used for such measurement. First, to construct a consumption expenditure measure requires data for each household on total consumption possibly by item (goods or services), in values and quantities. The key components are (see WB (2003)):

- 1) Food consumption: i) purchased; ii) home produced; iii) gifts; iv) consumed outside home
- 2) Utilities
- 3) Use value of housing
- 4) Use value of durable goods
- 5) Education
- 6) Other non-food consumption (clothing, etc.): i) purchased; ii) gifts

For food consumption (all kinds) data on values and quantities are needed in order to construct the food poverty line. Prices at the municipal or regional levels are also needed for spatial deflation.

In the HBS, consumption expenditure items were classified according to the COICOP classification in 12 categories: (1) *food and non-alcoholic beverages*; (2) *alcoholic beverages and tobacco*; (3) *clothing and footwear*; (4) *housing and utilities*; (5) *furnishing and household equipment*; (6) *health*; (7) *transport*; (8) *communication*; (9) *recreation and culture*; (10) *education*; (11) *restaurants and hotels*; (12) *miscellaneous goods and services*. While the COICOP classification is a standard statistical nomenclature for the construction of Consumer Price Indexes, the above WB classification into six groups corresponds to an economic criterion. For our purposes, the most important distinction is the one between consumption of food and beverages and all other non-food consumption. Thus, we divided division (2) into the two subdivisions *beverages* and *tobacco* and division (11) into *meals outside home* and *hotels and accommodation services*.

The HBS, like the LSMS, collects data on expenditures on food and beverages as well as home production of food and beverages. As for the data on spending on meals outside the home, no individual food items are collected in the HBS (only the aggregate expenditure by household on meals outside the home is recorded). All data were recorded in a diary for the whole two-week survey period, by item, in quantities and values. The annual consumption by household was then obtained by multiplying those amounts by 365/14.

Overall, 109 food and beverage expenditure items were recorded in the HBS questionnaire and diary and given a COICOP classification. Food and beverage expenditures were classified into 8 groups: A) *Bread and cereals*; B) *Sugar and confectionery, salt, coffee, tea and other products*; C) *Meat*; D) *Fish*; E) *Oils and fats*; F) *Milk, cheese and eggs*; G) *Vegetables*; H) *Fruits*; I) *All Beverages*. For all items, annual consumption expenditure was then calculated for each household. Per capita expenditures are then simply calculated by dividing total expenditure by the number of household members.

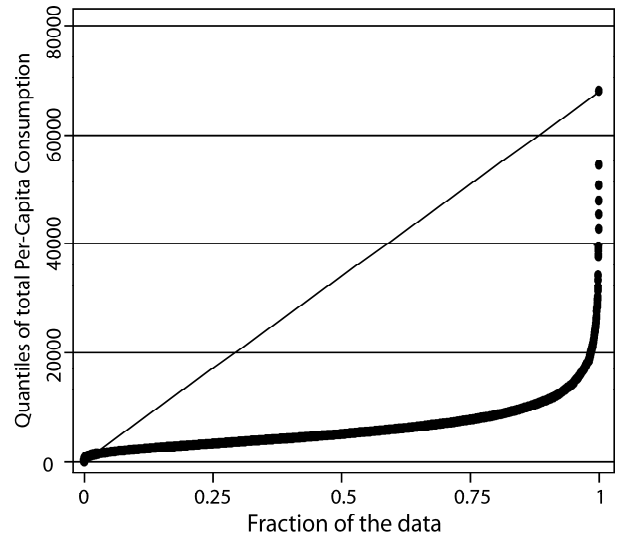
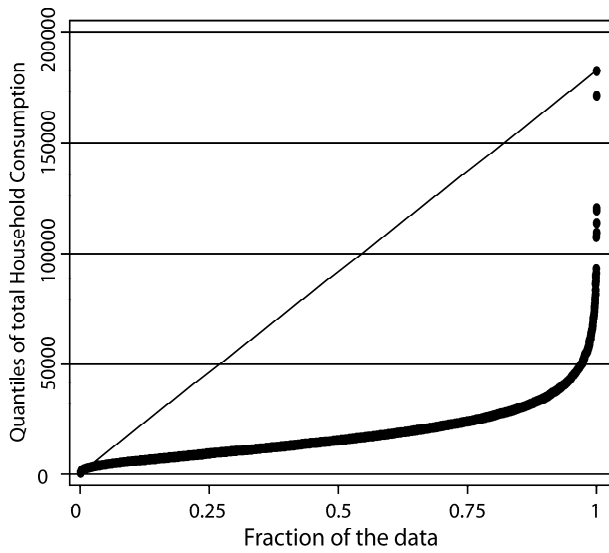
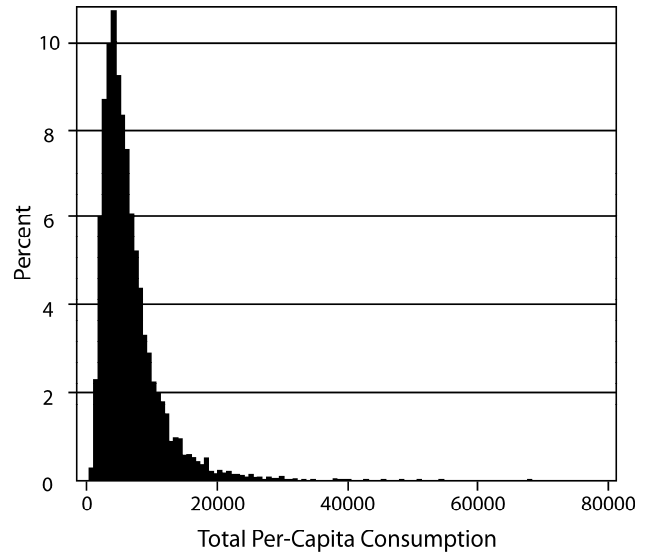
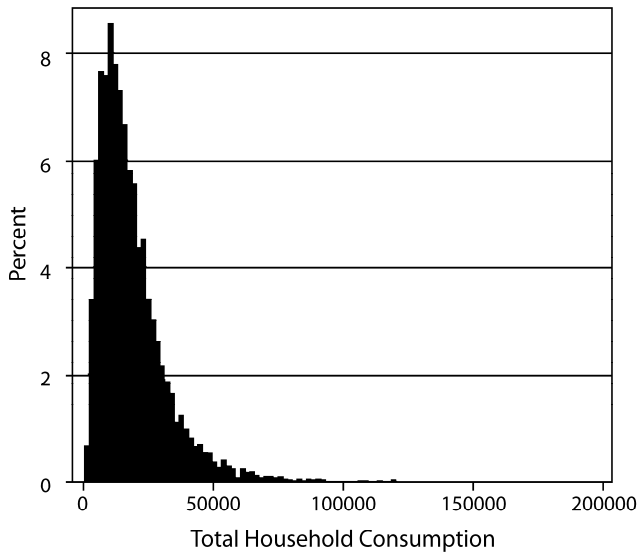
All other non-food consumption items recorded in the diary were classified into the following 12 groups: L) *Meals outside home*; M) *Tobacco*; N) *Haberdashery*; O) *Household equipment*; P) *Personal hygiene*; Q) *Books and newspapers*; R) *Telephone and post*; S) *Transport*; T) *Health*; U) *Various expenses*; V) *Games, lotteries, and show tickets*; Z) *Maintenance and repairs*.

In Table 1 we present a classification of total consumption according to the COICOP divisions and subdivisions comparable with the WB aggregates.

Table 1. Composition of total household consumption (annual average)

Consumption categories (COICOP divisions)	KM	Percentage
Food and beverages consumed at home	6,134.01	33.16
Food	5,903.49	31.92
Beverages	230.52	1.25
Meals outside home	378.95	2.05
Hotels and accommodation services	146.89	0.79
Tobacco	373.08	2.02
Clothing and footwear	977.43	5.28
Housing and utilities	4,097.96	22.15
Furniture and household equipment	1,005.46	5.44
Health	744.95	4.03
Transport	2,080.24	11.25
Communication	606.35	3.28
Recreation and culture	673.96	3.64
Education	97.11	0.53
Other miscellaneous	1,180.75	6.38
Total consumption	18,497.14	100.00

On average, total annual household consumption in 2007 was equal to KM 18,497.14. *Food* and *housing* were the largest items (31.92 and 22.15 percent, respectively), but if *beverages* and *meals outside home* are included, the overall “food” expenditure amounts to 35.21 percent of the total. In per capita terms, total consumption amounted to an average of KM 6,270.87. As we can see from the graphs, both total household consumption and total per capita consumption are very concentrated and skewed to the left: consumption therefore appears to be very concentrated at the lower left end of the distribution.



The concentration of total consumption is indeed remarkable: while the first decile of households spends 2.3 percent of total cumulative household consumption expenditure, the first two deciles spend 6.1 percent, and the first three deciles 11.2 percent of the total. The first half of the population spends about a quarter of the total consumption expenditure, a bit less than the richest decile alone. Table 2 shows the decile distribution for total household consumption, whose average value over the whole sample was KM 18,497.14, with a median value of KM 15,349.65 and a skewness of 2.19. As the Table shows, 60 percent of the population had a total consumption expenditure lower than the average, with the cumulative value over the overall total consumption barely around 35 percent.

Table 2. Distribution of total household consumption

Deciles	Total Consumption (KM)	Percentage of Overall Total Consumption	Cumulative Percentage of Overall Total Consumption
First	5,865.14	2.27	2.27
Second	8,224.43	3.82	6.10
Third	10,550.32	5.09	11.18
Fourth	12,807.90	6.29	17.47
Fifth	15,349.65	7.61	25.08
Sixth	18,202.23	9.05	34.13
Seventh	21,779.58	10.77	44.90
Eighth	26,452.11	12.93	57.83
Ninth	34,659.25	12.93	74.11
Tenth (more than 9th decile)		25.89	100.00

To construct the poverty line, consumption expenditure data have to be spatially deflated and expressed in per capita terms. As we know, spatial (i.e., geographic) differences in prices can cause the same bundle of goods to be more expensive in one region than in another. But these differences do not necessarily reflect differences in material well-being. Whatever price index is used for such deflation—generally a weighted Paasche index is suggested—, the issue is what prices to use to define reference prices. One natural way would be to use the unit values (implicit prices) that can be calculated by dividing the values by the quantities purchased by each household for each item. Unfortunately, in the HBS such data are only available for the items recorded in the diary—mostly food items—, while for most of the non-food expenditure items there is no information available on the quantities purchased. Clearly, as non-food prices (energy, oil, electricity, clothing, etc...) might have quite a different behaviour from food prices, we should not use unit values to construct a price deflator reflecting regional differences in prices.

An alternative way is to use consumer prices (indexes) at the local level. Such indexes reflect aggregate price indicators for groups of goods and services (down to a very disaggregated COICOP classification). For the purpose of deflation at the regional level, price indexes by COICOP division can be used, if available at a reasonably disaggregated regional level. In the case of BiH, such consumer price indexes are available since 2005 for twelve “regions” at a 4-digit COICOP disaggregation. Thus, we have taken the 2007 annual averages of the price indexes for the twelve regions and the 12 COICOP divisions and divided consumption expenditure (by division) by the corresponding price index for each household.² Regional price differences can be substantial: while urban areas like Sarajevo tend to be more expensive, rural³ areas in Republika Srpska (henceforth: RS) are the cheapest ones, and the variations between the two can be around 20-25 percent. Spatially deflated data thus reflect differences that are not due to regional price differences, which is important in the case of poverty analysis.

Overall household expenditures vary relative to the number of members of each household, although it can be argued that for some expenditure items they do not increase proportionally with the number of members. In any case, as the household size does affect expenditure patterns, it is important to express the data in per capita terms. One household might spend twice as much as another household and yet have three times more members. As it is the amount of consumption expenditure per person that counts for material well-being, we

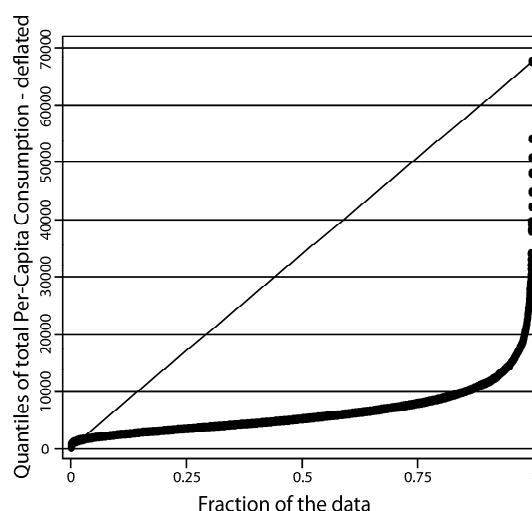
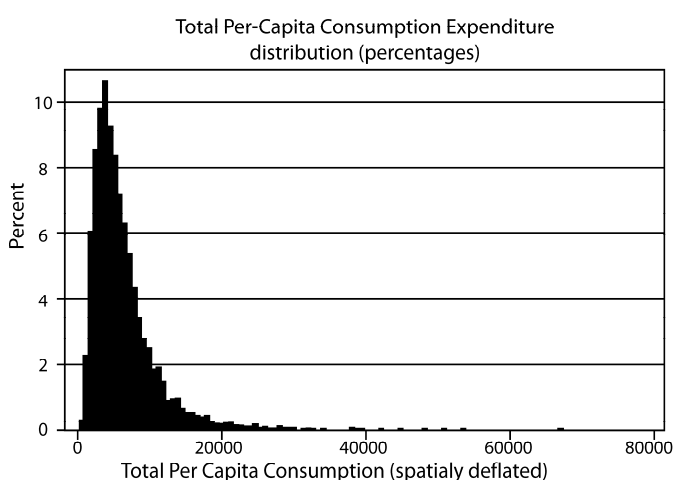
² As each municipality belongs to a region, we were able to have each household’s consumption expenditure by COICOP division divided by the corresponding price index for its region.

³ According to the current statistical typology, settlement types in BiH are categorised into two types: urban and “other”. Settlements typified as “other” include both rural and semi-urban areas, and will herein be referred to only as “rural” areas.

have therefore divided all expenditure figures by the number of household members, to obtain *per capita consumption expenditure*, whose distribution is shown in the Table below.

Table 3. Distribution of total per capita consumption expenditure
(adjusted for spatial price differences)

Deciles	Total Consumption (KM)	Percentage of Overall Total Consumption	Cumulative Percentage of Overall Total Consumption
First	2,358.48	2.86	2.86
Second	3,083.95	4.36	7.23
Third	3,752.04	5.47	12.70
Fourth	4,397.26	6.51	19.20
Fifth	5,142.81	6.51	26.82
Sixth	6,015.19	8.90	35.71
Seventh	7,081.62	10.42	46.13
Eighth	8,588.24	12.43	58.55
Ninth	11,341.70	15.67	74.22
Tenth (more than 9th decile)		25.78	100.00



5. Construction of a food-poverty line for BiH

To construct the food poverty line, we determine the food consumption patterns of the population. From such patterns, we then attribute the caloric contribution of each item consumed to the total consumption bundle. Once the minimum calorie requirement is defined, we then convert consumed quantities of each item into intake of calories for each item. The WB 2003 Poverty Assessment for BiH stipulates that the required level of calories, for each person, is set at 2,100 kcal per day. We then need to calculate how many calories a consumption bundle provides and then define the proportions of each individual item in the bundle necessary to attain the required minimum of 2,100 kcal.

Obviously, different households—and different household groups—have different consumption patterns, thus providing for a different calorie intake. Also, the same total calorie intake can be provided by different combinations and quantities of different food items. It is therefore important to identify a population reference group and take its consumption patterns as representative of a consumption bundle to be used to

calculate the proportions of calorie intakes and the overall caloric provisions. The WB methodology defines a consumption bundle of 66 food items, gives the original caloric contribution as well as the adjusted contribution of each item, by re-proportioning the total to 2,100 kcal.

Out of the many possible consumption bundles that can be chosen, it is of crucial importance to identify a representative one whose caloric contribution significantly corresponds to the consumption patterns of a representative subset of the population. The suggested choice is the second and third deciles of the population (in the distribution of consumption expenditures), “because our interest is in people at the lower end of the distribution” (WB (2003, p. 33)). The poorest decile of the population is excluded as the consumption patterns of those people might not be representative of a normal pattern and they may reflect measurement errors. The second and third deciles of the population surveyed are called the *reference group*.

Yet, a caveat is in order here. At this stage, we are trying to calculate how much of each food item a representative group of households consumes, how many calories that amount of food can give, and in what proportion over the total it is consumed so as to reach a total of 2,100. As it can be easily imagined, a lot of bread and very little meat can do the same as a bit of bread and a bit more of meat, just to give an example. Meat and beans can be substitutes, in a way, for proteins and calories, and yet they have a very different cost. As different combinations can have different food items in different proportions and yet give the same total in terms of calories but have very different costs, it is not irrelevant which bundle to choose as a representative minimum-caloric-requirement food bundle. The old definition of inferior vs. normal goods here comes to mind. Engel’s studies used to recall that potatoes were consumed when income was low but when income grew people would tend to switch to bread and cereals. The income elasticity of potato consumption was negative. And yet, what we are trying to measure here is a food-poverty line, i.e. a minimum bundle of food items that people need to consume to maintain life. Such a bundle should include all “normal” consumption goods, not only in the caloric sense, but also in the sense of consumption habits. Many examples can be made to make this analysis complex: if we exclude those items that are normally considered as luxury goods (caviar, champagne, etc.), why for instance should we exclude wine or beer from a “normal” consumption bundle? And how about meat and fish? If poor people usually tend not to buy meat or fish because they cannot afford them, does that mean that meat and fish should not be included in a “normal” consumption bundle. By excluding items that we can consider as normal, we will tend to introduce a bias in the bundle, giving too much weight to certain “poor” items and less weight to other items. As an extreme case, we could have a resulting bundle of only a few “poor”, inferior items, which does not include any “rich”, normal item, thus inducing a significant distortion in the definition of the food poverty line.

A second caveat is in order. In the WB methodology, it is suggested that 66 food items be chosen, out of which only 64 are actually included and only 54 are published in the Table (see Table 1, Annex 1).⁴ The list excludes all the other 53 items that were recorded in the HBS 2007. The choice appears to be arbitrary, as some very common food items are excluded while some others, uncommon in the reality of BiH, are included.⁵ The total amount of kcal of the chosen basket with 54 items is then adjusted downward in a non-proportional fashion, with an “optimization” criterion that is not explained and that does not simply apply the same original weights so as to give a total of 2,100 kcal.

For consistency with the LSMS 2001 and the WB 2003 Poverty Assessment, we have calculated for each household the daily expenditures and the quantities consumed (purchased or home produced) for the same original food basket of 66 items as in the LSMS 2001 (a larger list of items than that in Table 1 shown in Annex 1), as well as the implicit prices (unit values) for each food item—i.e. the value/quantity ratio—. Daily amounts were obtained by dividing the biweekly diary totals by 14. We then calculated the per capita values

⁴ Items 27, 28, 29, 31, 34, 35, 37, 38, 39, 40, 42, 43 were excluded in Table B3 (WB (2003)).

⁵ It is actually mentioned that, “given the demographic composition of the population in BiH, the minimum food basket is 2,239 kcal, as was assumed in the basic derivation.” (WB (2003, p. 76)).

by dividing aggregate household values by the number of members of each household. We then ranked the population by per capita consumption and selected the second and third deciles only, thus defining the *reference group*. In other words, per capita daily quantities are those calculated for the reference group only.

With the per capita daily quantities and values of the reference group, we then calculated the implicit prices (unit values) for each of the 66 food items and their averages across all households in the sample (i.e. average “country-wide” prices). We then took the amount of calories of each of the 66 items and converted the quantities consumed by the reference group into calories. Since the total consumed in calories was well above the required minimum of 2,100, we adjusted all quantities downward, keeping the original proportions in the consumption bundle of the reference group. Finally, we converted the resulting quantities of food into monetary values, by multiplying the average adjusted quantities by the average prices. This is the *food poverty line* (see Table 4).

Table 4. Minimum food bundle of the reference group (kcal, adjusted kcal, amounts)

Code	Food item	Average daily quantity	Kilocalories (real)	Average daily quantity (adjusted)	Kilocalories (adjusted)	Cost (KM/Year)
1	Rice	0.024	98.18468	0.013	53.30238	7.87
2	Other cereals	0.002	6.54161	0.001	3.551301	1.08
3	Wheat flour	0.295	1006.036	0.160	546.1553	50.70
4	Other types of flour	0.027	90.05075	0.015	48.88664	7.39
5	Bread	0.129	311.8777	0.070	169.3118	36.08
6	Pasta	0.026	89.46238	0.014	48.56723	13.33
7	Biscuits, pastries, pizza	0.001	4.579077	0.001	2.485884	2.37
8	Veal and edible veal offal	0.053	107.0937	0.029	58.13892	111.90
9	Beef and edible beef offal	0.006	9.312361	0.003	5.055483	10.73
10	Pork and edible pork offal	0.003	3.772368	0.002	2.047939	5.43
11	Poultry and edible poultry offal	0.047	38.63879	0.026	20.97618	49.15
12	Other products of animal origin	0.023	20.46849	0.012	11.11191	46.08
13	Freshwater and sea fish	0.014	9.128775	0.008	4.955818	18.17
14	Other fish-based product	0.003	5.807054	0.002	3.152527	5.99
15	Fresh milk	0.237	128.1641	0.129	69.57756	55.75
16	Yoghurt and sour milk, kefir	0.047	36.9886	0.025	20.08033	15.34
17	Sour cream	0.016	20.82366	0.009	11.30472	14.73
18	Kajmak and cream cheese	0.008	19.19418	0.004	10.42011	3.93
19	White cheese and cottage cheese	0.025	108.9238	0.013	59.1324	19.67
20	Eggs	0.024	31.09088	0.013	16.87858	15.85
21	Butter	0.002	18.24878	0.001	9.906878	4.70
22	Margarine, melted butter	0.012	87.31994	0.006	47.40414	10.16
23	Edible oil(and olive oil)	0.074	667.6915	0.040	362.4756	38.93
24	Other animal origin fat	0.001	6.629405	0.001	3.598964	0.71
25	Sugar	0.106	419.4535	0.058	227.7124	27.23
26	Jam, marmalade, preserves, jelly	0.008	22.91257	0.004	12.43875	6.60
27	Honey, all kinds	0.008	23.25592	0.005	12.62515	16.70
28	Chocolate for cooking or eating	0.010	49.81721	0.005	27.04471	19.85
29	Confectionery(ice cream)	0.005	17.98102	0.003	9.761517	12.89

Code	Food item	Average daily quantity	Kilocalories (real)	Average daily quantity (adjusted)	Kilocalories (adjusted)	Cost (KM/Year)
30	Food preparations for children	0.002	1.604846	0.001	0.8712366	2.81
31	Sauces, condiments (mustard, mayonnaise, ketchup)	0.006	17.0529	0.003	9.257658	6.93
32	Vinegar	0.005	0.6859324	0.003	0.3723782	1.92
33	Salt	0.037	0.000037	0.020	0.0000201	6.12
34	Soup concentrates	0.003	1.998493	0.002	1.084939	9.69
35	Baking powders, yeast, powdered cream, vanilla sugar	0.003	4.450667	0.001	2.416173	8.33
36	Coffee	0.025	0.4986714	0.014	0.2707181	50.23
37	Tea, all kind	0.001	0.0104435	0.001	0.0056696	9.36
38	Cocoa (sweetened or not) and powdered chocolate	0.001	4.547756	0.001	2.46888	2.39
39	Mineral Water	0.163	0.0001626	0.088	0.0000883	23.62
40	Soft drinks (Fanta, Sprite, etc.)	0.063	18.93968	0.034	10.28195	16.50
41	Fruit syrups and concentrates	0.041	49.45996	0.022	26.85077	16.66
42	Strong beverages (whisky, grapes, brandies, cognac, etc.)	0.002	4.730833	0.001	2.568269	4.86
43	Wine	0.002	1.321122	0.001	0.7172092	2.04
44	Beer	0.055	17.01345	0.030	9.236244	17.86
45	Fresh citrus fruits (lemons, tangerines, oranges)	0.034	8.926039	0.019	4.845757	13.01
46	Bananas	0.049	31.34868	0.027	17.01854	16.65
47	Apples	0.070	29.32958	0.038	15.92241	18.89
48	Pears	0.008	2.810279	0.004	1.525641	3.39
49	Grapes	0.010	5.589459	0.005	3.034399	5.78
50	Stone fruit (peach, apricot, plum etc...)	0.006	2.980778	0.003	1.618201	2.59
51	Other fruit (strawberries and other berries, water melons etc..)	0.052	20.79386	0.028	11.28855	16.86
52	Walnuts, almonds, hazelnuts, peanuts other edible seeds	0.003	6.375483	0.002	3.461114	6.04
53	Dried fruits	0.003	4.349827	0.002	2.361429	3.58
54	Vegetables cultivated for their leaves (lettuce, spinach, chicory...)	0.011	2.739075	0.006	1.486986	4.01
55	Cabbages (cabbage, cauliflower, kale, Brussels sprouts, broccoli)	0.030	7.62007	0.017	4.136775	7.03
56	Tomatoes	0.036	5.452821	0.020	2.960221	13.27
57	Green peppers	0.007	2.081985	0.004	1.130266	2.64
58	Cucumbers	0.016	2.084856	0.009	1.131824	4.87
59	Peas and string beans (fresh and frozen)	0.008	3.839333	0.004	2.084292	4.21
60	Dried beans	0.026	29.86911	0.014	16.21531	16.69
61	Carrots	0.010	3.814945	0.005	2.071053	3.65
63	Onions and garlic	0.029	28.25383	0.016	15.3384	8.50

Code	Food item	Average daily quantity	Kilocalories (real)	Average daily quantity (adjusted)	Kilocalories (adjusted)	Cost (KM/Year)
64	Potatoes	0.121	72.49039	0.066	39.3535	19.69
65	Other types of fresh vegetables	0.035	8.313094	0.019	4.513002	20.15
66	Processed, dried, canned and pickled vegetables	0.008	7.439917	0.004	4.038973	5.61
Total			3,868.267		2,100.00	1,005.68

Several caveats are in order here. In the first place, following the WB approach, we have calculated the amount of calories for only those 66 food items, even when there were other food items consumed by the reference group. Thus, proportions for each food item in the bundle are only calculated vis-à-vis the 66 food items. Secondly, unit prices used to calculate the monetary value of the resulting 2,100 kcal food consumption bundle are those derived from the value/quantity ratio of the reference group only.

As it turns out, the cost of a minimum-calories food bundle so calculated is equal to KM 1,005.68. This is the average 2007 food poverty line for BiH. In the sample, only 0.52 percent of the population has a total consumption expenditure—that is including food and non-food—that is less than the food poverty line, while 21.37 percent of the population spends in "food and beverages" only less than the food poverty line (but see below the estimated poverty rates).

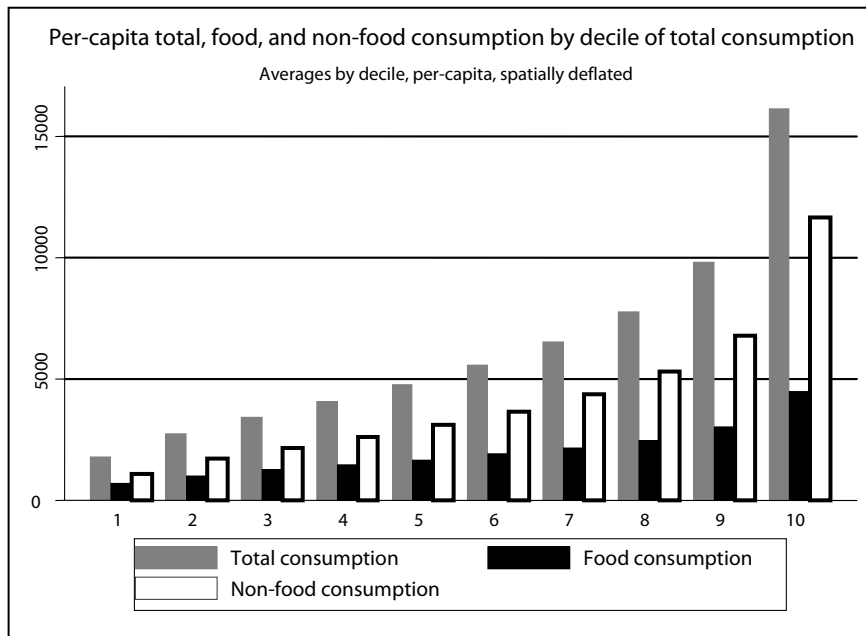
6. The general poverty line for BiH

To construct the general poverty line it must be assumed that food is not the only essential need, which implies that households in all cases will allocate part of their expenditures to non-food items to satisfy other essential needs. The method we use to estimate how much is allocated to other essential needs is called the "upper bound" method, after Ravallion (1998). Households will allocate part of their expenditures to food to satisfy their basic needs, but not all of their expenditures will necessarily go to food as they will have other essential needs to satisfy. If households allocate a certain share of their expenditures to food, they must be allocating the remaining share to other essential needs. If we choose a representative group of households whose expenditure allocation to food is equal to the food poverty line—i.e. they consume at least what is needed to survive and maintain life—than we can take their allocation as representative of a more general allocation procedure. We will consider that group of households as representative of an allocation to all items, both food and non-food, of what is minimally needed to survive and maintain life in society. Their overall expenditure level will be thus taken as representative of a general (overall) poverty line.

Food consumption obviously decreases as total consumption increases: the food consumption share decreases from around 39.4 to 28.5 percent (in line with the so-called Engel's law) along the ten deciles of total household consumption. The food consumption share of the second and third deciles of the population—the *reference group* we used to calculate the representative minimum-calorie food basket—is around 37 percent.

Table 5. Total, food, and non-food consumption and share by deciles of total consumption

Deciles	Total Consumption	Food Consumption	Food Share	Non-food Consumption	Non-food Share
1	1,788.608	701.4523	0.394	1,087.156	0.606
2	2,729.302	1,011.883	0.371	1,717.419	0.629
3	3,421.403	1,260.628	0.369	2,160.775	0.631
4	4,071.113	1,466.308	0.361	2,604.805	0.639
5	4,759.274	1,654.832	0.348	3,104.442	0.652
6	5,561.465	1,917.841	0.345	3,643.624	0.655
7	6,510.96	2,147.413	0.329	4,363.547	0.671
8	7,758.697	2,463.093	0.317	5,295.603	0.683
9	9,801.113	3,029.726	0.310	6,771.387	0.690
10	16,123.49	4,482.921	0.285	1,1640.57	0.715
Total	6,251.421	2,013.327	0.343	4,238.094	0.657



Following Ravallion (1998), we can assume that the “poverty line cannot exceed the total spending of those whose actual food spending achieves basic food needs”. And yet, the problem is which group’s food share should be used. Among those whose food consumption is lower than the food poverty line (21.4 percent of the population), the food consumption share is about 36.1 percent, with an average food consumption expenditure of KM 695, while total consumption expenditure averages KM 3092 (less than half the total average).⁶ Yet, not all households whose food consumption is lower than the food poverty line are poor, as shown by their total consumption expenditure, which might be high. So, in order to calculate the general poverty line we need to take a population group whose food consumption is “around” the food poverty line

⁶ In this particular subgroup of the population there are also individuals that are not necessarily “food poor”, but probably in some other conditions. It could be that for several of those households, food consumption occurs in canteens and work cafeterias, or hospices and hospitals. Or else, it could be that those are single-person households of young or old people who share their food with their relatives, and so do not spend that much on food. So, for most of those households, food consumption is not recorded under “food expenditure” but under “meals outside home”. However, since “meals outside home” are not used to calculate the food poverty line, we cannot consider these as “food expenditures”.

and at the same time whose non-food consumption is in a comparable range of values, to meet the essential non-food needs.

For those whose food consumption is around the poverty line, the situation is different. As it turns out, less than 5 percent of the whole sample has a food consumption expenditure that is ± 5 percent the food poverty line. For those whose food consumption is ± 5 percent the food poverty line, the average food share is 31.88 percent (and the median is 30.0 percent).⁷ Thus, if we take the food share of those households whose food consumption expenditure is ± 5 percent of the food poverty line we would get a *general poverty line* equal to:

$$GPL_1 = FPL/0.3188 = 1005.68/0.3188 = 3,154.18 \text{ (KM)}.$$

This is the estimate of the general poverty line that we obtain by using per capita total consumption, adjusted for spatial deflation, and considering as food consumption the total expenditure in those food and beverage items (109) out of which the minimum food basket has been calculated (with a selection of the 66 items listed in the WB (2003) poverty assessment) considering the expenditure weights of the reference group only (the third and second deciles of population per capita total consumption).

It must be noted that in the WB (2003) poverty assessment, food shares are calculated by adding to food consumption (expenditures in food and beverages) expenditures in meals outside home. While this is in fact food spending, since the minimum food basket—upon which the food poverty line is based—does not include it, we have not included it in the calculation of the share of total spending devoted to food. We should have done so had we had the amount of calories for each of the items consumed outside the home. As it turns out, meals outside home have zero value for the majority of the population (55.1 percent) and have a larger concentration in the highest deciles of the distribution. In any case, by including the expenditure in meals outside home, the overall share of spending in “food” (i.e. food, beverages and meals outside home) increases to 35.8 percent (from 34.3 percent). The “food” share of those whose food consumption so defined is ± 5 percent the food poverty line is now 33.6 percent, which therefore implies that the GPL is now:

$$GPL_2 = FPL/0.336 = 1005.68/0.336 = 2,993.08 \text{ (KM)}.$$

In the WB (2003) poverty assessment, it was also suggested that health expenditures should be taken out by the calculation of total consumption, following the concept that an increase in health care would not correspond to an increase in material well being. While we think this is arguable, as not all health care expenses respond to a deterioration of living conditions (spas, fitness, medical prevention, etc.), we notice that health care expenditures amount to an average of 4.4 percent of total consumption expenditures (with a median percentage value of 1.7) and that health care expenses tend to be concentrated in the highest deciles—the average health care share in the first decile is 3.5 percent, and the median is zero, while the average health care share in the highest decile is 5.5 percent—. By excluding health care expenditures, and including meals outside home under food expenditures, we get an aggregate food share of 37.5 percent, and a food share for the subgroup of those with a food consumption ± 5 percent around the food poverty line of 35.2 percent. In this case, the calculated GPL is thus:

$$GPL_3 = FPL/0.3519 = 1005.68/0.3519 = 2,857.31 \text{ (KM)}.$$

⁷ By decreasing the range around the food poverty line, the food share changes slightly. For that particular household whose food consumption is exactly equal to the food poverty line, the food share is 44.91 percent. These numbers show how variable the results are and how erratic the food shares appear to be. This is also due to the very limited number of observations, and makes the procedure very sensitive to the choice of the subgroup.

7. Poverty indicators in BiH

The first and rough estimate of poverty is based on the Head-count Index [HCI], i.e. the percentage of the population in households whose per capita consumption is below the poverty line. As we have seen above, in BiH, there is basically *no extreme poverty*, as almost all households in the HBS sample had per capita consumption levels above the food poverty line of KM 1005.68 per year.⁸ This does not mean that no household anywhere in the country suffers from food poverty: only that such cases are very limited in number and in the sample survey are not significant. It is also important to note that 21.4 percent of the population spends less on food than the value of the minimum food basket. While not all of these people can be called food poor, this shows that there is definitely a measurable extent of deprivation in the country.

Table 6A presents a set of poverty indicators for BiH based on the general poverty line GPL_1 : estimates are given in the first column, while the second shows the estimates' standard errors and the last two columns show the estimates' confidence intervals. On this basis, 20.98 percent of the overall country population can be considered as poor. As the table shows, poverty varies considerably across Entities: the Federation of Bosnia and Herzegovina (henceforth: FBiH) has a lower poverty rate (20.1 percent) than the RS (22.2 percent) and Brcko District of BiH (henceforth: BD) (27.2 percent). The *depth of poverty* is also considerable: the Poverty Gap [PG] is equal to 5.65 percent on aggregate, and goes from 5.36 percent in the FBiH to 6 percent in the RS to 8.27 percent in the BD. Poverty severity, as measured by the Squared Poverty Gap [SPG], is equal to 2.2 percent on aggregate and it varies similarly to the poverty gap. The *average shortfall* for the whole country is 26.9 percent, which means that the average consumption of the poor population falls short of the general poverty line by almost 27 percent.

Tables 6B and 6C present, respectively, the same sets of poverty indicators based on the other two poverty lines, GPL_2 and GPL_3 , constructed above.

⁸ As we have seen above, there are 39 households in the sample (0.5 percent) with an average per capita total consumption of KM 798.

Table 6A. Poverty indexes

[Poverty line is GPL₁]

	Estimate	Std. Err.	[95% Conf. Interval]	
Head-count				
Overall country	0.2098014	0.0063666	0.1972995	0.2223032
FBiH	0.200742	0.0085818	0.1838903	0.2175937
RS	0.2220862	0.0095107	0.2034105	0.2407618
BD	0.2717523	0.0270306	0.2186737	0.3248309
Poverty Gap				
Overall country	0.0565038	0.0021245	0.052332	0.0606756
FBiH	0.0535864	0.0028067	0.048075	0.0590978
RS	0.0600967	0.0033404	0.0535373	0.066656
BD	0.0826656	0.009763	0.0634945	0.1018368
Squared Poverty Gap				
Overall country	0.0225254	0.0010575	0.0204487	0.024602
FBiH	0.0212143	0.0013481	0.0185671	0.0238615
RS	0.0241284	0.0017866	0.0206202	0.0276366
BD	0.0344793	0.0050983	0.0244681	0.0444905
Average Shortfall				
Overall country	0.2693			
FBiH	0.1784			
RS	0.2706			
BD	0.3042			

Note: Standard errors for the overall country are computed with stratified sample design

Table 6B. Poverty indexes

[Poverty line is GPL₂ calculated including meals outside home in food consumption]

	Estimate	Std. Err.	[95% Conf. Interval]	
Head-count				
Overall country	0.1874582	0.006117	0.1754465	0.1994699
FBiH	0.1798943	0.0082128	0.1637673	0.1960213
RS	0.1969971	0.009217	0.1788981	0.2150961
BD	0.25146	0.0263901	0.1996391	0.3032809
Poverty Gap				
Overall country	0.0488275	0.0019464	0.0450054	0.0526496
FBiH	0.046234	0.0025544	0.041218	0.0512501
RS	0.0519752	0.0031061	0.0458759	0.0580745
BD	0.0728761	0.0090759	0.0550542	0.090698
Squared Poverty Gap				
Overall country	0.0191859	0.0009599	0.017301	0.0210707
FBiH	0.0180349	0.0012134	0.0156522	0.0204176
RS	0.0205933	0.0016454	0.0173624	0.0238242
BD	0.0296789	0.0046668	0.020515	0.0388429
Average Shortfall				
Overall country	0.2605			
FBiH	0.2570			
RS	0.2638			
BD	0.2898			

Table 6C. Poverty indexes

[Poverty line is GPL₃ calculated including meals outside home in food consumption and excluding health care expenditures from total consumption]

	Estimate	Std. Err.	[95% Conf. Interval]	
Head-count				
Overall country	0.1856022	0.0060185	00.173784	0.1974203
FBiH	0.1739089	0.0080185	00.1581635	0.1896544
RS	0.2023491	0.0091465	00.1843885	0.2203097
BD	0.2503388	0.0284358	00.1945009	0.3061768
Poverty Gap				
Overall country	0.0492439	0.0019843	0.0453476	0.0531403
FBiH	0.0454483	0.0025462	0.0404485	0.0504481
RS	0.0546274	0.003315	0.048118	0.0611369
BD	0.0711556	0.0093125	0.052869	0.0894421
Squared Poverty Gap				
Overall country	0.0194052	0.00098	0.0174808	0.0213296
FBiH	0.0177153	0.0012071	0.015345	0.0200856
RS	0.0218248	0.0017568	0.018375	0.0252746
BD	0.0287707	0.0047081	0.0195256	0.0380158
Average Shortfall				
Overall country	0.2653			
FBiH	0.2613			
RS	0.2700			
BD	0.2842			

From the methodological point of view, the GPL₃ poverty line—used for the set of indicators shown in Table 6C—is the closest to the one proposed in the WB (2003) poverty assessment. As the Tables 6A and 6C show, results with the three poverty lines are only slightly different. And yet, they might be significant. Take for instance the HC for the whole country. With GPL₁, the poverty rate is about 21 percent, with a 95 percent confidence interval between 19.7 and 22.2 percent. With GPL₃, the poverty rate is about 18.6 percent, with an interval between 17.4 and 19.7 percent. This implies that *the two poverty estimates are significantly different*. There are reasons why the two lines produce different results, which can be summarized as follows:

- a) In constructing GPL₁, we have used a food poverty line—i.e. a minimum food basket—that has 66 food items, all of which contribute to the overall 2,100 kcal total. GPL₃ is constructed using the same poverty line, although it is important to keep in mind—for the sake of comparison—that the food poverty line used in the WB (2003) poverty assessment has a different number of food items (54) and a total of around 2,300 kcal.⁹
- b) Consumption aggregates were spatially deflated. In constructing GPL₁, we have used a consumer price index deflator for twelve regions and the 12 COICOP commodity divisions. The original WB (2003) GPL₃ was constructed with consumption aggregates that were deflated using a price index derived from unit values. Yet, since those values were available only for food expenditure items, all consumption expenditures were deflated using a food price deflator, under the (unwarranted) assumption that non-food prices “would follow the same patterns as food prices”.¹⁰

⁹ As it is not clear how those 54 items were chosen out of the 66, we kept the original 66 in the basket.

¹⁰ However, in the WB (2003) poverty assessment, it is mentioned that the price index so constructed was used only because no other price data were available at the time.

- c) The food poverty line is constructed using all expenditures for food and beverages—COICOP divisions 1 and 2, excluding tobacco—. Several assumptions underlie this approach. First, the food poverty line is the amount to be spent to ensure the minimum food basic needs. Second, other essential basic needs have to be satisfied. Third, for the expenditure allocated to food in the amount proportional to the food minimum basket there must be a certain fraction of total expenditure allocated to non-food basic needs. So, the assumption is that any consumer will allocate at least some expenditure to food and some to non-food. The food poverty line—and the share allocated to that minimum food basket—defines the overall shares allocated to the satisfaction of all basic needs, food and non-food, in a proportion given by the shares allocated to the two type of expenditures. Therefore, the food-share “threshold” will be defined by the food share of those who spend in food at least the equivalent of the food poverty line. In line with what is suggested by the WB (2003) poverty assessment, Ravallion (1998) and others, we have considered those households whose food expenditure is in the ± 5 percent range of the food poverty line, taken the average food share of that particular subgroup, and calculated the general poverty line as the unit complement of the food poverty line using that food share. The poverty line GPL_1 was constructed exactly using the share of expenditure in food and beverages as mentioned above. Conversely, GPL_3 was constructed using the share of expenditure in food and beverages *and* meals outside the home, as indicated in the WB (2003) poverty assessment, but still using a food poverty line calculated by considering only the expenditure in food and beverages. Clearly, however, the two “food expenditures” are not congruous. This obviously increases the share allocated to food—it is food plus meals outside—and so decreases the resulting general poverty line: in our case, as we have seen above, the food share goes from 31.9 to 33.6 percent. This is the food share we have used to calculate GPL_2 and GPL_3 .
- d) The original WB (2003) GPL_3 was constructed by taking out from total household consumption the expenditures for health care, under the assumption that they do not contribute to material well-being—they are actually inversely related to material well-being—. This is also arguable, as one can say that whatever the final effects, any rational consumer will have to allocate all expenses so as to maximize his or her utility: health care expenses do contribute to one’s utility. So, whether the allocation of total consumption is done in steps—first taking out health care and then allocating to food and non-food items to maximize material well-being—or it is done all at once, there are reasons not to exclude health care expenses from total consumption. And yet, this is the way GPL_3 was calculated: excluding health care from total consumption, calculating the new share of expenditures in food plus meals outside and then calculating the GPL using the food poverty line constructed above from the 66 food items of the minimum-food basket. Clearly, by decreasing total expenditure, the share spent in food plus meals outside is now even larger, up to 35.2 percent, and so the new general poverty line is deemed to be lower.

In summary, the three general poverty lines define a range of thresholds, all of which have different implications. We will report results using GPL_3 , for the sake of comparison with the WB (2003) poverty assessment. Tables 7A and 7B below show the three poverty rates—HC, PG, and SPG—by settlement type (rural and urban) and geographical area.

Table 7A. Poverty indexes by settlement type
 [Poverty line is GPL_i]

Overall Country		Estimate	Std. Err.	[95% Conf. Interval]	
Head-count					
	Rural	0.2177658	0.0087674	0.2005498	0.2349818
	Urban	0.2041596	0.0070408	0.1903339	0.2179853
Poverty Gap					
	Rural	0.0591964	0.0030341	0.0532384	0.0651543
	Urban	0.0545965	0.0023302	0.0500209	0.0591721
Squared Poverty Gap					
	Rural	0.0237102	0.0015238	0.0207181	0.0267024
	Urban	0.021686	0.0011925	0.0193444	0.0240277
Head-count					
FBiH	Rural	0.2055048	0.0116419	0.1826442	0.2283655
FBiH	Urban	0.1974616	0.0092849	0.1792294	0.2156938
RS	Rural	0.2347727	0.0136661	0.2079374	0.2616081
RS	Urban	0.2126938	0.0109645	0.1911633	0.2342243
BD	Rural	0.2785672	0.0382814	0.2033959	0.3537385
BD	Urban	0.2665089	0.0372963	0.1932721	0.3397458
Poverty Gap					
FBiH	Rural	0.0570814	0.0040656	0.049098	0.0650647
FBiH	Urban	0.0511792	0.002943	0.0454002	0.0569583
RS	Rural	0.060868	0.0046225	0.051791	0.069945
RS	Urban	0.0595256	0.004006	0.0516592	0.067392
BD	Rural	0.0907959	0.0164618	0.0584707	0.1231212
BD	Urban	0.0764102	0.0107764	0.0552492	0.0975712
Squared Poverty Gap					
FBiH	Rural	0.0229191	0.0019793	0.0190324	0.0268058
FBiH	Urban	0.0200401	0.0014674	0.0171586	0.0229216
RS	Rural	0.0240323	0.0024583	0.0192051	0.0288596
RS	Urban	0.0241995	0.0021512	0.0199754	0.0284236
BD	Rural	0.0406017	0.0090802	0.0227714	0.0584319
BD	Urban	0.0297688	0.0050842	0.0197852	0.0397523

Table 7B. Poverty indexes by settlement type

[Poverty line is GPL₃ calculated including meals outside home in food consumption and excluding health care expenditures from total consumption]

Overall Country		Estimate	Std. Err.	[95% Conf. Interval]	
Head-count					
	Rural	0.1964128	0.0083207	0.1800739	0.2127516
	Urban	0.1779443	0.0067182	0.1647522	0.1911365
Poverty Gap					
	Rural	0.0517726	0.0028355	0.0462047	0.0573405
	Urban	0.0474527	0.0021706	0.0431903	0.0517151
Squared Poverty Gap					
	Rural	0.0203647	0.0013961	0.0176232	0.0231062
	Urban	0.0187255	0.0011038	0.016558	0.0208929
Head-count					
FBiH	Rural	0.185	0.0112517	0.1629057	0.2070944
FBiH	Urban	0.1662699	0.0086052	0.1493722	0.1831675
RS	Rural	0.211661	0.01245	0.1872137	0.2361084
RS	Urban	0.1954551	0.0110438	0.173769	0.2171412
BD	Rural	0.262743	0.0396527	0.184879	0.3406069
BD	Urban	0.2407951	0.0348541	0.172354	0.3092362
Poverty Gap					
FBiH	Rural	0.049238	0.0037664	0.041842	0.056634
FBiH	Urban	0.0428382	0.002654	0.0376267	0.0480496
RS	Rural	0.0543326	0.0043938	0.0457048	0.0629604
RS	Urban	0.0548457	0.0039469	0.0470955	0.062596
BD	Rural	0.0803288	0.0165612	0.0478084	0.1128491
BD	Urban	0.0640977	0.0096789	0.0450918	0.0831037
Squared Poverty Gap					
FBiH	Rural	0.0193758	0.0017927	0.0158555	0.022896
FBiH	Urban	0.0165717	0.0013136	0.0139922	0.0191512
RS	Rural	0.0211633	0.0023008	0.0166454	0.0256813
RS	Urban	0.0223145	0.0020963	0.0181981	0.0264309
BD	Rural	0.034855	0.0086082	0.0179514	0.0517585
BD	Urban	0.0240895	0.0044739	0.0153043	0.0328747

As expected, poverty rates appear to be higher in the rural areas, and they are highest in BD, followed by the RS. Also, it must be noticed that confidence intervals for all estimates are generally quite broad. Consider the results in Table 6A. With an average HCI of 20.98 percent for the whole country and a standard error of 6.37 percent, the confidence interval goes from 19.72 to 22.23 percent. As the standard errors are larger for the estimates at the Entity levels, the estimated poverty rates have larger confidence intervals, too. This also points to the caution needed in comparing different poverty rates for different parts of the country, or different groups. When confidence intervals intersect, it means that one cannot reject the null hypothesis tested that their poverty rates are the same.¹¹

¹¹ In Table 6A, for instance, the HCI is definitely larger in BD than in FBiH, as the two intervals do not intersect.

8. Poverty incidence in BiH

Poverty incidence varies considerably by settlement type and by population group. The incidence of poverty by settlement type is shown below for poverty rates calculated with GPL₃. In general, poverty is higher in rural areas (Table 8A).

Table 8A. Poverty incidence by settlement type
[percentages using GPL₃, standard errors in parentheses]

	Rural	Urban	Total
Overall country	23.90 (0.65)	11.03 (0.56)	18.56 (0.45)
FBiH	23.62 (0.86)	9.88 (0.66)	17.39 (0.56)
RS	23.91 (1.03)	13.24 (1.14)	20.23 (0.78)
BD	32.53 (3.56)	16.51 (2.87)	25.03 (2.35)

Poverty incidence also varies with gender, and in particular with the gender of the household head, at least in the aggregate. In the country, about 21.6 percent of households are female headed. As Table 8B shows, in the aggregate there are significant differences between male-headed households [MHH] and female-headed households [FHH] in terms of poverty incidence: households headed by women are considerably less poor than those headed by men, particularly in the FBiH, where in any case MHH are less poor than FHH living in RS.

Table 8B. Poverty incidence by gender of household head
[percentages using GPL₃, standard errors in parentheses]

	MHH	FHH	Total
Overall country	19.32 (0.52)	15.77 (0.91)	18.56 (0.45)
FBiH	18.30 (0.65)	14.04 (1.12)	17.39 (0.56)
RS	20.60 (0.89)	18.93 (1.64)	20.23 (0.78)
BD	28.10 (2.76)	13.19 (3.93)	25.03 (2.35)

Table 8C shows a more nuanced picture, relating gender of the household head and size of the household. Poverty incidence varies with household size: the larger the household, the higher the incidence of poverty. Overall, one in five households in the country has 5 or more members, while four-member households are the largest group (23.5 percent of the total). As it turns out, of all poor households, almost one fourth are households with four members, and the highest poverty incidence is in the group of large households. This is clearly a population group that appears to be more prone to poverty than others: large families are poorer than small families. We will see below what demographic and social characteristics those households have: if FHH have lower poverty rates than MHH it is because of those demographic and social characteristics.

Table 8C. Poverty incidence by gender of household head and household size
[percentages using GPL₃]

Household size and geographical area	MHH	FHH	Total
One member			
Overall country	8.17	10.82	9.99
FBiH	6.47	8.18	7.74
RS	10.08	14.98	13.13
BD	-	5.19	5.19
Two members			
Overall country	14.18	13.25	13.99
FBiH	11.08	11.34	11.15
RS	17.73	16.73	17.57
BD	26.01	20.73	25.33
Three members			
Overall country	13.92	17.81	14.60
FBiH	12.53	14.69	12.89
RS	16.59	22.50	17.76
BD	16.09	26.89	17.89
Four members			
Overall country	18.79	24.90	19.23
FBiH	19.10	22.70	19.38
RS	17.75	30.40	18.54
BD	24.42	36.07	24.96
Five or more members			
Overall country	32.20	35.94	32.39
FBiH	30.26	37.13	30.94
RS	34.19	33.80	34.16
BD	51.55	-	51.55

Single-member households are generally not too poor, and are even less poor when the only member is a man. We will look at age and occupation to see whether that makes a difference and explains why this is so. In the RS, single individuals (i.e. one-member households) are generally poorer than in FBiH, although the poverty incidence is still lower than the average poverty incidence for the whole population. Single women—i.e. one-member female-headed households—are definitely poorer than single men but less poor than the overall population, both in the RS and in the whole country, although single men living in the RS are poorer than single women living in FBiH. Two-member households—generally couples—are slightly poorer when headed by men and are in any case less poor than the overall population.¹² Three-member households are generally less poor than the overall population in the FBiH, and poorer in the RS when headed by women, where FHH tend to be worse off than MHH and have a high poverty incidence. Four-member households are generally as poor as the overall population, when headed by men, but they are significantly poorer when headed by women, particularly in the RS. Finally, households with five or more members are much poorer on average, particularly when headed by men in the RS and when headed by women in the FBiH. Overall, FHH are poorer than MHH in all cases.

The incidence of poverty varies also with the age of the household head. In our HBS sample, only 0.64 percent of the population is less than 24 years of age, while 7.3 percent are between 25 and 34 years included. The three classes of age 35-49, 50-64 and “over 64” have, respectively, a frequency of 29.6, 32 and 30.4

¹² Data for BD are not significant due to the small sample effect.

percent. Given this distribution of households by their head's age, Table 8D shows that the highest poverty incidence is in the young-adult age class (particularly in FBiH) and in the oldest one (especially in RS). Aggregate data, however, mask differences in social and living conditions. When we cross age and gender, a more nuanced picture emerges. Overall, the poorest class is the young-adult age class, while the less poor is the mature-adult age one. Among male-headed households, the poorest class is the youngest one, followed by the young-adult age class, while among female-headed households the oldest age class appears to be the poorest.

Table 8D: Poverty incidence by age class of household head
[percentages using GPL₃]

	15-24	25-34	35-49	50-64	65 or more	Total
Overall country	16.68	21.27	20.18	15.64	19.43	18.56
FBiH	18.61	23.10	20.12	14.39	15.97	17.39
RS	12.91	16.89	19.83	17.45	24.01	20.23
BD	0.00	31.17	26.97	20.90	25.96	25.03
	MHH					
Overall country	23.07	22.32	20.81	15.84	20.77	19.32
FBiH	25.89	24.47	20.59	14.17	17.58	18.30
RS	17.77	17.21	20.77	18.07	24.43	20.60
BD	0.00	31.17	27.93	23.47	33.30	28.10
	FHH					
Overall country	0.00	9.38	15.37	14.89	17.04	15.77
FBiH	0.00	7.19	16.14	15.20	13.32	14.04
RS	0.00	13.60	13.67	14.60	23.19	18.93
BD	0.00	0.00	20.10	7.91	13.11	13.19

Table 8E: Poverty incidence by household size and age class of household head
[percentages using GPL₃]

Household size and geographical area	Age class				Total
	15-34	35-49	50-64	> 64	
One member					
Overall country	3.19	7.21	8.30	11.52	9.99
FBiH	0.00	10.07	6.07	8.73	7.73
RS	3.19	4.98	10.80	15.71	13.14
BD	0.00	0.00	13.80	4.51	5.19
Two members					
Overall country	3.75	10.10	9.14	18.81	13.99
FBiH	3.85	10.50	6.10	15.28	11.15
RS	3.65	7.88	13.75	23.12	17.57
BD	0.00	27.98	10.24	34.36	25.33
Three members					
Overall country	14.05	11.60	13.14	22.19	14.60
FBiH	15.49	8.60	12.67	18.57	12.89
RS	10.93	17.97	13.99	27.17	17.76
BD	0.00	18.14	12.51	36.09	17.89
Four members					
Overall country	25.11	18.54	16.02	30.81	19.23
FBiH	28.53	18.88	15.43	26.56	18.3
RS	14.42	17.66	16.62	36.20	20.9
BD	42.71	19.22	24.62	52.53	20.1
Five or more members					
Overall country	52.39	32.73	27.88	33.56	32.39
FBiH	57.71	33.12	26.56	27.90	30.94
RS	43.17	33.06	29.52	40.65	34.16
BD	0.00	49.63	40.93	62.52	51.55

Is the incidence of poverty in the older population groups related to the household size? As Table 8E shows, at the country level, large (five-or-more-member) households tend to be poorer in all age classes.¹³ Four-member households are relatively poorer, in all age classes. One-, two-, and three-member households are poorer when the head is older, while the youngest households are much less poor than the average in all age classes. In the mature and elderly age classes, there are peaks of high poverty incidence in both Entities among all household sizes, with the exception of one-member households. Households with three or more members are particularly poor in RS when headed by an old person (poverty incidence is 27.2, 36.2 and 40.7 percent, respectively in the three size groups).

One- and two-member households headed by an elderly head tend to be poorer when the head is a woman (Table 8F). That is, single elderly women are relatively worse off than single elderly men, and old couples are worse off when the head is a woman. Conversely, households with three members tend to be poorer when headed by women, when old, while households with four or more members are significantly poorer when headed by women in almost all age classes. All in all, there does seem to exist a significant positive correlation between household size, age, and gender of the household head, as female-headed households are poorer if medium and large sized and the head is elderly.

¹³ In the Table, we have joined the first age class (15-24) with the second (25-34), as there were only 48 observations (households) in that age class in the whole sample.

Table 8F: Poverty incidence by age class and gender of household head
[percentages using GPL₃]

Household size and gender of household head	Age class				Total
	15-34	35-49	50-64	> 64	
One member					
MHH	3.19	9.74	9.40	7.82	8.17
FHH	0.00	3.18	7.73	12.69	10.82
Total	3.19	7.21	8.30	11.52	9.99
Two members					
MHH	3.75	10.58	8.92	18.69	14.18
FHH	0.00	9.36	9.89	19.46	13.25
Total	3.75	10.10	9.14	18.81	13.99
Three members					
MHH	14.11	9.89	12.54	22.36	13.92
FHH	13.41	17.13	16.76	21.54	17.81
Total	14.05	11.60	13.14	22.19	14.60
Four members					
MHH	25.11	18.47	15.30	28.23	18.79
FHH	0.00	19.78	23.31	37.99	24.90
Total	25.11	18.54	16.02	30.81	19.23
Five or more members					
MHH	52.49	32.67	27.04	32.48	32.20
FHH	50.44	34.49	33.63	38.29	35.94
Total	52.39	32.73	27.88	33.56	32.39

Before we look at the possible factors influencing the poverty status—activity, occupation, sector, education of the household head—we should look at whether the number of children is also an important factor to account for. Most households do not have children (64.8 percent of the total), while less than 17 percent have two or more children (and only 3.6 percent have three or more). Large households (with four or more members) have at least one child in two thirds of the cases. Poverty incidence does appear to be correlated with the number of children consistently and significantly (Table 8G), as rates increase with the number of children and the size of the household. Overall, poverty incidence among households with two children is equal to 30.7 percent, while among households with three or more children it reaches 43 percent.

Table 8G: Poverty incidence by household size and number of children
[percentages using GPL₃]

	No child	One child	Two children	Three or more children	Total
Overall country					
One member	9.99				9.99
Two members	14.00	14.09			14.00
Three members	14.82	13.97	21.57		14.61
Four members	16.26	17.12	25.53	100.00	19.24
Five or more members	23.93	28.24	36.24	42.60	32.40
Total	14.24	20.08	30.66	43.02	18.56
FBiH					
One member	7.74				7.74
Two members	11.12	12.83			11.15
Three members	12.88	13.18	0.00		12.89
Four members	15.66	16.16	27.61	-	19.38
Five or more members	22.17	25.96	35.31	41.44	30.94
Total	12.32	18.48	30.83	41.44	17.39
RS					
One member	13.13				13.13
Two members	17.54	20.48			17.57
Three members	17.80	26.26	66.83		17.76
Four members	17.31	18.59	19.72	100.00	18.54
Five or more members	25.01	31.65	37.28	44.85	34.16
Total	16.87	23.15	29.83	46.19	20.23
BD					
One member	5.19				5.19
Two members	25.28	0.00			25.33
Three members	18.77	14.07	-		17.89
Four members	17.65	33.23	29.46		24.96
Five or more members	50.82	60.00	46.27	51.90	51.55
Total	19.64	36.99	36.80	51.90	25.03

According to the HBS, 55.5 percent of the household heads are active, while retired household heads and housewives amount to 30.4 and 9.7 percent, respectively. Interestingly, the activity rate appears to be higher in the FBiH than the RS (56.4 vs. 53.9 percent, respectively), while in the RS 11.7 percent of all household heads declare to be unemployed, against 9.4 percent in the FBiH. In other words, there is a 5-percentage point difference in the employment status between the FBiH and RS. As Table 8H shows, there appears to be a significant relation between activity status of the household head and poverty: the incidence of poverty is high among the unemployed (26.76 percent) and individuals disabled to work (35.15 percent), while it is lower than the average for those employed (16.41 percent). FHH have a lower poverty incidence than MHH in all cases. Unemployed female household heads have a lower poverty incidence than male household heads (15.99 vs. 27.91 percent) particularly in the RS, where poverty incidence is more than double for unemployed MHH than it is for unemployed FHH. Once again, almost all categories show higher poverty incidence in RS than FBiH, if we exclude those employed, whose poverty incidence is slightly better in the RS than the FBiH.

Table 8H: Poverty incidence by activity status and gender of household head, by geographical area
[percentages using GPL₃]

	Overall country	FBiH	RS	BD
Employed				
MHH	17.00	16.99	16.46	25.66
FHH	9.27	8.88	10.42	0.00
Total	16.41	16.38	15.99	25.66
Unemployed				
MHH	27.91	26.70	29.16	32.68
FHH	15.99	17.79	13.29	18.53
Total	26.76	25.86	27.61	31.15
Retired				
MHH	18.53	17.05	20.66	24.83
FHH	12.17	10.86	15.42	6.83
Total	17.29	15.72	19.13	22.25
Disabled to work				
MHH	38.77	34.76	45.67	24.88
FHH	30.92	22.50	35.55	27.04
Total	35.15	30.28	39.98	25.30
Housewives				
MHH	16.78	13.21	28.92	
FHH	18.19	17.25	20.05	15.84
Total	18.13	17.04	20.30	15.84
Others (inactive)				
MHH	19.58	4.50	24.86	50.12
FHH	7.68	11.04	-	-
Total	14.85	7.45	24.86	50.12

As for settlement type, poverty incidence among household heads who are disabled to work or unemployed and live in rural areas appears to be definitely higher than that of those who live in urban areas and those who are employed or retired and live in the same rural areas. Also, poverty incidence is generally considerably higher for MHH also in rural areas, for all categories and especially for those unemployed and disabled to work.

**Table 8I: Poverty incidence by activity status and gender of household head,
by geographical area and settlement type**
[percentages using GPL₃]

	Overall Country		FBiH		RS		BD	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Employed								
MHH	22.38	9.59	23.10	9.29	20.23	9.58	34.85	17.47
FHH	13.01	7.86	9.11	13.26	-	12.85	-	-
Total	22.03	9.37	22.77	9.07	20.23	9.52	34.85	17.47
Unemployed								
MHH	32.17	19.82	31.56	18.96	32.12	21.85	41.34	14.03
FHH	28.54	8.81	29.05	11.67	27.09	5.54	33.33	-
Total	31.97	18.01	31.41	17.88	31.86	18.68	40.59	14.03
Retired								
MHH	22.76	12.24	22.81	9.72	22.62	16.79	24.45	25.25
FHH	16.46	9.85	12.09	10.31	23.34	8.73	-	6.83
Total	21.98	11.57	21.40	9.90	22.71	14.87	24.45	20.46
Disabled to work								
MHH	42.39	24.03	40.65	13.44	45.86	44.68	29.91	13.50
FHH	32.43	24.05	27.48	9.40	34.83	40.20	27.04	-
Total	37.74	24.04	36.07	11.73	39.58	42.23	29.16	13.50
Housewives								
MHH	26.64	-	25.36	-	28.92	-	-	-
FHH	21.90	9.30	22.59	7.50	20.93	16.12	22.28	7.16
Total	22.09	9.30	22.71	7.50	21.12	16.12	22.28	7.16
Others (inactive)								
MHH	26.57	-	6.62	-	24.86	-	50.12	-
FHH	8.57	-	21.79	-	-	-	-	-
Total	14.85	-	7.45	-	24.86	-	50.12	-

When we consider households by their size, we see that when the head is employed, only large households (with five or more members) are worse off than small-medium ones (between one and four members). Conversely, households whose head is unemployed are worse off when they have four, five or more members, while households whose head is retired are generally poorer than the average even if they have three members or more (see Table 8J for more details).

Table 8J: Poverty incidence by household size and gender of household head,
by activity status of household head
[percentages using GPL₃]

Household size and gender of household head		Activity status of household head			
		Employed	Unemployed	Retired	Other
Overall country					
One member					
	MHH	7.04	13.32	5.31	19.52
	FHH	4.44	16.41	6.41	13.9
	Total	5.98	14.31	5.94	14.33
Two members					
	MHH	8.21	17.48	14.61	36.19
	FHH	2.81	0.00	7.89	23.33
	Total	7.26	17.48	13.94	27.18
Three members					
	MHH	9.99	16.63	19.44	29.91
	FHH	9.47	19.8	20.36	21.52
	Total	9.91	17.13	19.57	23.68
Four members					
	MHH	15.55	31.3	24.57	20.53
	FHH	13.49	41.3	31.97	25.17
	Total	15.5	31.1	25.51	23.27
Five or more members					
	MHH	29.86	41.33	30.18	48.19
	FHH	47.72	0.00	30.94	37.81
	Total	30.24	41.33	30.26	41.26
FBiH					
One member					
	MHH	4.7	17.46	6.05	5.84
	FHH	2.7	9.87	6.17	10.26
	Total	3.76	13.86	6.13	9.96
Two members					
	MHH	5.61	13.34	11.52	32.3
	FHH	2.2	0.00	5.61	21.99
	Total	4.91	11.6	10.76	24.7
Three members					
	MHH	9.11	16.03	19.1	10.54
	FHH	7.67	20.01	17.52	16.53
	Total	8.99	16.64	18.86	14.96
Four members					
	MHH	16.12	29.43	26.84	24.1
	FHH	12.58	61.48	27.87	21.63
	Total	16.01	30.58	26.98	22.56
Five or more members					
	MHH	29.72	39.88	26.31	40.7
	FHH	47.06	0.00	32.14	38.38
	Total	30.14	39.1	26.88	39.04

Household size and gender of household head	Activity status of household head			
	Employed	Unemployed	Retired	Other
RS				
One member				
MHH	9.15	12.49	4.79	35.65
FHH	7.08	28.18	6.8	19.01
Total	8.44	16.01	5.74	20.42
Two members				
MHH	9.88	21.17	19.25	39.39
FHH	4.02	0.00	17.97	24.6
Total	9.05	18.34	19.18	29.46
Three members				
MHH	12.08	16.38	19.69	66.58
FHH	12.73	20.15	26.99	27.37
Total	12.15	17.02	20.62	36.49
Four members				
MHH	13.9	33.97	20.85	9.69
FHH	19.88	0.00	42.65	33.62
Total	13.98	32.68	23.07	25.02
Five or more members				
MHH	28.94	43.35	36.68	59.96
FHH	49.89	0.00	29.14	37.18
Total	29.27	42.23	35.72	45.87
BD				
One member				
MHH	0.00	0.00	0.00	0.00
FHH	0.00	0.00	8.27	8.65
Total	0.00	0.00	8.27	8.27
Two members				
MHH	10.47	26.24	19.1	45.39
FHH	0.00	0.00	0.00	42.91
Total	10.47	26.24	19.1	43.31
Three members				
MHH	15.06	28.25	26.5	-
FHH	0.00	0.00	0.00	-
Total	15.06	28.25	26.5	-
Four members				
MHH	20.77	39.89	18.76	0.00
FHH	0.00	61.67	0.00	0.00
Total	20.77	43.79	18.76	0.00
Five or more members				
MHH	56.37	40.92	66.41	46.76
FHH	0.00	-	-	-
Total	56.37	40.02	66.41	46.76

Among those who are active (employed or unemployed), poverty incidence is lower than average among those who are employers or permanently employed, and is higher than average among those who are self employed or non-permanently employed (see Table 8K). Among the employers, poverty incidence is relatively higher among female household heads (12.45 vs. 10.64 percent), while among all other categories it

is higher for male household heads. In all categories of professional status, FHH have poverty rates that are lower than the country average. In the Entities, poverty incidence is considerably high among the non-permanently employed in the RS, the MHH whose head is self-employed in the RS and those whose head is non-permanently employed in the FBiH. Considering that 17.6 percent of all active household heads declare that they are unemployed, and yet they do have a professional status,¹⁴ it implies that it could definitely affect their poverty status.

Table 8K: Poverty incidence by professional status and gender of household head, by geographical area
[percentages using GPL₃]

Professional status and household head gender		Geographical area			
		Overall country	FBiH	RS	BD
Employer					
	MHH	10.64	9.31	12.29	20.98
	FHH	12.45	12.45	0.00	-
	Total	10.48	9.68	12.29	20.98
Self-Employed					
	MHH	21.62	22.59	19.54	33.07
	FHH	9.61	6.93	12.43	0.00
	Total	21.07	21.99	19.93	33.07
Permanent Employed					
	MHH	15.81	14.52	17.71	25.2
	FHH	9.6	10.76	8.27	0.00
	Total	15.26	14.19	16.86	25.2
Other Employed					
	MHH	29.54	29.51	28.66	41.47
	FHH	15.24	10.73	22.56	61.67
	Total	28.3	27.92	28.08	42.74

In terms of sector of activity, poverty incidence is slightly lower than the average for those who work in the trade and transportation sector and other services, and it is lower for FHH (Table 8L). For those who work in agriculture, industry and construction, poverty incidence is high (25.26, 20.95 and 26.48 percent, respectively). Overall, FHH have a lower poverty incidence than MHH, although they are poorer than MHH when they work in the industry and construction sectors in FBiH.¹⁵ On the other hand, in the RS, MHH tend to be poorer than FHH in all cases.

¹⁴ Most of them are employed, either permanently under other forms. This means that either their unemployment status was temporary at the time of the survey, or that that was their previous professional status, or that they have some kind of informal occupation.

¹⁵ As there are almost no women who are household heads and declare to work in agriculture or construction, data for FHH for those two sectors are not significant.

Table 8L: Poverty incidence by sector of activity and gender of household head, by geographical area
[percentages using GPL₃]

Sector of activity and gender of household head		Overall country	Geographical area		
			FBiH	RS	BD
Agriculture					
	MHH	25.69	26.58	24.46	40.32
	FHH	15.45	0.00	15.45	-
	Total	25.26	26.58	24.07	40.32
Industry					
	MHH	20.99	20.14	22.38	23.31
	FHH	20.43	21.60	20.17	0.00
	Total	20.95	20.24	22.25	23.31
Construction					
	MHH	26.58	26.82	24.47	45.61
	FHH	25.34	34.07	0.00	11.19
	Total	26.48	26.86	24.34	45.61
Trade, transport					
	MHH	11.76	11.19	11.79	25.2
	FHH	8.01	8.43	6.28	19.9
	Total	11.40	10.95	11.17	24.56
Other services					
	MHH	11.02	10.39	12.18	12.33
	FHH	7.05	6.36	8.79	0.00
	Total	10.36	9.72	11.61	12.33

As for the education level (of the household head), Table 8M shows that poverty incidence is higher for those with low levels of education (primary or none), particularly when they are men. In the FBiH, poverty is considerably lower for those with secondary or tertiary (high) education. In the RS, poverty rates are higher for all levels, but they are particularly high for those with primary education or no education at all. In terms of gender differences, women are better off than men in all cases, particularly when they are educated.

Table 8M: Poverty incidence by education level and gender of household head, by geographical area
[percentages using GPL₃]

Class of Education and household head gender		Overall country	Geographical area		
			FBiH	RS	BD
No Education					
	MHH	45.55	41.43	52.85	25.7
	FHH	25.69	23.01	29.85	14.54
	Total	33.31	30.2	38.39	19.6
Primary Education					
	MHH	27.53	28.26	25.98	37.48
	FHH	15.64	14.99	16.75	16.54
	Total	24.17	24.1	23.77	32.21
Secondary Education					
	MHH	16.39	15.7	17.28	25.44
	FHH	7.72	6.46	10.71	7.31
	Total	15.45	14.74	16.44	23.33
Tertiary Education					
	MHH	3.23	3.14	3.33	4.09
	FHH	0.00	0.00	0.00	0.00
	Total	3.23	3.14	3.33	4.09

Those with no education have a very high poverty incidence when employed, although we have to keep in mind that they represent only 10 percent of the whole population. Those with primary education, who are the second poorest group by education level, have a higher poverty incidence when they are employed or

unemployed. Conversely, those with secondary education tend to be poorer only when they are unemployed (Table 8N).¹⁶

**Table 8N: Poverty incidence by education level and gender of household head,
by activity status of household head and geographical area**
[percentages using GPL₃]

Education and gender of household head	Activity status of household head				Total
	Employed	Unemployed	Retired	Other	
Overall country					
No Education					
MHH	53.90	40.32	37.09	56.61	45.55
FHH	0.00	19.58	23.38	26.89	25.69
Total	53.90	35.24	32.06	30.75	33.31
Primary Education					
MHH	28.62	32.67	24.75	28.89	27.53
FHH	23.99	19.15	12.95	15.50	15.64
Total	27.28	31.24	22.35	17.83	24.17
Secondary Education					
MHH	15.09	27.29	13.26	18.09	16.39
FHH	8.31	15.56	5.89	5.65	7.72
Total	14.64	26.30	12.05	12.03	15.45
Tertiary Education					
MHH	2.66	8.52	4.55	0.00	3.23
FHH	0.00	0.00	0.00	0.00	0.00
Total	2.66	8.52	4.55	0.00	3.23
FBiH					
No Education					
MHH	59.45	42.13	27.47	59.80	41.43
FHH	0.00	0.00	18.67	25.33	23.02
Total	59.45	42.13	24.04	28.58	30.20
Primary Education					
MHH	31.59	32.78	24.74	20.02	28.26
FHH	24.77	18.98	13.30	13.97	14.99
Total	30.92	31.02	22.09	14.86	24.10
Secondary Education					
MHH	14.87	25.34	13.04	16.01	15.70
FHH	6.62	23.85	5.21	2.31	6.46
Total	14.40	25.23	11.66	9.55	14.74
Tertiary Education					
MHH	2.86	5.85	3.26	0.00	3.59
FHH	0.00	0.00	0.00	0.00	0.00
Total	2.86	5.85	3.26	0.00	3.15
RS					
No Education					
MHH	43.46	19.76	54.62	58.66	52.85
FHH	0.00	32.80	34.56	29.32	29.85
Total	43.46	24.60	48.06	33.80	38.40

¹⁶ We did not include BD in the Table, as the frequencies in each cell were too small and not significant.

Education and gender of household head	Activity status of household head				Total
	Employed	Unemployed	Retired	Other	
Primary Education					
MHH	24.21	32.29	24.29	38.87	25.99
FHH	21.89	15.37	12.33	18.09	16.76
Total	24.10	31.03	22.33	22.23	23.77
Secondary Education					
MHH	15.11	29.61	13.18	25.28	17.29
FHH	11.17	9.69	7.95	11.70	10.07
Total	14.76	27.47	12.43	18.29	16.45
Tertiary Education					
MHH	1.26	11.92	5.24	0.00	3.69
FHH	0.00	0.00	0.00	0.00	0.00
Total	1.26	11.92	5.24	0.00	3.35

For those who are active, poverty incidence is very high for those with no education and with primary education only (Table 8O). For those who are employed or unemployed but active in a sector of occupation, poverty incidence is very high for those with no education, primary and secondary education when occupied in agriculture, industry and construction (Table 8P).

Table 8O: Poverty incidence by education level and gender of household head, by professional status of household head
[percentages using GPL₃]

Education and gender of household head	Employer	Professional status of household head			Total
		Self-employed	Permanent employment	Other employment	
No Education					
MHH	51.01	51.21	46.01	45.67	48.86
FHH	0.00	0.00	0.00	0.00	0.00
Total	51.01	51.21	46.01	45.67	48.86
Primary Education					
MHH	30.75	24.67	29.74	34.89	29.27
FHH	50.00	14.72	18.95	36.44	22.93
Total	32.23	24.22	28.68	35.93	28.78
Secondary Education					
MHH	8.64	15.97	13.55	27.92	17.19
FHH	0	7.25	11.11	9.08	10.11
Total	8.64	15.6	15.17	26.4	16.70
Tertiary Education					
MHH	0.00	4.29	2.46	8.94	3.23
FHH	0.00	0.00	0.00	0.00	0.00
Total	0.00	4.29	2.46	8.94	2.86

Table 8P: Poverty incidence by education level and gender of household head, by sector of activity of household head
[percentages using GPL₃]

Education and gender of household head	Sector of activity of household head				
	Agriculture	Industry	Construction	Trade, transport	Other services
No Education					
MHH	50.11	55.69	43.99	54.85	66.18
FHH	-	0.00	0.00	0.00	0.00
Total	50.11	55.69	43.99	54.85	33.21
Primary Education					
MHH	25.1	32.9	35.84	21.35	33.37
FHH	22.29	23.34	50.82	20.29	21.12
Total	25.02	31.77	34.98	21.34	29.37
Secondary Education					
MHH	22.68	19.19	23.44	10.34	13.01
FHH	0.00	23.3	0.00	6.4	7.82
Total	22.68	20.35	23.44	9.96	12.3
Tertiary Education					
MHH	10.26	2.74	0.00	3.43	2.57
FHH	-	0.00	0.00	0.00	-
Total	10.26	2.74	0.00	3.43	2.57

9. The distribution of poverty among population groups in BiH

The distribution of households according to their poverty status across the different population groups and categories complements the information given above about poverty incidence. Results are shown in Annex 2, where the tables show in what categories poor people are more concentrated. For instance, while FHH represent 21.6 percent of the overall population, they only account for 18.0 percent of the poor population (those whose per capita consumption falls under the poverty line, as calculated above). Also, while 58.4 percent of all households lives in rural areas, 75.2 percent of those who are poor live in rural areas. Poor households are more concentrated in rural areas both in the F BiH and RS. Although large households (with four or more members) account for almost 44 percent of the whole population, more than 60 percent of all poor households are large. This is even more so in the F BiH. As for the age classes, poor households are more concentrated in the middle-age and over-64 age classes: while the two groups account for 39.6 and 30.4 percent, respectively, they represent 32.4 and 31.8 percent of the poor population, respectively. As for the number of children in the household, while households with one or more children represent 35.2 percent of the total, they account for 50.4 percent of all poor households (and the concentration is higher in the F BiH than in the RS). Poor households are slightly more concentrated among the unemployed and the disabled to work, they are more concentrated among the self-employed and the non-permanent employed categories, and among those working in agriculture, industry, and construction sectors. Finally, while only 41.5 percent of all household heads have no education or just primary education, they account for 58.8 percent of the poor population.

In conclusion, we can summarize the above results on the characteristics of poverty in BiH—and ask “who are the poor?”—as follows.

1. Poverty is more widespread in the RS (and even more in BD) than in F BiH. Depth and severity are also higher in the RS than in F BiH.

2. Poverty is definitely higher in rural than urban areas. Urban poverty in the RS is more widespread than rural poverty in FBiH, and it is deeper and more severe.
3. Poverty is not peculiar to female-headed households, actually quite the contrary. On average, the poverty head-count is significantly lower for FHH than for MHH, on aggregate and in the FBiH, while in the RS is just slightly lower. Also: FHH living in rural areas are significantly less poor than MHH but they are significantly poorer than those MHH who live in urban areas.
4. Poverty is higher among those households whose head is either in the young-adults or in the middle-aged-adults or in the elderly class of age. Concentration of poverty is significant in different age classes of the population of the two Entities: while in the FBiH it is the young-adult group that appears to be the poorest, in the RS it is the over-64 group that is the poorest.
5. Poverty is widespread among the larger households. Yet, within each size group, poverty incidence increases with the age of the household head. Considering that large households (with five or more members) represent 20.6 percent of the total number of households and 35.9 percent of the population, we can say that poverty affects 22.7 percent of the whole population and that people living in large households show the highest concentration of poverty (36.2 percent of the total, with a poverty incidence of 34.1 percent in terms of population, the highest among all household sizes).
6. Poverty is more concentrated in households with children, and it is more widespread, deep and severe. Yet, of the whole population of children—defined as people with less than 14 years of age and representing 17.4 percent of the whole population—only 16.6 percent lives in households that are poor (against the 22.7 percent of the whole population). Poverty rates for households with no children are generally lower than the average. Also, as expected, as the number of children increases, poverty incidence worsens.
7. Poverty rates are higher than the average for the unemployed and the disabled to work, while among those who are active, poverty rates are higher among the self-employed and the non-permanently employed. Yet, of all poor households, 39.9 percent of the heads are employed and 28.1 percent are retired.
8. In terms of sectors of occupation, poverty is concentrated in agriculture, industry and construction, which absorb about half of the poor household heads that are employed.

10. Inequality in BiH

Poverty and inequality in the distribution of income or consumption expenditure are often related, and it is therefore important to look at both issues to have a more thorough picture of social and living conditions in a country. The Tables below present a set of consumption inequality indices for BiH and the two Entities. The *decile ratio* (90/10 percentile ratio) shows what multiple of the consumption of the richest person in the bottom decile is consumed by the poorest person in the top decile. The 90/10 ratio is the product of the 90/50 ratio (“rich to middle” ratio) and the 50/10 ratio (“middle to poor”).

Table 9. Inequality measure for per capita consumption expenditure

	FBiH	RS	BD	Overall	Urban	Rural
Measure						
p90/p10 ratio	4.938	4.616	4.609	4.889	4.684	4.473
p90/p50 ratio	2.198	2.207	2.071	2.205	2.156	2.115
p10/p50 ratio	0.445	0.478	0.449	0.451	0.46	0.473
p25/p50 ratio	0.655	0.697	0.65	0.662	0.667	0.684
Dispersion						
Mean Deviation (Median)	3076	2615	2552	2910	3381	2399
Coefficient of Dispersion	0.5723	0.5508	0.5468	0.5662	0.5451	0.5364
Coefficient of Variation	0.7072	0.6894	0.6901	0.7055	0.6821	0.6691
Gini	0.3423	0.3323	0.337	0.3406	0.3317	0.3271
Atkinson						
Atkinson e=0.5	0.09418	0.08911	0.08995	0.09325	0.08815	0.08596
Atkinson e=1.0	0.17926	0.16874	0.17148	0.17699	0.16759	0.16417
Atkinson e=2.0	0.32886	0.30799	0.31277	0.32333	0.3057	0.30435
Generalised Entropy						
GE(0)	0.19754	0.18481	0.18811	0.19479	0.18343	0.17933
GE(1)	0.19878	0.18919	0.18906	0.1974	0.18618	0.18086
GE(2)	0.25061	0.2381	0.23099	0.24942	0.23284	0.2233

Note: Health care expenditures are excluded from Per Capita Consumption Expenditure

The distance between the middle and the poor is wider in FBiH than in RS, while the rich are above the middle by a similar ratio in the two Entities. If we look at the share of total consumption going to the top and bottom quintiles, we see that overall the poorest 20 percent of the population (in terms of consumption) commands about 7.2 percent of total equivalent consumption, while the richest 20 percent uses about 39 percent. The Gini coefficient, Theil and log mean deviation show inequality to be relatively low in the country. As the table shows, the distribution of consumption in the two Entities is similar.

Table 10. Distributional summary statistics, 10 quantile groups for PCE

Quantile group	% of median	% Share	L(P) %	GL(p)
1	2211.14	45.09	2.86	170.7
2	2952.7	60.22	4.37	431.82
3	3572.49	72.85	5.45	757.48
4	4193.86	85.53	6.51	1146.46
5	4903.58	100	7.58	1599.61
6	5765.32	117.57	8.86	2129.29
7	6806.72	138.81	10.45	2754.19
8	8198.08	167.19	12.47	3499.6
9	10810.47	220.46	15.68	4436.75
10			25.77	5977.1

Share = quantile group share of total PCE

L(p)=cumulative group share; GL(p)=L(p)*mean(PCE)

11. Poverty estimates with alternative poverty lines

As we have discussed above, from the same food poverty line—derived from a minimum food basket—we have derived three alternative general poverty lines based on different assumptions about the composition of the food expenditure share and the total consumption expenditure. The first general poverty line—which we called GPL_1 —is based on a food share that includes exactly and only the food expenditure that makes the minimum food basket. Any other expenditure item—like meals outside the home, expenses in restaurants and cafeterias—is included in the remaining non-food expenses. The second general poverty line—which we called GPL_2 —is based on a food share that includes all expenses in food, even those that do not concur in determining the food poverty line. This way, the food share is *necessarily higher than in the previous case* and so *the general poverty line is deemed to be lower* than GPL_1 . The third general poverty line—which we called GPL_3 —is based on a food share that includes all expenses in food, even those that do not concur in determining the food poverty line, and on a total consumption expenditure that excludes health care expenses. This way, the food share is even higher than in the previous case and so *the general poverty line is going to be even lower* than GPL_1 . In the tables and the analysis above we have mostly used GPL_3 , since this is the type of general poverty line that was used in the WB (2003) poverty assessment for BiH. For the sake of analysis, we believe that a comparison among the three alternative poverty lines would be interesting, as a way of checking the robustness of the findings and look at the possible impact of changing the value or level of the poverty line itself on the key factors associated with poverty in BiH. Obviously, changing the value of the poverty line changes the overall incidence of poverty, as it implies a higher or lower expenditure threshold below which individuals are considered as poor. But it may also be the case that for some categories, some expenditure items may result in a different contribution to well-being than others. The end result will be that poverty rates might not change in the same way as poverty lines since increases or decreases in expenditure might not follow the same change patterns as the poverty lines themselves. In summary: do alternative poverty lines re-rank households in such a way as to change poverty rates?

To do this, we have simply listed the poverty incidence deriving from the three alternative poverty lines in a compact way for some of the main categories in the poverty profile sketched above. The Table below shows—for several cross tabulations—in each cell the three poverty incidence indicators (in percentage), calculated with the three poverty lines, going from GPL_1 (top row), to GPL_2 (middle row) to GPL_3 (bottom row).

The poverty incidence that we would get with GPL_1 is—in the aggregate—significantly higher than the one we have obtained with GPL_3 . As the standard errors show (see Table 11), the poverty incidence estimate for GPL_1 ranges between 20.04 and 21.92 percent, while the estimate for GPL_3 ranges between 17.66 and 19.46 percent. The poverty incidence estimate for GPL_2 ranges between 17.74 and 19.54 percent. Thus, while the two poverty incidence estimates obtained with GPL_2 and GPL_3 do not differ significantly, the one obtained with GPL_1 is significantly higher, as the upper bound of the of the estimated GPL_3 is lower than the lower bound of the estimated GPL_1 .

**Table 11. Poverty Incidence according to three alternative poverty lines
by gender of household head and by settlement type**

[percentages using GPL₁ (first row), GPL₂ (second row) and GPL₃ (third row), standard errors in parentheses]

Gender of household head	Overall country		
	Rural	Urban	Total
MHH			
GPL ₁	27.54 (0.75)	13.67 (0.71)	22.01 (0.54)
GPL ₂	24.89 (0.73)	11.51 (0.66)	19.55 (0.52)
GPL ₃	24.47 (0.72)	11.56 (0.66)	19.32 (0.52)
FHH			
GPL ₁	23.50 (1.46)	10.23 (1.09)	17.21 (0.94)
GPL ₂	20.78 (1.40)	9.24 (1.05)	15.31 (0.90)
GPL ₃	21.52 (1.42)	9.39 (1.05)	15.77 (0.91)
Total			
GPL₁	26.76 (0.67)	12.83 (0.60)	20.98 (0.47)
GPL₂	24.10 (0.65)	10.95 (0.56)	18.64 (0.45)
GPL₃	23.90 (0.65)	11.03 (0.56)	18.56 (0.45)

At a more disaggregated level, differences seem to be significant between GPL₁ and GPL₃ but not between GPL₂ and GPL₃. We will show below a few cross tabulations to see whether such differences in poverty incidence reveal any specific patterns (see the various panels of Table 12).¹⁷ At the level of the Entities, differences between GPL₁ and GPL₃ are significant. In the FBiH, for instance, urban poverty is more than 2 percent higher for MHH, while it is not significantly higher for FHH. Rural poverty is 3.7 percent higher for MHH and not significantly higher for FHH. In general, poverty incidence for FHH shows a much higher variability (standard errors are higher), so that poverty estimates overlap. In any case, overall estimates do differ significantly, at least for rural poverty. In the RS, standard errors are higher, particularly for FHH, and poverty incidence estimates are not significantly different for both MHH and FHH. Finally, in BD, poverty rates are generally much higher, and estimates have larger variance, but there is no statistically significant difference between the two. In general, the difference in poverty incidence among the two rates is considerable—some time even larger than 4 points. The poverty incidence calculated with the first poverty line somehow sharpens the differences, thus rendering a more colourful and sharp picture of poverty in BiH. There is no visible pattern in the differences, besides that which accounts for expenditures in meals outside home, which might be a more typical “urban” behaviour and which makes urban poverty rates higher—although not significantly—with the first poverty line. As such expenses, in any case, account not only for restaurants but for canteens and cafeterias also, they affect also the large population of workers, employed people and retired individuals.

¹⁷ The Table does not show results for GPL₂, as there is no significant difference in pattern as compared with the overall country results shown in Table 11, and they do not appear to be significantly different from the results obtained with GPL₃.

Table 12A. Poverty Incidence according to two alternative poverty lines by gender of household head and by geographical area and settlement type
 [percentages using GPL₁ (first row) and GPL₃ (second row), standard errors in parentheses]

Gender of household head		Rural	Urban	Total
FBiH				
MHH				
	GPL ₁	28.07 (1.00)	12.41 (0.84)	21.32 (0.69)
	GPL ₃	24.38 (0.96)	10.27 (0.78)	18.03 (0.65)
FHH				
	GPL ₁	22.19 (1.97)	9.66 (1.30)	15.48 (1.16)
	GPL ₃	20.15 (1.90)	8.73 (1.24)	14.04 (1.12)
Total				
	GPL₁	27.00 (0.90)	11.72 (0.71)	20.07 (0.60)
	GPL₃	23.62 (0.86)	9.88 (0.66)	17.39 (0.56)
RS				
MHH				
	GPL ₁	26.39 (1.19)	15.63 (1.39)	22.73 (0.93)
	GPL ₃	24.12 (1.16)	13.77 (1.32)	20.60 (0.89)
FHH				
	GPL ₁	25.04 (2.26)	11.97 (2.28)	20.32 (1.69)
	GPL ₃	23.15 (2.21)	11.44 (2.24)	18.93 (1.64)
Total				
	GPL₁	26.10 (1.06)	14.80 (1.19)	22.20 (0.81)
	GPL₃	23.91 (1.03)	13.24 (1.14)	20.23 (0.78)
BD				
MHH				
	GPL ₁	34.72 (3.98)	24.63 (3.90)	30.26 (2.82)
	GPL ₃	34.26 (3.97)	20.31 (3.64)	28.10 (2.76)
FHH				
	GPL ₁	26.20 (8.17)	6.94 (3.83)	15.24 (4.18)
	GPL ₃	23.91 (7.92)	5.06 (3.31)	13.19 (3.93)
Total				
	GPL₁	33.30 (3.58)	20.21 (3.11)	27.17 (2.41)
	GPL₃	32.53 (3.56)	16.51 (2.87)	25.03 (2.35)

**Table 12B. Poverty Incidence according to two alternative poverty lines
by gender and age of household head**

[percentages using GPL₁ (first row), GPL₃ (second row), standard errors in parentheses]

		Overall country					
		15-24	25-34	35-49	50-64	65 or more	Total
MHH							
GPL ₁		28.89 (7.77)	25.06 (1.94)	24.35 (0.97)	18.79 (0.89)	21.86 (1.08)	22.01 (0.54)
GPL ₃		23.07 (7.23)	22.32 (1.86)	20.81 (0.92)	15.84 (0.84)	20.77 (1.06)	19.32 (0.52)
FHH							
GPL ₁		0.00	11.63 (4.95)	19.96 (2.50)	16.54 (1.70)	17.34 (1.32)	17.22 (0.94)
GPL ₃		0.00	9.39 (4.50)	15.38 (2.25)	14.89 (1.63)	17.04 (1.32)	15.78 (0.91)
Total							
GPL ₁		20.90 (5.93)	23.97 (1.83)	23.85 (0.91)	18.34 (0.79)	20.24 (0.84)	20.98 (0.47)
GPL ₃		16.69 (5.44)	21.28 (1.76)	20.18 (0.85)	15.65 (0.74)	19.43 (0.83)	18.56 (0.45)

**Table 12C. Poverty Incidence according to two alternative poverty lines
by gender of household head and by size of household**

[percentages using GPL₁ (first row), GPL₃ (second row), standard errors in parentheses]

		Overall country					
		One member	Two members	Three members	Four members	Five or more members	Total
MHH							
GPL ₁		9.14 (1.54)	14.70 (0.96)	16.43 (1.11)	22.29 (1.03)	36.46 (1.49)	22.01 (0.54)
GPL ₃		8.18 (1.46)	14.18 (0.94)	13.92 (1.04)	18.80 (0.97)	32.02 (1.25)	19.32 (0.52)
FHH							
GPL ₁		11.20 (1.14)	13.85 (1.90)	20.40 (2.61)	30.04 (4.10)	39.76 (4.11)	17.22 (0.94)
GPL ₃		10.82 (1.12)	13.26 (1.86)	17.81 (2.48)	24.90 (3.87)	35.94 (4.03)	15.78 (0.91)
Total							
GPL ₁		10.55 (0.92)	14.53 (0.86)	17.13 (1.02)	22.85 (1.00)	36.77 (1.23)	20.98 (0.47)
GPL ₃		9.99 (0.90)	14.00 (0.84)	14.61 (0.96)	19.24 (0.94)	32.40 (1.19)	18.56 (0.45)

**Table 12D. Poverty Incidence according to two alternative poverty lines
by gender and activity status of household head**

[percentages using GPL₁ (first row), GPL₃ (second row), standard errors in parentheses]

		Overall country						
		Employed	Unemployed	Retired	Disabled to work	Housewife	Others	Total
MHH								
GPL ₁		20.14 (0.72)	32.18 (1.75)	19.92 (0.93)	40.60 (4.08)	20.12 (7.44)	22.12 (6.48)	22.01 (0.54)
GPL ₃		17.01 (0.68)	27.91 (1.68)	18.53 (0.91)	38.78 (4.05)	16.79 (6.94)	19.59 (6.20)	19.32 (0.52)
FHH								
GPL ₁		11.37 (1.98)	18.78 (4.78)	12.64 (1.59)	32.57 (4.28)	19.89 (1.52)	7.69 (5.33)	17.22 (0.94)
GPL ₃		9.28 (1.81)	15.99 (4.20)	12.17 (1.56)	30.92 (4.22)	18.20 (1.47)	7.69 (5.33)	15.78 (0.91)
Total								
GPL ₁		19.47 (0.68)	30.89 (1.64)	18.50 (0.82)	36.90 (2.96)	19.90 (1.49)	16.38 (4.52)	20.98 (0.47)
GPL ₃		16.41 (0.64)	26.77 (1.57)	17.30 (0.79)	35.15 (2.93)	18.14 (1.44)	14.86 (4.35)	18.56 (0.45)

There are cases for which poverty estimates differ significantly and are higher with GPL₁ than with GPL₃. Poverty incidence is 3.5 points significantly higher for MHH and for all households as a whole but is not

significantly higher for FHH in the middle-aged adult class. For all other age classes, differences in poverty estimates are not significant. Poverty incidence is 3.4 points significantly higher for four-member MHH, but is not significantly different for all other households of all sizes. Finally poverty incidence is 3.1 points significantly higher for MHH whose head is employed, but is not significantly different for all other households, independently of the household head’s activity.¹⁸

12. Vulnerability and the risk of poverty in BiH

Vulnerability is defined in many ways. Here, we use the concept of *being exposed to the risk of becoming poor*: vulnerability to poverty is measured as the proneness to that risk. If one household experiences a total consumption expenditure that is just above the poverty line and some exogenous economic shock occurs—either at the macro or at the micro level—than that household will find itself under the poverty line, either because its total income has decreased and so has its total expenditure or because goods and services have become more expensive in real terms or because its optimal consumption bundle has changed. Obviously, the more volatile the economic and social environment, the more vulnerable households will find themselves at risk of poverty. Intuitively, vulnerability can thus be measured by the level of per capita consumption: if that is above the poverty line in some neighbourhood of that level, than we can say that that household is vulnerable.

In line with what is common practice in many studies, we take a threshold around 50 percent above the general poverty line and we consider as *vulnerable* those whose per capita total consumption expenditure is below that threshold, albeit above the poverty line. Thus, vulnerability is measured by the percentage of households whose per capita consumption is above the general poverty line and below the vulnerability line—defined as the 1.5 times the general poverty line—.

In our case, with the 2007 HBS data, we obtain that the total incidence of poverty and near poverty is around 41.5 percent—or 18.6 percent of poor and 22.9 percent of near poor, i.e. vulnerable to the risk of poverty.

Table 13. Poverty status and vulnerability

Poverty status (weighted percentages)	Vulnerability		Total
	Non vulnerable	Vulnerable	
Poor		100.00	100.00
		44.75	18.56
Non poor	71.86	28.14	100.00
	100.00	55.25	81.44
Total	58.52	41.48	100.00
	100.00	100.00	100.00

Vulnerable households are more concentrated in RS than FBiH (45.9 vs. 38.7 percent of the total), and they are more concentrated among four- and five-or-more-member households (with incidences equal to 43.5 and 62.4 percent, respectively). Vulnerability rates are higher among households with two or three-and-more children (57.3 and 70.9 percent, respectively), and among those whose head is in the middle-age or in the older-age class (45 and 42.6 percent, respectively). MHH are more vulnerable than FHH (43.3 vs. 34.8 percent), while rural households are more vulnerable than urban households (50.4 vs. 29 percent). As for the activity status, unemployment and disability is where vulnerability is more concentrated (51.9 and 64.1 percent, respectively).

¹⁸ For instance, poverty incidence is more than 4 points higher for MHH whose head is unemployed, but the difference is not statistically significant.

13. Household size and economies of scale

As noted earlier, our analysis does not account for economies of scale or the different expenditure levels of children, using instead a simple per capita allocation rule that assigns household consumption equally among all household members. The use of per capita consumption ignores the differences in household composition, i.e. it does not take into account the differences in consumption needs relating to the age and gender composition of different households and the fact that consumption of children can typically be met at lower cost than those of adults. Typically, a single-member household consists entirely of adults, while households in other groups typically include children as well as adults. By using *equivalence scales*, we can incorporate low needs to additional adults and then to children.

From another point of view, the use of a per capita measure of individual well-being assumes that there are no economies of scale in household consumption, i.e. the individual (per capita) cost of achieving a specific level of well-being does not decrease as the household size increases. If this was not true, then total consumption expenditure might have different effects between large and small households, and so affect their poverty status: for example, households with older people, typically small, or households with children, typically large, might see the effects of economies of scale affect their relative rankings in terms of poverty.

To test the presence of economies of scale, in line with the WB (2003) we have used the “arbitrary approach” advocated by Deaton and Zaidi (2002), which gives different weights to household members of different age. In particular, we have constructed a set of poverty measures using the OECD(I) (old) equivalence scale and the OECD(II) (new) equivalence scale. In the OECD(I) scale, the first adult counts as 1.0, every subsequent adult as 0.7, every child as 0.5 of an “equivalent adult”. In the OECD(II) scale, the first adult counts as 1, every subsequent adult as 0.5, and every child is 0.3 of an “equivalent adult”. The OECD(II) equivalence scale implies substantially greater scale economies than the OECD(I) scale.

As suggested by Deaton and Zaidi (2002), we calculated the “per-adult equivalent consumption” (by dividing the total expenditure by equivalent adults) and then we calibrated the general poverty line in order to hold constant the head-count ratio. Actually, our interest is to consider how sensitive some of the results presented above are to different choice of equivalences scales.

The purpose of this comparison is to determine the extent to which taking into account economies of scale would affect the overall profile of poverty that we have constructed. Therefore, we test a few set of key poverty profile results for the measurement assumptions, looking at the changes in incidence by number of adults, gender of household head, number of children and household size. Overall poverty incidence should not change, only the ranking of households should be re-arranged.

Table 14A below shows the Head-count ratio for different household types, under the OECD(I) and OECD(II) assumptions about equivalences scales. Unexpectedly, the per capita scale that we used up to now does not make the profile more even, i.e. it does not reduce differences among categories more than the two OECD scales. This suggests that, under the OECD(I) scale, there is apparently no relationship between, say, the number of adults in the household and the size of the household—actually, quite the opposite—, although the ranking is preserved, and larger households somehow remain poor. With the OECD(II) scales the picture is a bit different: for example, we observe a rank reversing between MHH and FHH household head and between small (one-member) and larger households (five-members or more). At the same time, with both OECD equivalences scales, households with two or more elderly appear to be much poorer as compared to household with two or more children, but clearly this can be due to the fact that children are supposed to need less than other adults.

In sum, we can conclude that there are economies of scale in BiH consumption expenditure patterns.

Table 14A. Poverty measures under different assumptions on the equivalence scales

<i>Households</i>	Overall			Urban			Rural		
	PCE	OECD(I)	OECD(II)	PCE	OECD(I)	OECD(II)	PCE	OECD(I)	OECD(II)
Male headed	19.32	18.43	17.27	11.57	10.90	10.42	24.48	23.44	21.82
Female headed	15.78	19.04	23.28	9.39	10.79	13.07	21.52	26.47	32.48
Widow headed	15.42	18.84	24.03	8.82	10.49	13.51	19.99	24.63	29.63
Other female	15.65	19.37	20.97	9.65	10.97	11.87	25.91	23.86	36.55
One adult	9.99	16.68	26.25	3.34	7.13	13.24	14.96	23.81	35.97
Two adults	14.00	16.29	20.08	6.49	7.24	10.07	19.39	22.77	27.25
Three adults	14.61	15.18	14.02	9.69	9.92	9.40	19.52	20.42	18.64
Four adults	19.24	17.58	13.66	12.31	11.28	8.69	24.94	22.78	17.75
Five or more adults	32.40	26.50	21.00	26.18	21.32	17.18	34.91	28.59	22.55
One child	19.33	16.88	13.71	12.85	11.61	9.97	24.06	20.74	16.44
Two children	30.00	23.32	17.98	20.91	15.23	10.12	34.64	27.45	22.00
Three or more children	42.04	31.87	24.45	31.13	25.22	20.95	46.32	34.47	25.82
No elderly	17.45	16.52	14.81	10.68	9.92	9.07	22.79	21.71	19.33
One elderly	17.91	16.48	15.54	11.66	13.29	15.50	21.90	25.07	28.67
Two elderly	26.58	21.33	19.62	12.25	15.98	15.29	33.44	33.19	36.48
Three or more elderly	40.02	29.02	24.02	-	-	-	40.02	40.02	40.02
At least one elderly	20.59	19.30	17.42	11.81	12.95	15.45	25.71	27.77	31.25

Table 14B. Poverty measures under different assumptions on the equivalence scales

<i>Households</i>	FBiH			RS			BD		
	PCE	OECD(I)	OECD(II)	PCE	OECD(I)	OECD(II)	PCE	OECD(I)	OECD(II)
Male headed	18.30	17.06	15.27	20.60	20.41	20.21	28.10	25.96	26.93
Female headed	14.04	16.61	19.22	18.93	23.35	30.32	13.19	17.11	23.38
Widow headed	12.89	16.15	18.26	19.78	24.84	30.62	8.77	15.42	21.88
Other female	15.94	17.28	19.92	14.63	20.18	22.81	22.09	26.96	26.33
One adult	7.74	12.57	20.22	13.13	22.10	33.93	5.19	12.82	24.95
Two adults	11.15	13.86	17.02	17.57	19.36	24.19	25.33	25.32	23.09
Three adults	12.89	13.60	12.33	17.76	18.02	17.11	17.89	19.41	17.89
Four adults	19.38	17.62	13.45	18.54	17.40	13.86	24.96	19.26	17.33
Five or more adults	30.94	24.85	19.29	34.16	28.71	23.06	51.55	44.49	44.14
One child	17.59	15.22	11.90	22.64	20.25	17.23	40.07	32.75	34.28
Two children	30.59	23.75	18.35	28.14	22.22	17.00	37.02	25.08	20.09
Three or more children	40.75	29.65	22.88	44.44	36.28	27.02	51.90	42.86	42.86
No elderly	17.35	16.22	13.85	17.23	16.73	16.21	24.47	22.92	23.47
One elderly	16.03	15.69	14.45	20.78	17.65	16.46	15.23	17.94	23.48
Two elderly	21.02	20.55	17.46	32.23	32.53	35.14	51.37	45.42	47.38
Three or more elderly	32.54	21.54	19.54	47.13	42.13	31.13	-	-	-
At least one elderly	17.48	18.53	16.90	24.58	27.30	25.38	25.93	26.08	30.56

Households obviously differ not only in terms of the demographic composition (age, gender, etc...) but also in terms of size (number of members). If there are *economies of scales* in consumption, *ceteris paribus*, a larger household should be able to achieve a higher level of well-being than a smaller household, because at the same level of expenditure (per capita) it is possible to realize some economies of size (typically it is possible to “share” some public goods among households members, like “cooking fuel”, “shelter”, “energy”, and so on).

In what follows, we followed the approach, proposed by Drèze (1997), of defining the *scale-adjusted per capita expenditure*, say PCE^* , for a household of size n as: $PCE^* = C/n^e$, where C is total consumption and e is

a parameter varying between 0 and 1. When $e=1$, there are no economies of scale, and then per capita consumption adjusted is equal to the per capita not adjusted for economies of scale. If $e=0$, PCE* is equal to total consumption and then all the consumption goods can be shared among household members (the consumption of one person does not reduce anyone else consumption). Clearly, in very poor countries, where almost all the consumption expenditure goes into food consumption, it is “reasonable” to choose high values of e . The opposite is true for richer countries.

In tables 15A and 15B we present some basic estimations, according to progressively higher economies of scales. The purpose of this comparison is to determine the extent to which taking into account economies of scale would affect the overall profile of poverty that we have constructed above. Therefore, we test a few set of key poverty profile results for the measurement assumptions, looking at the changes in incidence by number of adults, gender of household head, number of children and household size.

Table 15A. Poverty measures under different assumptions on the size economies

<i>Households</i>	Overall			Urban			Rural		
	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6
Male headed	19.32	16.64	16.42	11.57	9.73	9.51	24.48	21.23	21.02
Female headed	15.78	16.39	21.13	9.39	8.83	12.53	21.52	23.20	28.87
Widow headed	15.42	16.58	20.86	8.82	5.77	12.28	19.99	15.75	26.81
Other female	15.65	16.15	19.65	9.65	10.98	11.88	25.91	21.26	32.96
Single parent	9.99	14.23	23.77	3.34	5.51	12.27	14.96	20.75	32.36
Two adults	14.00	14.47	18.89	6.49	6.36	8.83	19.39	20.28	26.11
Three adults	14.61	13.92	14.30	9.69	8.93	9.08	19.52	18.91	19.52
Four adults	19.24	15.83	14.11	12.31	10.00	8.84	24.94	20.62	18.44
Five or more adults	32.40	23.79	17.87	26.18	18.74	14.67	34.91	25.83	19.17
One child	19.33	15.41	12.99	12.85	10.79	9.74	24.06	20.05	23.75
Two children	30.00	23.91	20.16	20.91	15.94	13.20	34.64	18.79	15.37
Three or more children	42.04	34.38	25.24	31.13	28.16	22.35	46.32	27.98	23.72
No elderly	17.45	15.02	14.88	10.68	8.89	8.89	22.79	19.85	19.61
One elderly	17.91	17.83	20.59	11.66	11.06	13.59	21.90	22.17	25.07
Two elderly	26.58	21.93	19.39	12.25	10.30	12.17	33.44	28.97	31.71
Three or more elderly	40.02	32.02	24.02	-	-	-	40.02	32.02	24.02
At least one elderly	20.59	19.44	18.10	11.81	10.86	13.22	25.71	24.46	27.29

Like for the equivalence scales, also in this case the general poverty line has been calibrated (or “normalized”) in a way that an the overall poverty incidence should not change, but only the ranking of households should be re-arranged¹⁹.

Table 15B. Poverty measures under different assumptions on the size economies

<i>Households</i>	Overall			FBiH			RS			BD		
	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6
Male headed	19.32	16.64	16.42	18.30	15.34	14.88	20.60	18.39	18.54	28.10	25.68	26.53
Female headed	15.78	16.39	21.13	14.04	13.79	17.94	18.93	20.91	26.48	13.19	16.04	23.99
Widow headed	15.42	16.58	20.86	12.89	12.76	17.01	19.78	21.52	26.83	8.77	12.59	22.77
Other female	15.65	16.15	19.65	15.94	15.48	19.08	14.63	17.15	20.40	22.09	22.09	26.33
Single parent	9.99	14.23	23.77	7.74	10.48	18.63	13.13	19.12	30.11	5.19	11.68	25.93
Two adults	14.00	14.47	18.89	11.15	11.87	16.37	17.57	17.68	21.92	25.33	25.32	30.97

¹⁹ See Drèze(1997) and Deaton and Zaidi (2002) for a simple explanation of the technique of choosing a “pivot household”, or for calibrating the general poverty line (i.e. altering the poverty line so as to hold constant the head-count ratio).

<i>Households</i>	Overall			FBiH			RS			BD		
	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6	e=1	e=0.8	e=0.6
Three adults	14.61	13.92	14.30	12.89	12.18	12.76	17.76	17.10	17.10	17.89	17.89	17.89
Four adults	19.24	15.83	14.11	19.38	15.70	13.95	18.54	15.89	14.22	24.96	19.26	17.59
Five or more adults	32.40	23.79	17.87	30.94	22.49	17.20	34.16	25.18	18.16	51.55	44.49	36.36
One child	19.33	15.41	12.99	17.59	13.99	11.99	22.64	18.11	14.79	40.07	32.75	26.95
Two children	30.00	23.91	20.16	30.59	24.64	21.55	28.14	22.18	16.97	37.02	25.08	21.22
Three or more children	42.04	34.38	25.24	40.75	33.35	23.50	44.44	36.28	28.25	51.90	42.86	42.86
No elderly	17.45	15.02	14.88	17.35	14.65	14.23	17.23	15.30	15.74	24.47	22.56	22.68
One elderly	17.91	17.83	20.59	16.03	14.86	17.28	20.78	22.18	25.21	15.23	17.13	23.64
Two elderly	26.58	21.93	19.39	21.02	17.88	20.80	32.23	28.06	29.86	51.37	45.42	49.59
Three or more elderly	40.02	32.02	24.02	25.54	20.54	18.54	50.13	38.13	32.13	-	-	-
At least one elderly	20.59	19.44	18.10	17.48	15.75	14.31	24.58	24.20	23.82	25.93	25.51	31.32

As expected, the ratio of scale-adjusted for a particular group tends to be lower for higher economies of scale. The ranking of different household groups can be sensitive to different assumptions about the level of economies of scale. For example when e decreases to 0.6, the same rank reversal between MHH and FHH can be observed. We observed the same phenomenon above with the OECD(I) and OECD(II) scales²⁰. This suggest that female headed household tend to be relatively small. At the same large households tend to be the poorest for low value of economies of scale (i.e. $e=0.8$), and in general, we find a quite stable relationship between poverty and size (i.e. not a clear decrease in the relationship when e decrease). The opposite applies to “mono-nuclear” household, and in general, to small households. The rank of a single-person household in terms of scale-adjusted head-count ratio, tends to be sensitive to the choice of the scale parameter (country wide it increases, with e decreasing from 0.8 to 0.6, from 9.99 to 23.77). We know that the question of estimating the “correct” value of the economies of scale, on the basis of a single sample survey, is a complex one and largely unresolved, so all the results should be considered with cautions.

14. The dynamics of poverty in BiH over time

Poverty, however defined, is a dynamic phenomenon and it is bound to change over time. The poverty status of individuals is not fixed over time and changes depending on many factors, like income and expenditure patterns, prices, and in general the economic and social environment. To compare poverty as measured by expenditure—the concept of poverty we are using here—over time would imply that data on consumption expenditure by item are available in real terms. This would allow comparing different poverty lines and minimum food baskets over time. And yet, in order to estimate the real value of two different baskets we would need the prices of each item for each household, or at least for each municipality or area in two different moments in time. If that kind of comparison is not possible—as data on prices at the individual item level are not available—what is possible is to compare poverty rates, once it is assumed that the minimum food basket in two different moments in time is the same—quantities and calories are the same—so that the food poverty lines can be estimated for the two moments with their corresponding prices, the food expenditure shares calculated and the two general poverty lines constructed from the two food poverty lines. One would then not compare the values of the two poverty lines—they would not matter as they are expressed in nominal values at current prices—but could certainly compare the poverty rates deriving from the two lines.

With the data available and of any use for analysing the dynamics of poverty in BiH over time—the 2001 LSMS, the 2004 and 2007 HBS—it would be necessary to express all expenditure data in real terms. In our case, however, prices for the items included in the food basket or price deflators for comparable categories of

²⁰ The estimation of poverty incidence based on the “relative poverty line” calculated as the 60 percent of the median per capita equivalent consumption reports, in fact, that FHH are poorer than MHH.

goods and services are not available for the whole period.²¹ As using different indexes and “chain” their time series somehow would be inappropriate, it is therefore not possible to make any coherent analysis of the dynamics of real expenditure—and poverty lines expressed in real terms—in BiH from 2001 to 2007. Conversely, comparing different values over time when expressed in nominal terms at current prices does not make much sense, as it would be difficult to disentangle any change in expenditure values from changes in prices.

In 2001, the value of the minimum food basket was found to be KM 740 (per person, per year) (WB (2003)). The share of expenditure devoted to food was 34.5 percent (but including meals outside home and excluding health care expenditures from total consumption), so that the general “absolute” poverty line was defined at KM 2,198. Thus, the resulting absolute (baseline) poverty head-count was 19.5 percent, with a standard error of ± 3.6 percent. These are the rates resulting from the 2001 LSMS data.

The results for 2004 show a slightly different picture. With the 2004 HBS data we have constructed the general poverty line for 2004 using the same methodological approach as above, for the sake of comparison with the 2007 and the 2001 results. As it turns out, the absolute poverty line so calculated amounts to KM 2,347 in 2004 prices. For this poverty line we obtain the poverty rates shown below in Tables 15 and 16.

As Table 16 shows, the simple poverty Head-count has apparently gone down in 2004 to 17.9 from 19.5 percent in 2001, just to go up a bit again in 2007 to 18.6 percent. And yet, we should keep in mind that this is the mean estimate. If we take account of the standard errors, we see that the poverty HC rate has remained substantially unchanged. A standard error of 1.8 in 2001 implies that the 95 percent confidence interval for the mean estimate is ± 3.6 percent around 19.5: so meaning that with 95 percent probability the actual value for the HC estimate in BiH lies between 15.9 percent and 23.1 percent (see WB (2003)). Similarly, the standard errors for the HC mean estimates give a 95 percent confidence interval between 17.0 and 18.8 percent for 2004 and between 17.4 and 19.8 percent for 2007. This means that the three estimates overlap significantly, whereby the 2001 has a very large interval that makes any judgment on the actual dynamics of the poverty rate quite hard to give. Conversely, it is interesting to notice that between 2004 and 2007, poverty rates in the Entities have gone in opposite directions, although their estimates’ confidence intervals still leave the question on whether poverty conditions in BiH have worsened or not unsettled.²² Between 2004 and 2007 poverty rates have improved in the FBiH and have worsened in the RS, although not in a statistically significant way. Conversely, for BD, poverty has clearly and dramatically worsened.

²¹ A Retail Price Index would be available for the FBiH and the RS for the years 2001-2004, although it would have limited geographical coverage and a different commodity classification. A Consumer Price Index following a COICOP classification is available only from December 2004.

²² If we exclude results for Brcko District, for which the trend seems to be clearer.

Table16. Poverty indexes in 2001, 2004, 2007

	2001		2004		2007	
	Estimate (%)	Std. Err.	Estimate (%)	Std. Err.	Estimate (%)	Std. Err.
Overall country						
Head-count	19.5	1.8	17.9	0.448	18.6	0.602
Poverty Gap	4.6	-	4.6	0.145	4.9	0.198
Squared Poverty Gap	1.6	-	1.8	0.077	1.9	0.098
Average Shortfall	23.5		25.5		26.5	
By geographical area						
Head-count						
FBiH	16.3	1.8	18.5	0.587	17.4	0.802
RS	24.8	3.8	17.5	0.727	20.2	0.915
BD	-	-	7.9	1.424	25.0	2.844
Poverty Gap						
FBiH	-	-	4.9	0.197	4.5	0.254
RS	-	-	4.2	0.222	5.5	0.331
BD	-	-	1.7	0.359	7.1	0.931
Squared Poverty Gap						
FBiH	-	-	2.0	0.106	1.8	0.120
RS	-	-	1.5	0.113	2.2	0.175
BD	-	-	0.5	0.138	2.9	0.470
Average Shortfall						
FBiH	-	-	26.49		26.13	
RS	-	-	23.77		27.00	
BD	-	-	22.18		28.42	

Source:

For 2001 – WB (2003) Poverty assessment, 2001 LSMS data;

For 2004 – 2004 HBS data (our calculations);

For 2007 – 2007 HBS data (our calculations).

Table 17 shows a few results for 2004, by which it appears that in 2007 conditions have worsened in some cases, while they have improved in others. Between 2004 and 2007 in FBiH poverty incidence has improved (although not significantly) in both rural and urban areas. Conversely, in the RS, poverty incidence has worsened (although not significantly) both in rural and urban areas. In BD, the increase in poverty incidence between 2004 and 2007 has been dramatic and very significant. Poverty incidence has also apparently and significantly worsened for FHH at least in the RS and BD, while it has remained substantially unchanged for MHH. Poverty rates have slightly increased for large-size households—and they were already very high—when headed by men and have slightly decreased when headed by women, although in 2007 still one in three large FHH is poor. Poverty rates have worsened for FHH with one or four members as well as for one-member MHH. In this sense, the distribution of poverty has got less “flat” between 2004 and 2007: poverty incidence has worsened for small and large households, while it has remained substantially unchanged for all sizes in between.

Table 17A. Poverty indexes for 2004

Mean	Estimate	Std. Err.	[95% Conf. Interval]	
Head-count	17.91	0.448	17.03	18.79
Poverty Gap	4.56	0.145	4.28	4.85
Squared Poverty Gap	1.76	0.077	1.61	1.92

Table 17B. Poverty incidence by geographical area and settlement type in 2004 and 2007
[percentages using GPL₃, standard errors in parentheses]

	Rural		Urban		Total	
	2004	2007	2004	2007	2004	2007
Overall country	23.09 (0.63)	23.90 (0.65)	10.98 (0.57)	11.03 (0.56)	17.91 (0.45)	18.56 (0.45)
FBiH	25.24 (0.88)	23.62 (0.86)	10.78 (0.72)	9.88 (0.66)	18.49 (0.59)	17.39 (0.56)
RS	20.59 (0.95)	23.91 (1.03)	12.11 (1.06)	13.24 (1.14)	17.52 (0.73)	20.23 (0.78)
BD	13.82 (2.50)	32.53 (3.56)	1.12 (0.86)	16.51 (2.87)	7.90 (1.46)	25.03 (2.35)

Table 17C. Poverty incidence by geographical area and gender of household head in 2004 and 2007
[percentages using GPL₃, standard errors in parentheses]

	MHH		FHH		Total	
	2004	2007	2004	2007	2004	2007
Overall country	18.94 (0.51)	19.32 (0.52)	14.00 (0.89)	15.77 (0.91)	17.91 (0.45)	18.56 (0.45)
FBiH	19.51 (0.67)	18.30 (0.65)	14.47 (1.20)	14.04 (1.12)	18.49 (0.59)	17.39 (0.56)
RS	18.55 (0.84)	20.60 (0.89)	13.83 (1.41)	18.93 (1.64)	17.52 (0.73)	20.23 (0.78)
BD	8.85 (1.75)	28.10 (2.76)	4.74 (2.44)	13.19 (3.93)	7.90 (1.46)	25.03 (2.35)

Table 17D. Poverty incidence by gender of household head and household size in 2004 and 2007
[percentages using GPL₃]

Household size and geographical area	MHH		FHH		Total	
	2004	2007	2004	2007	2004	2007
One member						
Overall country	4.60	8.17	6.60	10.82	5.90	9.99
FBiH	4.88	6.47	6.81	8.18	6.11	7.74
RS	4.48	10.08	6.75	14.98	6.00	13.13
BD	0.00	-	0.00	5.19	0.00	5.19
Two members						
Overall country	12.25	14.18	13.66	13.25	12.54	13.99
FBiH	12.58	11.08	13.04	11.34	12.68	11.15
RS	12.32	17.73	15.40	16.73	12.89	17.57
BD	1.50	26.01	4.12	20.73	2.19	25.33
Three members						
Overall country	15.78	13.92	19.19	17.81	16.38	14.60
FBiH	15.56	12.53	17.79	14.69	15.79	12.89
RS	16.99	16.59	22.63	22.50	17.97	17.76
BD	8.91	16.09	0.00	26.89	7.84	17.89
Four members						
Overall country	19.76	18.79	20.40	24.90	19.80	19.23
FBiH	20.82	19.10	23.41	22.70	21.03	19.38
RS	18.60	17.75	13.46	30.40	18.22	18.54
BD	6.79	24.42	34.54	36.07	8.54	24.96
Five or more members						
Overall country	30.71	32.20	36.36	35.94	31.21	32.39
FBiH	30.69	30.26	34.39	37.13	31.03	30.94
RS	31.00	34.19	40.52	33.80	31.80	34.16
BD	24.60	51.55	24.50	-	24.59	51.55

Clearly, a lot more comparisons can be made by considering the age, activity and professional status and the sector of occupation of the household head. This is a direction for further analysis and research, and these preliminary results already show that while we can say that in general poverty incidence has remained substantially unchanged—it has not increased but it has not decreased either—, in some specific cases it has significantly worsened.

15. Conclusions

In this report, we have followed the WB (2003) approach to construct an absolute poverty line for BiH based on the minimum-caloric-intake criterion in order to attain absolute poverty rates for the country for 2007 comparable with the estimates for 2001 which were derived from the LSMS. The minimum-food poverty line so obtained for 2007 is equivalent to KM 1,005.98.²³ As we have seen, only 0.52 percent of the population spends in total less than the food poverty line, while 21.37 percent of the population spends in food and beverages less than the food poverty line.

From the food poverty line, we have then derived a set of three alternative general poverty lines: GPL₁, GPL₂, and GPL₃. While prices of all items in the food poverty lines were deflated in all cases using value/quantity ratios (unit values), all three general poverty lines were constructed by deflating consumption expenditures for all items by the relative regional price deflators for the 12 main COICOP commodity divisions. GPL₁ was then constructed by taking the amount spent in the minimum food basket—the food poverty line—of a specific reference population group—those households corresponding to the second and third deciles of the distribution of total consumption expenditure—as the reference food expenditure share and taking the complement to one of that share as the complementary non-food component in the general poverty line. Conversely, GPL₂ was constructed by taking the amount spent by the same reference population group in the minimum food basket and in meals outside home as the reference food expenditure share and then taking the complement to one of that share as the complementary non-food component in the general poverty line. Since in this case the food share is larger, the non-food component is lower, and the general poverty line is thus deemed to be lower. Finally, GPL₃ was constructed by excluding health expenditures from total consumption aggregates—in line with WB (2003)—and including, as with GPL₂, expenses in meals outside in the food share. As total expenditure is lower, the reference food share is thus larger in this case, and the resulting general poverty line even lower. From the methodological point of view, the GPL₃ poverty line is the closest to the one proposed in the WB (2003) poverty assessment.

We have then calculated three different poverty indexes—the Head-count ratio, the Poverty Gap and the Squared Poverty Gap—which measure the *incidence*, the *depth* and the *severity* of poverty. Results with the three poverty lines tend to be only slightly different and yet they are significant in some cases. With GPL₁, for instance, the poverty rate for the whole country is about 21 percent with a 95 percent confidence interval between 20.0 and 21.9 percent. With GPL₃, the poverty rate is about 18.6 percent, with an interval between 17.7 and 19.5 percent. Therefore, the poverty incidence estimated with GPL₁ is—in the aggregate—significantly higher than the one obtained with GPL₃. While the two poverty incidence estimates obtained with GPL₂ and GPL₃ do not differ significantly, the one obtained with GPL₁ is significantly higher, as the upper bound of the of the estimated GPL₃ is lower than the lower bound of the estimated GPL₁.

On this basis, about one fifth of the overall country population can be considered as poor. Yet, poverty varies considerably across Entities: the FBiH has a lower poverty rate (17.4 percent) than the RS (20.2 percent) and BD (27.2 percent). While the two estimates for the FBiH and the RS might not be statistically different, that for BD is. The *depth of poverty* is also considerable—4.9 percent for the whole country, 4.5 percent for FBiH,

²³ The food poverty line was calculated by defining a food basket with all 66 items listed in the WB (2003) minimum-food basket list, even though in that case not all items were actually included in the final calculations.

5.5 percent for the RS and 7.1 percent for BD—, as is the *severity* of poverty. The *average shortfall* for the whole country is 26.5 percent, which means that the average consumption of the poor population falls short of the general poverty line almost by 26.5 percent. Also, poverty varies according to settlement type (the urban poverty rate in RS is higher than the rural poverty rate in FBiH). As expected, poverty rates appear to be higher in the rural areas, and they are highest in the BD, followed by the RS.

In general, confidence intervals for all estimates are generally quite large. As the standard errors are larger for the estimates at the Entity levels, the estimated poverty rates have larger confidence intervals, too. This also points to the caution needed in comparing different poverty rates for different parts of the country, or different groups. When confidence intervals intersect, it means that one cannot reject the null hypothesis tested that their poverty rates are the same.

The characteristics of poverty in BiH that result from the analyses of the poverty incidence estimates can be summarised as follows.

1. Poverty is more widespread in RS (and even more in BD) than in FBiH. Depth and severity are also higher in RS than in FBiH. Poverty is definitely higher in rural than urban areas. Urban poverty in the RS is more widespread than rural poverty in FBiH, and it is deeper and more severe.
2. Poverty is not peculiar to female-headed households, actually quite the contrary. On average, the poverty head-count is significantly lower for FHH than for MHH, on aggregate and in the FBiH, while in the RS is just slightly lower. Also: FHH living in rural areas are significantly less poor than MHH but they are significantly poorer than those MHH who live in urban areas.
3. Poverty is higher among those households whose head is either in the young-adults or in the middle-aged-adults or in the elderly class of age. Concentration of poverty is significant in different age classes of the population of the two Entities: while in FBiH is the young-adult group that appears to be the poorest, in the RS it is the over-64 group that is the poorest.
4. Poverty is widespread among the larger households. Yet, within each size group, poverty incidence increases with the age of the household head. Considering that large households (with five or more members) represent 20.6 percent of the total number of households and 35.9 percent of the population, we can say that poverty affects the 22.7 percent of the whole population and that people living in large households show the highest concentration of poverty (36.2 percent of the total, with a poverty incidence of 34.1 percent in terms of population, the highest among all household sizes).
5. Poverty is more concentrated in households with children, and it is more widespread, deep and severe. Yet, of the whole population of children—defined as people with less than 14 years of age and representing the 17.4 of the whole population—only 16.6 percent lives in households that are poor (against the 22.7 percent of the whole population). Poverty rates for households with no children are generally lower than the average. Also, expectedly, as the number of children increases, poverty incidence worsens.
6. Poverty rates are higher than the average for the unemployed and the disabled to work, while among those who are active, poverty rates are higher among the self-employed and the non-permanently employed. Yet, of all poor households, 39.9 percent of the heads are employed and 28.1 percent are retired.

Poverty in the strict sense is defined as a level of consumption expenditure that is lower than a certain threshold, the general poverty line. Yet, vulnerability and the proneness to poverty are also important. Vulnerability to the risk of poverty is usually defined as the percentage of households whose consumption expenditure levels are in a certain neighbourhood of the poverty line, 50 percent as suggested in WB (2003). In our case, the *total incidence of poverty and near poverty* is around 41.5 percent—or 18.6 percent of poor and 22.9 percent of near poor, i.e. vulnerable to the risk of poverty.

Vulnerable households are more concentrated in RS than FBiH (45.9 vs. 38.7 percent of the total), and they are more concentrated among four- and five-or-more-member households (with incidences equal to 43.5 and 62.4 percent, respectively). Vulnerability rates are higher among households with two or three-or-more children (57.3 and 70.9 percent, respectively), and among those whose head is in the middle-age or in the older-age class (45 and 42.6 percent, respectively). MHH are more vulnerable than FHH (43.3 vs. 34.8 percent), while rural households are more vulnerable than urban households (50.4 vs. 29 percent). As for the activity status, unemployment and disability is where vulnerability is more concentrated (51.9 and 64.1 percent, respectively).

Inequality is also a concern, as it appears from the results above. The distance between the middle and the poor is wider in FBiH than in RS, while the rich are above the middle by similar ratio in the two Entities. If we look at the share of total consumption going to the top and bottom quintiles, we see that overall the poorest 20 percent of the population (in terms of consumption) commands about 7.2 percent of total equivalent consumption, while the richest 20 percent uses about 39 percent. The Gini coefficient, Theil and log mean deviation show inequality to be relatively low in the country.

As for the dynamics of poverty, it appears that the simple poverty Head-count has apparently gone down to 17.9 percent in 2004 from 19.5 percent in 2001, to go up again to 18.6 percent in 2007. Yet, if we take account of the standard errors, we can say that the poverty rate has remained substantially unchanged. The three estimates overlap significantly, whereby the 2001 has a very large interval that makes any judgment on the actual dynamics of the poverty rate quite hard to make. Conversely, it is interesting to notice that between 2004 and 2007, poverty rates in the Entities have gone in opposite directions, although their estimates' confidence intervals still leave the question on whether poverty conditions in BiH have worsened or not unsettled.²⁴ Between 2004 and 2007 poverty rates have improved in the FBiH and have worsened in the RS, although not in a statistically significant way. Conversely, for BD, poverty has clearly and dramatically worsened.

In comparison with 2004, it appears that in 2007 conditions have worsened in some cases, while they have improved in others. Between 2004 and 2007 in FBiH poverty incidence has improved (although not significantly) in both rural and urban areas. Conversely, in the RS, poverty incidence has worsened (although not significantly) both in rural and urban areas. In BD, the increase in poverty incidence between 2004 and 2007 has been dramatic and very significant. Poverty incidence has also apparently and significantly worsened for FHH at least in the RS and BD, while it has remained substantially unchanged for MHH. Poverty rates have slightly increased for large-size households—and they were already very high—when headed by men and have slightly decreased when headed by women, although in 2007 still one in three large FHH is poor. Poverty rates have worsened for FHH with one or four members as well as for one-member MHH. In this sense, the distribution of poverty has got less “flat” between 2004 and 2007: poverty incidence has worsened for small and large households, while it has remained substantially unchanged for all sizes in between.

In conclusion, for a country that in the last ten years has had “a robust economic growth”, as mentioned in recent policy papers by the IMF and the WB, the results shown above on poverty are a reason of concern.²⁵ “GDP has more than quadrupled and merchandise exports have been growing 20 percent on average for the past 8 years” (WB (2008)). Estimated per capita GDP was KM 5,633 in 2007 (or USD 3,940 at the average annual exchange rate), or USD 7,700 if measured in PPP terms. And yet, even if real income has grown steadily between 2001 and 2007, the incidence of poverty has not decreased significantly, while vulnerability

²⁴ If we exclude results for BD, for which the trend seems to be clearer.

²⁵ And actually, poverty rates with GPL_1 are even higher.

has only gone from 48 to 42 percent in six years.²⁶ Since in this case we are considering an absolute concept of poverty—and not so much a relative one as measured by Eurostat (see the main publication)—that poverty incidence has not improved should be seen as an issue for social policy making. Income is growing, the size of the economy grows, and yet there is a good 20 percent of the population whose standards of living are precarious and just bearable—a share that keeps steadily high—and a good 40 percent that lives in that same range of possibilities. This is a society that is deemed to witness a growing inequality and an ever increasing social exclusion which need to be addressed.

16. References

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²⁶ A simple although somehow arbitrary comparison shows that the general poverty line used above of KM 2857, i.e. the per capita level of consumption under which an individual is considered to be poor, is equivalent to half per capita GDP. The vulnerability line is then just about 76 percent of per capita income.

Annex 1

Table 1. World Bank actual reference and minimum food basket, per person, kg/lt/KM/month

Code	Product	Unit	Initial minimum basket	Optimised minimum basket	KCAL Composition	Price (KM)	Cost (KM/Month)
01	Rice	KG	0.214	0.154	0.8%	1.63	0.25
02	Other cereals (maize, wheat, rye, barley,	KG	0.930	1.230	6.2%	1.40	1.72
03	Wheat flour (all types)	KG	4.950	5.002	23.8%	0.64	3.20
04	Other types of flour (maize, rye, etc.)	KG	0.270	0.304	1.6%	1.13	0.34
05	Bread	KG	3.625	5.932	22.7%	0.87	5.16
06	Pasta	KG	0.355	0.427	2.1%	1.94	0.83
07	Biscuits, pastries, pizza, etc	KG	0.100	0.100	0.5%	4.84	0.48
8/10	Beef, baby-beef, veal	KG	0.410	1.569	2.3%	7.00	10.99
11	Poultry (fresh, chilled, frozen)	KG	0.483	0.820	1.1%	4.77	3.91
12	Other products of animal origin	KG	0.050	0.050	0.2%	6.73	0.34
13	Fresh water and sea fish (fresh, chilled)	KG	0.146	0.163	0.1%	5.46	0.89
14	Other fish-based products	KG	0.050	0.050	0.0%	6.50	0.33
15	Fresh milk	LT	3.825	4.884	4.4%	1.00	4.88
16	Yogurt, sour milk, kefir	LT	0.771	0.771	0.7%	1.38	1.06
17	Sour cream	LT	0.227	0.227	0.7%	3.97	0.90
18	Cream cheese	KG	0.287	0.299	1.5%	2.63	0.79
19	White cheese	KG	0.226	0.185	1.0%	5.75	1.06
20	Eggs	KG	0.240	0.247	0.3%	5.00	1.24
21	Butter	KG	0.090	0.090	1.0%	5.77	0.52
22	Margarine, melt. butter	KG	0.099	0.100	1.1%	4.00	0.40
23	Edible oil	LT	0.700	0.500	6.5%	1.64	0.82
24	Other animal origin fat	KG	0.317	0.316	4.2%	2.43	0.77
25	Sugar	KG	0.771	0.546	3.2%	1.05	0.57
26	Jam, marmalade, preserves, jelly	KG	0.141	0.352	1.2%	3.12	1.10
30	Other confect. (ice-cream...)	KG	0.050	0.339	2.1%	7.71	2.61
32	Vinegar	LT	0.077	0.092	0.4%	1.59	0.15
33	Salt	KG	0.180	0.247	0.0%	0.89	0.22
36	Coffee	KG	0.163	0.177	0.0%	7.32	1.29
41	Fruit syrups, juices	LT	0.291	0.291	0.5%	1.98	0.58
44	Beer	LT	0.827	0.900	0.5%	1.23	1.11
45	Fresh citrus fruit	KG	0.141	0.146	0.1%	1.92	0.28
46	Bananas	KG	0.150	0.150	0.1%	1.71	0.26
47	Apples	KG	0.294	0.212	0.2%	1.37	0.29
48	Pears	KG	0.116	0.081	0.0%	1.81	0.15
49	Grapes	KG	0.104	0.075	0.0%	2.19	0.16
50	Stone fruit (peach, apricot...)	KG	0.090	0.090	0.0%	1.46	0.13
51	Other fruit (strawberry, raspberry, melon)	KG	0.188	0.225	0.1%	0.93	0.21
52	Nuts, almonds...	KG	0.000	0.000	0.0%	7.40	0.00
53	Dried fruit	KG	0.047	0.826	4.9%	3.00	2.48
54	Fresh leaf vegetables	KG	0.099	0.099	0.0%	1.54	0.16

Code	Product	Unit	Initial minimum basket	Optimised minimum basket	KCAL Composition	Price (KM)	Cost (KM/Month)
55	Cabbage-like vegetables	KG	0.490	2.906	0.6%	0.59	2.00
56	Tomato	KG	0.333	0.253	0.1%	1.51	0.38
57	Green pepper	KG	0.263	0.382	0.1%	1.65	0.63
58	Cucumber	KG	0.208	0.150	0.0%	1.12	0.17
59	Peas, green beans	KG	0.064	0.539	0.3%	1.96	1.06
60	Dried beans	KG	0.188	0.282	0.1%	3.00	0.85
61	Carrots	KG	0.090	0.097	0.0%	1.25	0.12
62	Onions	KG	0.213	0.245	0.1%	1.08	0.26
63	Garlic	KG	0.090	0.124	0.0%	2.80	0.35
64	Potatoes	KG	2.356	1.649	1.7%	0.59	0.97
65	Other types of fresh vegetables	KG	0.043	0.507	0.1%	3.89	1.97
66	Processed, preserved, dried vegetables	KG	0.150	0.420	0.5%	2.22	0.93
TOTAL MONTHLY					100%		63.33
ANNUAL TOTAL PER PERSON							760.00

Source: WB (2003).

Annex 2

Distribution of households according to their poverty status by gender, settlement type, household size, age, activity status, professional status, sector of activity and education level of household head, and geographical area [percentages using GPL₃]

Table 1. Distribution of households according to their poverty status by gender of household head and geographical area [percentages using GPL₃]

Poverty status	Gender of household head		Total
	MHH	FHH	
Overall country			
Non poor	77.77	22.23	100.00
	80.68	84.22	81.44
Poor	81.72	18.28	100.00
	19.32	15.78	18.56
Total	78.50	21.50	100.00
	100.00	100.00	100.00
FBiH			
Non poor	77.73	22.27	100.00
	81.70	85.96	82.61
Poor	82.73	17.27	100.00
	18.30	14.04	17.39
Total	78.60	21.40	100.00
	100.00	100.00	100.00
RS			
Non poor	77.91	22.09	100.00
	79.40	81.07	79.77
Poor	79.67	20.33	100.00
	20.60	18.93	20.23
Total	78.27	21.73	100.00
	100.00	100.00	100.00
BD			
Non poor	76.20	23.80	100.00
	71.90	86.81	74.97
Poor	89.17	10.83	100.00
	28.10	13.19	25.03
Total	79.44	20.56	100.00
	100.00	100.00	100.00

Table 2. Distribution of households according to their poverty status by settlement type and geographical area [percentages using GPL₃]

Poverty status	Settlement type		Total
	Urban	Rural	
Overall country			
Non poor	45.36	54.64	100.00
	88.97	76.10	81.44
Poor	24.68	75.32	100.00
	11.03	23.90	18.56
Total	41.52	58.48	100.00
	100.00	100.00	100.00
FBiH			
Non poor	49.46	50.54	100.00
	90.11	76.38	82.61
Poor	25.78	74.22	100.00
	9.89	23.62	17.39
Total	45.34	54.66	100.00
	100.00	100.00	100.00
RS			
Non poor	37.53	62.47	100.00
	86.76	76.08	79.77
Poor	22.58	77.42	100.00
	13.24	23.92	20.23
Total	34.50	65.50	100.00
	100.00	100.00	100.00
BD			
Non poor	52.14	47.86	100.00
	83.49	67.46	74.97
Poor	30.87	69.13	100.00
	16.51	32.54	25.03
Total	46.82	53.18	100.00
	100.00	100.00	100.00

Table 3. Distribution of households according to their poverty status by gender of household head and settlement type [percentages using GPL₃]

Poverty status	Gender of household head		Total
	MHH	FHH	
Urban			
Non poor	75.02	24.98	100.00
	88.43	90.61	88.97
Poor	79.12	20.88	100.00
	11.57	9.39	11.03
Total	75.47	24.53	100.00
	100.00	100.00	100.00
Rural			
Non poor	75.02	24.98	100.00
	88.43	90.61	88.97
Poor	79.12	20.88	100.00
	11.57	9.39	11.03
Total	75.47	24.53	100.00
	100.00	100.00	100.00

Table 4. Distribution of households according to their poverty status by settlement type and gender of household head [percentages using GPL₃]

Poverty status	Settlement type		Total
	Urban	Rural	
MHH			
Non poor	43.76	56.24	100.00
	88.43	75.52	80.68
Poor	23.90	76.10	100.00
	11.57	24.48	19.32
Total	39.92	60.08	100.00
	100.00	100.00	100.00
FHH			
Non poor	50.96	49.04	100.00
	90.61	78.48	84.22
Poor	28.19	71.81	100.00
	9.39	21.52	15.78
Total	47.37	52.63	100.00
	100.00	100.00	100.00

Table 5. Distribution of households according to their poverty status by household size and geographical area [percentages using GPL₃]

Poverty status	Household size (number of members)					Total
	One member	Two members	Three members	Four members	Five or more members	
Overall country						
Non poor	16.34	23.94	19.17	23.37	17.18	100.00
	90.01	86.00	85.39	80.76	67.60	81.44
Poor	7.96	17.10	14.39	24.42	36.13	100.00
	9.99	14.00	14.61	19.24	32.40	18.56
Total	14.79	22.67	18.28	23.56	20.70	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
FBIH						
Non poor	14.34	22.79	20.03	24.88	17.95	100.00
	92.26	88.85	87.11	80.62	69.06	82.61
Poor	5.71	13.58	14.09	28.40	38.21	100.00
	7.74	11.15	12.89	19.38	30.94	17.39
Total	12.84	21.19	19.00	25.49	21.48	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
RS						
Non poor	19.53	25.96	17.78	20.64	16.08	100.00
	86.87	82.43	82.24	81.46	65.84	79.77
Poor	11.64	21.81	15.14	18.52	32.89	100.00
	13.13	17.57	17.76	18.54	34.16	20.23
Total	17.93	25.12	17.25	20.21	19.48	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
BD						
Non poor	24.47	24.96	15.88	22.94	11.74	100.00
	94.81	74.67	82.11	75.04	48.45	74.97
Poor	4.01	25.36	10.36	22.86	37.41	100.00
	5.19	25.33	17.89	24.96	51.55	25.03
Total	19.35	25.06	14.50	22.92	18.17	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Table 6. Distribution of households according to their poverty status by household size and gender of household head [percentages using GPL₃]

Poverty status	Household size (number of members)					Total
	One member	Two members	Three members	Four members	Five or more members	
MHH						
Non poor	6.72	24.65	20.49	28.03	20.11	100.00
	91.82	85.82	86.08	81.20	67.98	80.68
Poor	2.50	17.01	13.84	27.09	39.56	100.00
	8.18	14.18	13.92	18.80	32.02	19.32
Total	5.90	23.17	19.20	27.85	23.87	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
FHH						
Non poor	50.00	21.45	14.56	7.04	6.94	100.00
	89.18	86.74	82.19	75.10	64.06	84.22
Poor	32.39	17.50	16.85	12.46	20.80	100.00
	10.82	13.26	17.81	24.90	35.94	15.78
Total	47.22	20.83	14.93	7.90	9.13	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Table 7. Distribution of households according to their poverty status by age class of household head and geographical area [percentages using GPL₃]

Poverty status	Age class of household head					Total
	15-24	25-34	35-49	50-64	65 or more	
Overall country						
Non poor	0.67	7.11	29.10	33.23	29.90	100.00
	83.31	78.72	79.82	84.35	80.57	81.44
Poor	0.59	8.43	32.29	27.05	31.64	100.00
	16.69	21.28	20.18	15.65	19.43	18.56
Total	0.65	7.35	29.69	32.08	30.22	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
FBiH						
Non poor	0.70	7.34	31.07	32.57	28.33	100.00
	81.39	76.90	79.88	85.60	84.03	82.61
Poor	0.76	10.47	37.18	26.02	25.57	100.00
	18.61	23.10	20.12	14.40	15.97	17.39
Total	0.71	7.88	32.13	31.43	27.85	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
RS						
Non poor	0.63	6.79	25.44	34.57	32.57	100.00
	87.08	83.10	80.17	82.55	75.99	79.77
Poor	0.37	5.44	24.81	28.80	40.57	100.00
	12.92	16.90	19.83	17.45	24.01	20.23
Total	0.58	6.52	25.32	33.40	34.19	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
BD						
Non poor	0.30	5.13	30.50	30.85	33.23	100.00
	100.00	68.82	73.02	79.10	74.04	74.97
Poor	0.00	6.95	33.74	24.41	34.89	100.00
	0.00	31.18	26.98	20.90	25.96	25.03
Total	0.22	5.58	31.31	29.24	33.64	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Table 8. Distribution of households according to their poverty status by age class of household head and gender of household head [percentages using GPL₃]

Poverty status	Age class of household head					Total
	15-24	25-34	35-49	50-64	65 or more	
MHH						
Non poor	0.57	8.29	32.84	34.06	24.23	100.00
	76.93	77.68	79.19	84.16	79.23	80.68
Poor	0.72	9.94	36.04	26.77	26.53	100.00
	23.07	22.32	20.81	15.84	20.77	19.32
Total	0.60	8.61	33.46	32.65	24.68	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
FHH						
Non poor	1.00	2.97	16.02	30.31	49.70	100.00
	100.00	90.61	84.62	85.11	82.96	84.22
Poor	0.00	1.64	15.53	28.32	54.50	100.00
	0.00	9.39	15.38	14.89	17.04	15.78
Total	0.84	2.76	15.94	30.00	50.46	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Table 9. Distribution of households according to their poverty status by number of children in household and geographical area [percentages using GPL₃]

Poverty status	Number of children in household				Total
	No children	One child	Two children	Three or more children	
Overall country					
Non poor	67.99	18.11	11.33	2.57	100.00
	85.76	79.92	69.34	56.98	81.44
Poor	49.55	19.97	21.97	8.50	100.00
	14.24	20.08	30.66	43.02	18.56
Total	64.57	18.46	13.30	3.67	100.00
	100.00	100.00	100.00	100.00	100.00
FBiH					
Non poor	64.88	20.38	11.89	2.85	100.00
	87.68	81.52	69.17	58.56	82.61
Poor	43.29	21.95	25.17	9.59	100.00
	12.32	18.48	30.83	41.44	17.39
Total	61.12	20.65	14.20	4.02	100.00
	100.00	100.00	100.00	100.00	100.00
RS					
Non poor	73.22	14.43	10.25	2.10	100.00
	83.13	76.85	70.17	53.81	79.77
Poor	58.57	17.14	17.18	7.11	100.00
	16.87	23.15	29.83	46.19	20.23
Total	70.25	14.98	11.65	3.11	100.00
	100.00	100.00	100.00	100.00	100.00
BD					
Non poor	75.98	10.19	12.24	1.59	100.00
	80.36	63.01	63.20	48.10	74.97
Poor	55.62	17.92	21.33	5.12	100.00
	19.64	36.99	36.80	51.90	25.03
Total	70.89	12.13	14.51	2.47	100.00
	100.00	100.00	100.00	100.00	100.00

Table 10. Distribution of households according to their poverty status by number of children in household and gender of household head [percentages using GPL₃]

Poverty status	Number of children in household				Total
	No children	One child	Two children	Three or more children	
MHH					
Non poor	62.75	20.48	13.62	3.15	100.00
	85.28	80.71	69.53	58.30	80.68
Poor	45.24	20.44	24.92	9.40	100.00
	14.72	19.29	30.47	41.70	19.32
Total	59.36	20.48	15.80	4.36	100.00
	100.00	100.00	100.00	100.00	100.00
FHH					
Non poor	86.34	9.83	3.30	0.53	100.00
	87.00	74.55	66.74	38.83	84.22
Poor	68.85	17.91	8.77	4.46	100.00
	13.00	25.45	33.26	61.17	15.78
Total	83.58	11.10	4.16	1.15	100.00
	100.00	100.00	100.00	100.00	100.00

Table 11. Distribution of households according to their poverty status by activity status of household head and geographical area [percentages using GPL₃]

Poverty status	Activity status of household head				Total
	Employed	Unemployed	Pensioner	Other	
Overall country					
Non poor	46.38	9.33	30.95	13.34	100.00
	83.59	73.23	82.70	77.83	81.44
Poor	39.96	14.97	28.40	16.67	100.00
	16.41	26.77	17.30	22.17	18.56
Total	45.19	10.38	30.48	13.96	100.00
	100.00	100.00	100.00	100.00	100.00
FBiH					
Non poor	47.67	8.39	31.21	12.73	100.00
	83.61	74.13	84.27	81.15	82.61
Poor	44.38	13.90	27.66	14.05	100.00
	16.39	25.87	15.73	18.85	17.39
Total	47.10	9.35	30.59	12.96	100.00
	100.00	100.00	100.00	100.00	100.00
RS					
Non poor	44.53	10.60	30.81	14.06	100.00
	84.01	72.38	80.19	72.86	79.77
Poor	33.42	15.94	30.01	20.63	100.00
	15.99	27.62	19.81	27.14	20.23
Total	42.28	11.68	30.65	15.39	100.00
	100.00	100.00	100.00	100.00	100.00
BD					
Non poor	36.96	17.54	25.13	20.37	100.00
	74.34	68.84	77.75	78.72	74.97
Poor	38.21	23.76	21.54	16.49	100.00
	25.66	31.16	22.25	21.28	25.03
Total	37.27	19.09	24.24	19.40	100.00
	100.00	100.00	100.00	100.00	100.00

Table 12. Distribution of households according to their poverty status by activity status of household head and gender of household head [percentages using GPL₃]

Poverty status	Activity status of household head				Total
	Employed	Unemployed	Pensioner	Other	
MHH					
Non poor	54.68	10.68	31.59	3.05	100.00
	82.99	72.09	81.47	68.13	80.68
Poor	46.78	17.26	30.00	5.95	100.00
	17.01	27.91	18.53	31.87	19.32
Total	53.16	11.95	31.28	3.61	100.00
	100.00	100.00	100.00	100.00	100.00
FHH					
Non poor	17.32	4.63	28.72	49.33	100.00
	90.72	84.01	87.83	80.30	84.22
Poor	9.46	4.70	21.25	64.59	100.00
	9.28	15.99	12.17	19.70	15.78
Total	16.08	4.64	27.54	51.74	100.00
	100.00	100.00	100.00	100.00	100.00

Table 13. Distribution of households according to their poverty status by professional status of household head and geographical area [percentages using GPL₃]

Poverty status	Professional status of household head				Total
	Employer	Self-employed	Permanent employment	Other employment	
Overall country					
Non poor	6.57	16.67	62.19	14.57	100.00
	89.52	78.92	84.74	71.69	81.85
Poor	3.47	20.07	50.52	25.93	100.00
	10.48	21.08	15.26	28.31	18.15
Total	6.01	17.29	60.08	16.63	100.00
	100.00	100.00	100.00	100.00	100.00
BiH					
Non poor	6.49	14.79	62.88	15.84	100.00
	90.52	78.01	85.81	72.08	82.38
Poor	3.18	19.50	48.63	28.69	100.00
	9.48	21.99	14.19	27.92	17.62
Total	5.91	15.62	60.37	18.10	100.00
	100.00	100.00	100.00	100.00	100.00
RS					
Non poor	6.69	20.12	60.97	12.22	100.00
	88.43	80.87	83.13	71.91	81.45
Poor	3.84	20.89	54.32	20.95	100.00
	11.57	19.13	16.87	28.09	18.55
Total	6.16	20.26	59.74	13.84	100.00
	100.00	100.00	100.00	100.00	100.00
BD					
Non poor	7.22	17.68	60.94	14.16	100.00
	79.02	67.64	77.86	57.26	72.32
Poor	5.01	22.09	45.29	27.61	100.00
	20.98	32.36	22.14	42.74	27.68
Total	6.61	18.90	56.61	17.88	100.00
	100.00	100.00	100.00	100.00	100.00

Table 14. Distribution of households according to their poverty status by occupation sector of household head and geographical area [percentages using GPL₃]

Poverty status	Occupation sector of household head					Total
	Agriculture	Industry	Construction	Trade, transport	Other	
Overall country						
Non poor	12.44	23.98	16.02	23.88	23.69	100.00
	74.74	79.04	73.42	88.60	89.63	81.85
Poor	18.95	28.68	26.15	13.86	12.36	100.00
	25.26	20.96	26.58	11.40	10.37	18.15
Total	13.62	24.84	17.86	22.06	21.63	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
FBiH						
Non poor	8.49	24.77	17.44	24.44	24.86	100.00
	73.86	79.76	73.13	89.04	90.28	82.38
Poor	14.05	29.39	29.97	14.07	12.52	100.00
	26.14	20.24	26.87	10.96	9.72	17.62
Total	9.47	25.58	19.65	22.62	22.68	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
RS						
Non poor	19.99	22.54	13.46	22.47	21.55	100.00
	75.92	77.75	75.66	88.83	88.39	81.45
Poor	27.83	28.32	19.01	12.41	12.43	100.00
	24.08	22.25	24.34	11.17	11.61	18.55
Total	21.44	23.61	14.49	20.60	19.86	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
BD						
Non poor	9.01	23.77	14.22	30.25	22.76	100.00
	59.67	76.73	54.38	75.43	87.67	72.32
Poor	15.90	18.83	31.16	25.74	8.36	100.00
	40.33	23.27	45.62	24.57	12.33	27.68
Total	10.92	22.40	18.91	29.01	18.77	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Table 15. Distribution of households according to their poverty status by education level and geographical area [percentages using GPL₃]

Poverty status	Education level				Total
	No education	Primary education	Secondary education	Tertiary education	
Overall country					
Non poor	8.48	28.68	48.89	13.95	100.00
	66.68	75.82	84.54	96.76	81.44
Poor	18.59	40.14	39.23	2.05	100.00
	33.32	24.18	15.46	3.24	18.56
Total	10.35	30.81	47.10	11.74	100.00
	100.00	100.00	100.00	100.00	100.00
FBiH					
Non poor	8.14	25.73	51.33	14.79	100.00
	69.80	75.90	85.26	96.85	82.61
Poor	16.74	38.81	42.16	2.28	100.00
	30.20	24.10	14.74	3.15	17.39
Total	9.64	28.01	49.74	12.61	100.00
	100.00	100.00	100.00	100.00	100.00
RS					
Non poor	9.05	33.69	44.61	12.65	100.00
	61.60	76.23	83.55	96.65	79.77
Poor	22.24	41.41	34.63	1.73	100.00
	38.40	23.77	16.45	3.35	20.23
Total	11.72	35.25	42.59	10.44	100.00
	100.00	100.00	100.00	100.00	100.00
BD					
Non poor	9.11	35.35	45.75	9.79	100.00
	80.39	67.87	76.67	95.04	74.97
Poor	6.65	50.12	41.70	1.53	100.00
	19.61	32.13	23.33	4.96	25.03
Total	8.49	39.05	44.74	7.72	100.00
	100.00	100.00	100.00	100.00	100.00

Table 16. Distribution of households according to their poverty status by education level and gender of household [percentages using GPL₃]

Poverty status	Education level				Total
	No education	Primary education	Secondary education	Tertiary education	
MHH					
Non poor	3.42	25.31	55.44	15.83	100.00
	54.44	72.47	83.60	96.35	80.68
Poor	11.94	40.15	45.41	2.50	100.00
	45.56	27.53	16.40	3.65	19.32
Total	5.06	28.18	53.50	13.26	100.00
	100.00	100.00	100.00	100.00	100.00
FHH					
Non poor	26.18	40.48	25.97	7.37	100.00
	74.31	84.36	92.28	100.00	84.22
Poor	48.33	40.07	11.60	0.00	100.00
	25.69	15.64	7.72	0.00	15.78
Total	29.67	40.42	23.70	6.20	100.00
	100.00	100.00	100.00	100.00	100.00

Annex 3. Poverty measures with general poverty line GPL₃

[Output from statistical software STATA, *sepo* routine]

Poverty measures for the variable *pccce*: Per capita consumption expenditure (no health expenditures)

Survey mean estimation

pweight: *finwgt* Number of observations = 7,468
 Strata: *entity* Number of strata = 3
 PSU: *EA* Number of PSUs = 648
 Population size = 1,054,612.70

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	FBiH	0.1739089	0.0080185	0.1581635	0.1896544	2.084985
	RS	0.2023491	0.0091465	0.1843885	0.2203097	1.375157
	BD	0.2503388	0.0284358	0.1945009	0.3061768	0.6685201
p1						
	FBiH	0.0454483	0.0025462	0.0404485	0.0504481	1.929909
	RS	0.0546274	0.003315	0.048118	0.0611369	1.547465
	BD	0.0711556	0.0093125	0.052869	0.0894421	0.5675771
p2						
	FBiH	0.0177153	0.0012071	0.015345	0.0200856	1.647227
	RS	0.0218248	0.0017568	0.018375	0.0252746	1.54397
	BD	0.0287707	0.0047081	0.0195256	0.0380158	0.5404762

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	Rural	0.1964128	0.0083207	0.1800739	0.2127516	1.358114
	Urban	0.1779443	0.0067182	0.1647522	0.1911365	1.348594
p1						
	Rural	0.0517726	0.0028355	0.0462047	0.0573405	1.407625
	Urban	0.0474527	0.0021706	0.0431903	0.0517151	1.250123
p2						
	Rural	0.0203647	0.0013961	0.0176232	0.01762	1.29109
	Urban	0.0187255	0.0011038	0.016558	0.0208929	1.174209

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	FBiH Rural	0.185	0.0112517	0.1629057	0.2070944	1.595412
	FBiH Urban	0.1662699	0.0086052	0.1493722	0.1831675	1.473624
	RS Rural	0.211661	0.01245	0.1872137	0.2361084	1.048415
	RS Urban	0.1954551	0.0110438	0.173769	0.2171412	1.182383
	BD Rural	0.262743	0.0396527	0.184879	0.3406069	0.5476431
	BD Urban	0.2407951	0.0348541	0.172354	0.3092362	0.582708
p1						
	FBiH Rural	0.049238	0.0037664	0.041842	0.056634	1.590101
	FBiH Urban	0.0428382	0.002654	0.0376267	0.0480496	1.318546
	RS Rural	0.0543326	0.0043938	0.0457048	0.0629604	1.196428
	RS Urban	0.0548457	0.0039469	0.0470955	0.062596	1.230052
	BD Rural	0.0803288	0.0165612	0.0478084	0.1128491	0.6515283
	BD Urban	0.0640977	0.0096789	0.0450918	0.0831037	0.4111363
p2						
	FBiH Rural	0.0193758	0.0017927	0.015855	0.022896	1.402781
	FBiH Urban	0.0165717	0.0013136	0.0139922	0.0191512	1.202804
	RS Rural	0.0211633	0.0023008	0.0166454	0.0256813	1.201163
	RS Urban	0.0223145	0.0020963	0.0181981	0.0264309	1.20768
	BD Rural	0.034855	0.0086082	0.0179514	0.0517585	0.5911868
	BD Urban	0.0240895	0.0044739	0.0153043	0.0328747	0.3732522

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	MHH	0.1866512	0.0065025	0.1738826	0.1994198	1.631479
	FHH	0.1817837	0.010309	0.1615404	0.202027	1.149826
p1						
	MHH	0.049767	0.0021254	0.0455934	0.0539406	1.544824
	FHH	0.04734	0.0034699	0.0405264	0.0541536	1.179154
p2						
	MHH	0.0196065	0.0010566	0.0175316	0.0216813	1.425891
	FHH	0.0186725	0.0018365	0.0150663	0.0222786	1.175387

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff		
p0							
	FBiH	MHH	0.1752679	0.0086202	0.1583409	0.1921949	1.882032
	FBiH	FHH	0.1689219	0.013044	0.143308	0.1945358	1.209136
	RS	MHH	0.2037196	0.0098908	0.1842976	0.2231416	1.252089
	RS	FHH	0.1974167	0.0177157	0.1626292	0.2322041	1.142696
	BD	MHH	0.2384317	0.0308837	0.1777869	0.2990765	0.6327347
	BD	FHH	0.291672	0.0556525	0.18239	0.4009541	0.5202158
p1							
	FBiH	MHH	0.0455877	0.0026982	0.0402894	0.0508861	1.702308
	FBiH	FHH	0.0449369	0.0043643	0.0363669	0.0535069	1.21651
	RS	MHH	0.0557341	0.003584	0.0486964	0.0627718	1.394
	RS	FHH	0.0506445	0.0060091	0.0388448	0.0624442	1.169449
	BD	MHH	0.0739381	0.0109153	0.0525043	0.095372	0.5557324
	BD	FHH	0.0614965	0.0156634	0.030739	0.092254	0.5243395
p2							
	FBiH	MHH	0.0177359	0.0012876	0.0152074	0.0202643	1.47141
	FBiH	FHH	0.0176399	0.0022224	0.0132759	0.0220039	1.200422
	RS	MHH	0.022227	0.0019084	0.0184795	0.0259744	1.449215
	RS	FHH	0.0203773	0.0033719	0.0137561	0.0269985	1.169031
	BD	MHH	0.0312919	0.0058297	0.0198445	0.0427394	0.5553941
	BD	FHH	0.0200188	0.0061116	0.0080177	0.0320198	0.4683148

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff		
p0							
	Rural	MHH	0.1994248	0.0093382	0.1810879	0.2177616	1.338914
	Rural	FHH	0.1849612	0.0153901	0.1547404	0.215182	1.013045
	Urban	MHH	0.1774587	0.0073328	0.1630597	0.1918578	1.254813
	Urban	FHH	0.1796595	0.012635	0.1548488	0.2044701	1.0447
p1							
	Rural	MHH	0.0531942	0.0031677	0.046974	0.0594145	1.355605
	Rural	FHH	0.0463677	0.0050323	0.036486	0.0562494	1.02733
	Urban	MHH	0.0473006	0.0023864	0.0426145	0.0519866	1.18401
	Urban	FHH	0.0479901	0.0043092	0.0395283	0.0564519	1.066697
p2							
	Rural	MHH	0.0209751	0.0015485	0.0179344	0.0240158	1.216487
	Rural	FHH	0.0180439	0.0025734	0.0129906	0.0230972	1.049557
	Urban	MHH	0.0186215	0.0012132	0.0162392	0.0210038	1.137405
	Urban	FHH	0.0190928	0.002358	0.0144625	0.023723	1.075941

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	15-34	0.1628618	0.0155558	0.1323157	0.1934078	1.059527
	35-49	0.1747453	0.009268	0.1565462	0.1929443	1.319265
	50-64	0.1932611	0.0095275	0.1745524	0.2119697	1.394589
	> 64	0.1941324	0.0088183	0.1768164	0.2114484	1.123247
p1						
	15-34	0.0415509	0.004845	0.0320371	0.0510647	1.057153
	35-49	0.0459845	0.0031044	0.0398886	0.0520805	1.350794
	50-64	0.0517772	0.0031071	0.0456758	0.0578785	1.279172
	> 64	0.0517857	0.0028802	0.04613	0.0574414	1.046378
p2						
	15-34	0.0149817	0.0023061	0.0104534	0.01951	1.072466
	35-49	0.0179168	0.001522	0.0149282	0.0209054	1.259969
	50-64	0.0207593	0.0016339	0.0175509	0.0239677	1.208652
	> 64	0.0205972	0.0014628	0.0177247	0.0234696	1.010254

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	One member	0.1991376	0.0130807	0.1734517	0.2248234	1.200736
	Two members	0.1970148	0.0108276	0.1757532	0.2182764	1.263622
	Three members	0.1829442	0.0113817	0.1605946	0.2052937	1.176325
	Four members	0.1934144	0.0091354	0.1754757	0.2113531	0.9351377
	Five or more members	0.1565527	0.0100822	0.1367548	0.1763506	1.183437
p1						
	One member	0.0503562	0.0043095	0.0418939	0.0588184	1.233474
	Two members	0.0522282	0.0036806	0.0450008	0.0594557	1.306935
	Three members	0.0482661	0.0036492	0.0411003	0.0554319	1.105219
	Four members	0.0522386	0.0032119	0.0459315	0.0585457	0.9868616
	Five or more members	0.0425822	0.0035366	0.0356375	0.0495269	1.255159
p2						
	One member	0.0193863	0.0021355	0.0151929	0.0235797	1.166846
	Two members	0.0204023	0.0018544	0.0167609	0.0240437	1.265669
	Three members	0.0186843	0.0017654	0.0152177	0.022151	1.0452
	Four members	0.0210031	0.0017617	0.0175438	0.0244624	0.9880971
	Five or more members	0.0171324	0.0018031	0.0135919	0.020673	1.2007

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff	
p0						
	No children	0.1920915	0.0072332	0.177888	0.2062949	1.630109
	One child	0.1673388	0.0107841	0.1461627	0.188515	1.138685
	Two children	0.1848149	0.0130809	0.1591286	0.2105012	1.134926
	Three or more children	0.1644339	0.0224353	0.1203789	0.2084889	0.9821276
p1						
	No children	0.0510027	0.0023528	0.0463826	0.0556228	1.546872
	One child	0.0475714	0.00387	0.0399721	0.0551708	1.147148
	Two children	0.0468569	0.0042854	0.0384418	0.0552719	1.151532
	Three or more children	0.0349308	0.0063793	0.0224042	0.0474574	1.038781
p2						
	No children	0.0199052	0.0011548	0.0176375	0.0221729	1.412273
	One child	0.0200749	0.0020899	0.015971	0.0241788	1.148869
	Two children	0.0181322	0.0022164	0.0137799	0.0224844	1.087659
	Three or more children	0.0117227	0.0029409	0.0059478	0.0174976	1.010884

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff	
p0						
	Employed	0.1841105	0.0077344	0.1689228	0.1992983	1.343572
	Unemployed	0.1831879	0.0151717	0.1533959	0.2129798	1.18963
	Retired	0.1893969	0.0087735	0.1721688	0.2066249	1.141777
	Other	0.1839313	0.0125504	0.1592867	0.208576	1.094137
p1						
	Employed	0.0484028	0.0024732	0.0435463	0.0532592	1.243017
	Unemployed	0.050471	0.0053705	0.0399252	0.0610168	1.25857
	Retired	0.0514283	0.0029867	0.0455635	0.0572932	1.121592
	Other	0.0462847	0.0040352	0.0383609	0.0542085	1.119755
p2						
	Employed	0.018944	0.0012278	0.0165331	0.0213549	1.148393
	Unemployed	0.0202693	0.0028571	0.0146589	0.0258797	1.248319
	Retired	0.0207569	0.0015936	0.0176277	0.0238862	1.147386
	Other	0.0173041	0.0020245	0.0133286	0.0212796	1.125177

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff
p0					
	Employer	0.1604409	0.0234454	0.114398 0.2064838	0.9936905
	Self-employed	0.189987	0.0159405	0.1586825 0.2212915	1.163454
	Permanent employment	0.1821019	0.00893	0.1645649 0.199639	1.308881
	Other employment	0.1951592	0.0162655	0.1632163 0.227102	1.137356
p1					
	Employer	0.0376096	0.0071984	0.023473 0.0517462	1.084203
	Self-employed	0.04991	0.0050034	0.0400841 0.0597359	1.013441
	Permanent employment	0.048033	0.0028793	0.0423786 0.0536874	1.218524
	Other employment	0.0543476	0.0053531	0.0438349 0.0648602	1.050656
p2					
	Employer	0.0130522	0.0034815	0.0062152 0.0198893	1.091427
	Self-employed	0.0198968	0.0026251	0.0147415 0.025052	0.9649682
	Permanent employment	0.018939	0.0014465	0.0160983 0.0217798	1.1169
	Other employment	0.0213703	0.0025297	0.0164023 0.0263383	0.9743429

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]	Deff
p0					
	Agriculture	0.1884804	0.0163928	0.1562878 0.2206731	0.9775601
	Industry	0.1914436	0.0142301	0.1634981 0.2193891	1.322218
	Construction	0.1817166	0.0144704	0.153299 0.2101342	1.022154
	Trade, transport	0.1687033	0.0135581	0.1420774 0.1953292	1.174383
	Other sectors	0.1916485	0.0130776	0.1659662 0.2173308	0.9703946
p1					
	Agriculture	0.0491444	0.0053428	0.0386519 0.0596368	0.9664402
	Industry	0.052122	0.004618	0.043053 0.0611909	1.189914
	Construction	0.047271	0.0046848	0.0380708 0.0564712	1.02346
	Trade, transport	0.0440768	0.0043681	0.0354985 0.052655	1.108446
	Other sectors	0.0507575	0.0045372	0.0418472 0.0596678	1.017057
p2					
	Agriculture	0.0188504	0.0027303	0.0134886 0.0242122	0.9496707
	Industry	0.0208312	0.0023232	0.0162687 0.0253936	1.099789
	Construction	0.0178001	0.0022186	0.0134432 0.022157	0.9866082
	Trade, transport	0.0173656	0.0023154	0.0128185 0.0219127	1.041023
	Other sectors	0.0203684	0.0023689	0.0157163 0.0250206	1.03411

Mean	Sub-population	Estimate	St.Err.	[95% Conf. Interval]		Deff
p0						
	No education	0.1738364	0.0141602	0.1460308	0.201642	1.080563
	Primary education	0.1990291	0.0088967	0.1815592	0.216499	1.143992
	Secondary education	0.1770224	0.0081106	0.161096	0.1929487	1.585989
	Tertiary education	0.1950781	0.0132605	0.1690391	0.2211171	0.9815084
p1						
	No education	0.0454527	0.0046116	0.0363971	0.0545082	1.051732
	Primary education	0.0534709	0.0029695	0.04764	0.0593019	1.106672
	Secondary education	0.0463004	0.0026329	0.0411304	0.0514704	1.536884
	Tertiary education	0.0532762	0.0049034	0.0436475	0.0629048	1.110296
p2						
	No education	0.0177161	0.0022932	0.0132131	0.0222191	1.001904
	Primary education	0.0212177	0.0015236	0.0182258	0.0242096	1.094262
	Secondary education	0.0179862	0.0012958	0.0154417	0.0205308	1.353979
	Tertiary education	0.0218184	0.0025681	0.0167756	0.0268612	1.108564