



National Bureau of Statistics

Poverty measurement note

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Abbreviations

ISAS	Improving Social and Agricultural Statistics
HBS	Household Budget Survey
NBS	National Bureau of Statistics
MET	Ministry of Economy and Trade

Acknowledgments/Preface

The present methodology was developed by the NBS with the technical assistance from DFID „Improving social and agricultural statistics” Project, especially with the input of the international consultant, Mr. Ludovico Carraro, Oxford Policy Management. When developing the given methodology, there were taken into account the recommendations set under the previously developed methodology by the MET regarding the adjustment of the price regional index and the set up of the consumption indicator for poverty measurement.

The methodology for poverty indicators calculation was consulted with the MET experts, including Mrs. Franziska Gaussman, expert within the Joint UNDP/UNICEF/SIDA „Support for strategic policies formulation, monitoring and evaluation in the Republic of Moldova” Project.

1. Introduction

This note describes in detail the methodology for poverty measurement adopted by the National Bureau of Statistics in consultation with the Ministry of Economy and Trade.

Poverty measurement and poverty analysis used to be both conducted by the MET, but from 2006 is the responsibility of the NBS to compute the poverty line and the main welfare indicator. Such estimates need to be provided to the MET, which in turn will concentrate on poverty analysis and explanations of poverty trends.

Poverty measurement can be divided in three main steps:

- 1) The construction of the main welfare indicator: the consumption aggregate for welfare analysis;
- 2) The setting of the poverty line, and
- 3) The computation of poverty measures.

This report follows this structure and provides some detailed tables in four annexes.

2. Consumption aggregate for welfare analysis

Poverty in Moldova is measured using a 'basic needs' approach and uses consumption expenditure as an indicator of living standards (see for instance the report from the Ministry of Economy on "Poverty and Policy Impact"). The same approach was also used by the World Bank, and the same broad approach is also followed here¹.

However, consumption expenditure can be computed in different ways depending on the purpose and use of the aggregate. In particular, it is important to be aware of the difference between the consumption aggregate used for the national accounts and the one used for welfare analysis. Indeed, when using consumption expenditure for poverty measurement the objective is to make inter-household comparisons and for this reason it is important to make the following adjustments:

- 1) For items whose purchase is infrequent, but still more frequent than once a year, use expenditure captured through appropriate recall periods. For instance, expenditure for clothing is both recorded during the month of interview (in the diary) and in the six months preceding the interview. The six month recall expenditure should be used and adjusted in monthly terms;
- 2) Exclude from the consumption aggregate expenses for items generally purchased within intervals longer than one year (namely durable items), if possible include the annual consumption flow derived from durable items;
- 3) Either exclude actual rent payments or include for all households an imputed rent that corresponds to the benefit the households derive from the use of their dwellings;
- 4) Impute actual consumption and use of services correcting for subsidies that are not uniformly received by all households;
- 5) Correct for price differences over time and across different areas of the country (namely urban and rural areas);
- 6) Adjust expenditure measured at the household level to identify individual consumption levels.

In case of Moldova the following adjustments were made in construction of consumption aggregate for poverty measurement:

1. Items of infrequent purchase

Households were asked to recall their expenditure at the first interview for a number of items² (clothes, footwear, textile items, seasonal expenditure for utilities, education, etc.) and this information was transformed in monthly terms and included in the consumption aggregate. Whereas any eventual corresponding expenditure recorded in the diary was excluded.

2. Durable items and imputed rents

¹ The cost of basic needs approach is one of the objective approaches of poverty measurement. Objective approaches try to determine the poverty line considering some normative criteria that guarantee the achievement of some basic requirements, and the various approaches differ for the degree of normative judgements used in determining such necessities. There are also subjective approaches of poverty measurement. These abandon the attempt of identifying some objective minimum living standards and consider people's perception of a minimum income (minimum spending or socially perceived necessities) necessary to conduct a decent life.

² Trials were performed in previous HBS surveys to identify appropriate recall periods.

Both the computation of the consumption flow from durable items and the calculation of imputed rents involve complex imputations and assumptions. In particular, given that the housing rental market is inexistent in rural areas of the country, estimates appear to be very arbitrary. Therefore, both expenditure for durable items and actual rent payments have been excluded from the consumption aggregate.

3. Subsidies

Since August 2006 households connected to central gas received a subsidy for gas consumption equivalent to 50% of the price increase in gas for the first 30 cubic metres of consumption. However, households use bottled gas paid the full price. Similarly, municipalities providing central heating also introduced a subsidy. In Chisinau households paid only half of the central heating bill. These price distortions were corrected to account for the actual benefit that the household received.

4. Price correction

Nominal expenditure has been adjusted for inflation as well as for regional price differences through a Paasche price index constructed using data collected in the survey as well as information from the official consumer price index. Such index is constructed at the level of each primary sampling unit and for each month, and it does correct both for price differences over time and across regions (a description on how this consumer price index was computed are found in appendix A).

5. Equivalence scales

In adjusting household expenditure to individual expenditure it is important to take into consideration the different needs of household members. It is natural to expect that there are economies of size that make consumption 'cheaper' for large households, and some 'quasi public goods', whose costs tend to be very similar independently from the number of members in the household (such goods are generally durable items and housing related services). For instance costs of heating an apartment of a fixed size is the same regardless of the number of people living in it. Therefore, simply adjusting household expenditure by the number of household members is inappropriate. Although these arguments are widely accepted, it is more complicated to establish what should be the parameters that can make appropriate adjustments. For international comparisons in OECD countries there are some established equivalence scales, and such scales have been adopted also for this analysis³. These scales adjust both for some economies of size and different needs of children and adults. The same scales were used in the past by the Ministry of Economy.

³ The old OECD scales is used: 1 for the first household member, 0.7 for any other adult and 0.5 for children less than 15. Modified and currently used scales in OECD countries are respectively 1, 0.5 and 0.3. However, old equivalence scales do adapt better than the modified ones to the situation of Moldova, since food consumption still takes a relatively high share of total consumption.

3. Setting the poverty line

If the 2006 HBS were comparable with the previous HBS (see the “Informative note on the 2006 Household Budget Survey”, available on the NBS website www.statistica.md for explanations on comparability issues), we could have used the poverty line computed in 2005 and simply adjust it by inflation. However, since we have a new dataset which is not fully comparable with the previous one, it is essential to compute a new poverty line that corresponds to the collected data.

The method used to set the poverty line is the ‘cost of basic needs’ methodology, which is widely recognised and used in many countries⁴. This methodology should identify a poverty line that is linked to a notion of necessity consistent with the standards existing in Moldova. This approach identifies the consumption bundle believed to be adequate for basic consumption needs based on nutritional requirements. In particular, according to this methodology, the poverty line is calculated in two stages: 1) first we estimate the food component and 2) the non-food component is calculated based on the cost of meeting food requirements.

The food component of the poverty line is based on the need to meet certain minimum nutritional requirements. The Academy of Sciences provides some recommendations on what should be the calorie intake of people at different age, sex and depending on the type of people’s activity. Such recommendations for low levels of activity are those adopted for the report, and such ‘minimum’ calories’ intakes per day are reported in table 3.1. These calorie-intake levels were used to set a minimum **per capita average** requirement of 2282 calories per day (this was the requirement used by the Ministry of Economy in previous calculations). However, if instead of considering average per capita requirement we consider the average **per adult equivalent** requirement the minimum calorie requirement per adult equivalent is 3004 calories per day.

Table 3.1 Recommended daily calorie intake (Kcal)

age group	Minimum calorie intake		Population shares		Calories
	male	female	male	female	
0		593		0.01	5
1-6		1536		0.07	107
7-16		2201		0.18	390
17-54	2721	2334	0.24	0.27	1276
55-59	2721	2042	0.03	0.03	143
60+		2042		0.18	362
Overall				1	2282

Source: Academy of Science and 2006 HBS.

However, calories intake per persons is not the criteria with which people’s welfare is assessed, instead such nutritional references are used to set the minimum expenditure that would allow people to reach such nutritional intake. In other words what is relevant is the cost of buying such calories. It would also be possible to follow further the recommendations of the Academy of Sciences and consider the recommended food bundle that people should consume in order to guarantee such calorie intake, but such normative approach is often too different from actual consumption habits. Indeed, an infinite variety of food baskets, differing in price, could be consistent with attaining a certain level of calories, but choosing which items to include in the basket would be extremely arbitrary.

⁴ see Ravallion M. (1998): “Poverty lines in theory and practice”, LSMS Working Paper 133.

Therefore, we use the HBS data and include all the items consumed in the food basket by a specified population group. Their relative weights are also based on actual consumption patterns observed in the data.

We consider the population of interest to be the lower part of the distribution, **from the second to the fourth deciles**. In fact focusing on the population located in the low end of the welfare distribution, we are more likely to reflect the preferences of the poor as well as the prices that they face.

HBS data contains information on both quantity and value of about 100 different food items, and therefore also on implicit prices (given by value divided by quantity). Quantities consumed were used to compute the per capita average food basket (total quantities consumed by the population of interest have been divided by the respective population) and the cost of such basket was obtained multiplying quantities by median implicit prices observed in the population of interest⁵. Afterwards caloric conversion factors were used to transform the identified food bundle into daily calorie-intake⁶. Cost and calorie intake were then adjusted to meet the per adult equivalent requirement implicit in the recommendations of table 3.1, giving a food poverty line of 404 Lei per month per adult equivalent at 2006 prices. Table 3.2 shows the composition of the basket that gives the desired per capita daily calorie intake as well as their respective costs that make up the food poverty line⁷.

Table 3.2 Composition of food poverty line (value and calories of the minimum per adult equivalent food basket)

	quantities	calories		expenditure	
	Monthly (Kg, Lt)	Calories per day	% calories	Lei per month	%
Cereals and cereal-based products	15.4	1510	50.3	78	19.2
Meat and meat products	2.8	182	6.1	92	22.6
Fish	1.0	22	0.7	18	4.5
Milk and milk products	4.5	150	5.0	43	10.6
Eggs	0.3	6	0.2	2	0.5
Fats and oils	18.9	473	15.7	39	9.7
Fruits	1.9	94	3.1	14	3.5
Vegetables	18.6	324	10.8	86	21.4
Sugar and sugar products	1.7	201	6.7	23	5.6
Seasonings, coffee, tea and beverages	21.9	42	1.4	10	2.4
Total		3004	100.0	404	100.0

The cost of meeting nutritional needs alone cannot constitute the poverty line since it would ignore other fundamental basic needs: being healthy and able to participate in society requires spending on shelter, clothing, health care, recreation, etc. This is why it is essential to consider a non-food component of the poverty line. However, identifying which other items should be included in the minimum consumption basket and their amount is generally a controversial issue. One way to avoid a direct judgment on the non-food items is to link the non-food component with the normative judgment involved in the food poverty line. The advantage of this method is that the non-food component can be based on the actual consumption behavior of a reference group and not by a pre-determined non-food bundle.

⁵ as recommended by Bidani B. and Ravallion M. (1994): How robust is a poverty profile?; *The World Bank Economic Review*, Vol. 8, No. 1, pp. 75-102.

⁶ Alcoholic drinks and tobacco as well as meals in restaurants were excluded from this calculation, but food expenditure of food eaten outside home was later included as food expenditure that can provide the required calorie intake.

⁷ A more detailed table with all the food items is provided in the statistical annex.

Usual practice is to scale up the food poverty line by dividing the food poverty line by the proportion of total consumption devoted to food expenditure by those households that spend for food consumption an amount approximately equivalent to the food poverty line. The argument is that, if these households do not spend more on food consumption, it is because also the non food expenditure must be an essential part of their consumption. Another, stricter approach, is to consider the food share of households, whose total expenditure is equal to the food poverty line, arguing that in such case people substitute basic food needs in order to satisfy some non-food needs. This second approach was used in the past by the Ministry of Economy and it is also applied here.

We used a non-parametric method proposed by Ravallion (1998 already quoted) to compute the relevant multiplier (the inverse of the food share). The method requires computing the mean multiplier among households whose expenditure lies within a small interval around the food poverty line.

The method is the following: it calculates the average multiplier among households whose expenditure is between plus and minus one percent of the food poverty line, plus and minus two percent, three percent, up to ten percent, and then it takes the average of the ten mean multipliers. Such method identifies a multiplier of 1.85, equivalent to a food share of 54%. Therefore the overall poverty line is 747 Lei per month.

The calculation of the poverty line has been conducted in **per adult equivalent** terms, but it can also be expressed in per capita terms simply taking the average value of the line across households and individuals. Per capita poverty lines would be respectively 310 and 574 for the food poverty line and the overall poverty line⁸. However, we need to remember that per capita poverty lines are more appropriate for households of average size and composition, whereas they tend to underestimate the poverty line for small households and to overestimate the needs of large households. For instance, the average calorie intake is lower than the actual requirements of a single adult, but overestimates those of households with many children since individual calorie requirements vary with age and sex. Therefore, per adult equivalent adjustments provide a better assessment of people's needs.

Using the OECD equivalence scales it is possible to express household size as a number of 'equivalent members'. For instance a household of four members made of husband, wife and two children, is made of 2.7 equivalent members ($1+0.7+2*0.5$). Table 3.3 shows poverty lines for different household members and provide some example of overall poverty lines for household with different composition.

⁸ Considering these lines and per capita consumption levels would generate approximately the same poverty measures, but a different poverty profile.

Table 3.3 Poverty lines in 2006 (Lei per month, at 2006 prices)

	Extreme poverty line	Poverty line	Member equivalent size
One adult	404	747	1
Other adult	283	523	0.7
Child (<15)	202	374	0.5
Average per capita	310	574	
<i>Examples</i>			
Two adult household	687	1270	1.7
Two adults and one child	889	1643	2.2
Four adult household	1252	2316	3.1
Two adults and two children	1091	2017	2.7

4. Poverty measures

The poverty line is instrumental in poverty measurement, and it is used to determine who the poor are as well as the various poverty measures. People's poverty status is judged on whether they have the means that would have allowed them to consume the minimum consumption basket. Therefore, poor are people who, regardless of how they spend their money, have consumption expenditure below the poverty line.

A set of poverty measures often used in the literature are those proposed by Foster, Greer and Thorbecke (1984)⁹. This family of measures is summarized by the following formula:

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

where,

α is a non-negative number, z is the poverty line, y is consumption, i represents individuals, n is the total number of individuals in the population, and q is the number of individuals with consumption below the poverty line.

The most common poverty measures are three, where α takes the value of zero, one and two. When $\alpha=0$ we simply have the headcount index, which gives the share of the poor in the total population, it measures the percentage of population whose consumption is below the poverty line. This is the most widely used poverty measure, mainly because it is very simple to understand and easy to interpret. However, it has some limitations. It does not take into account how close or far the consumption levels of the poor are with respect to the poverty line nor the distribution among the poor. The poverty gap ($\alpha=1$) is the average consumption shortfall of the population relative to the poverty line. Since the greater the shortfall, the higher the gap, this measure overcomes the first limitation of the headcount. Finally, the severity of poverty ($\alpha=2$) is sensitive to the distribution of consumption among the poor, transfers among the poor will leave unaffected the headcount or the poverty gap, but will change this measure. It gives a relatively higher weight to the largest poverty gaps.

Informative: only joint consideration of these three indices can give an adequate description of poverty and satisfy two famous axioms of poverty measurement (Sen 1976):

1. *even if the number of the poor is the same, but there is a welfare reduction in one poor household, a measure of poverty should detect an increase of poverty (this increase would be captured by the poverty gap index);*
2. *even if the average welfare of the poor is the same, if there is a transfer from one poor household to another poor household, relatively better off, a measure of poverty should detect an increase of poverty (this would be captured by an increase of the severity of poverty).*

Furthermore, these poverty measures satisfy two convenient properties of aggregation and decomposability. In fact it is possible to generate the overall poverty indexes by summing up individual measures of poverty, and therefore it is possible to decompose these indexes for various subgroups of the population and obtain the overall index by taking the population weighted sum of poverty indexes of the subgroups under analysis. For instance, it is possible to compute the poverty gap in different areas of the country (North, South and Centre) and the sum of their poverty gaps, weighted by the respective share of population of each region, will be equal to the poverty gap for Moldova.

⁹ Foster J, Greer J., and Thorbecke E. (1984): "A class of decomposable poverty measures"; *Econometrica*, Vol. 52, pp. 761-765.

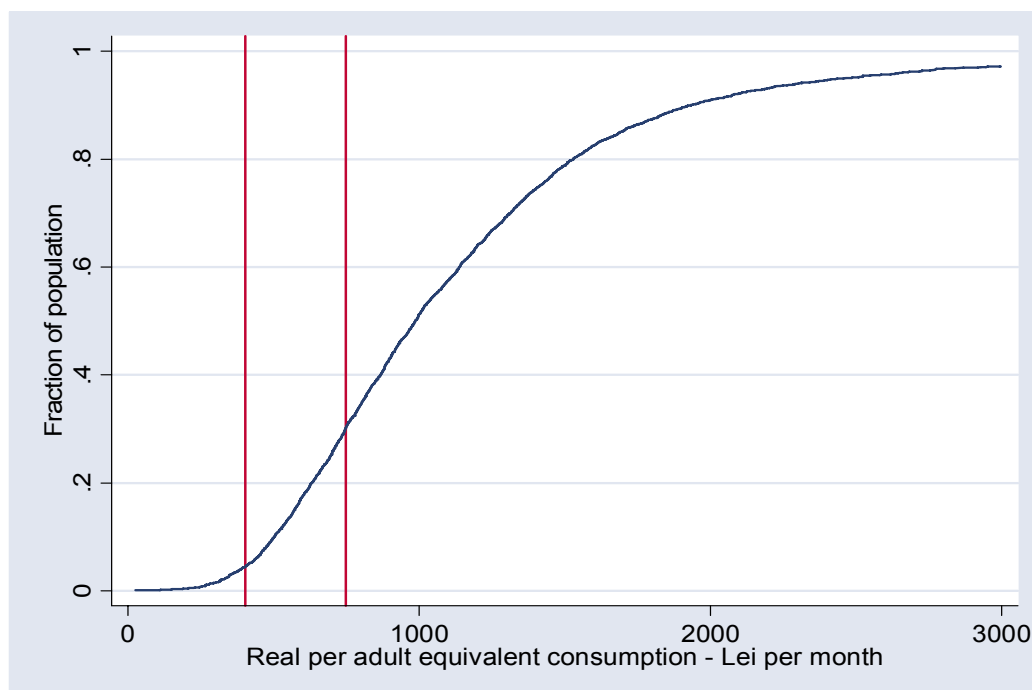
Table 4.1 reports these three poverty measures in 2006 considering the food poverty line, or the extreme poverty line and the full poverty line. The poverty profile is presented in annex D.

Table 4.1 Poverty measures, 2006

	Full poverty			Extreme poverty		
	Headcount (P0)	Poverty gap (P1)	Severity of poverty (P2)	Headcount (P0)	Poverty gap (P1)	Severity of poverty
Cities	20,6	5,6	2,2	3,5	0,8	0,3
Towns	30,1	7,9	3,1	5,0	1,2	0,5
Villages	34,1	8,8	3,3	4,7	1,1	0,4
Total	30,2	7,9	3,0	4,5	1,0	0,4

To see to what extent poverty measures are sensitive to the level of poverty line, we produced the cumulative distribution function of monthly equivalised consumption (see figure 4.2). For a given consumption level on the horizontal axis, the curve indicates the percent of the population with an equal or lesser level of consumption on the vertical axis. If one thinks of the chosen consumption level as the poverty line, the curve will show the associated poverty headcount, and hence it can be seen as a “poverty incidence curve”. It is simple then to assess how much the headcount will change when the poverty line is shifted upward or downwards. In the figure I also reported two vertical lines at the value of the extreme poverty line and the full poverty line. The steeper is the curve where the poverty line intersects the cumulative distribution function and the more sensitive are poverty measures to the level of the poverty line.

Figure 4.2 Consumption cumulative distribution function and poverty line, 2006



Annex A: Correcting for price differences

Annual levels of inflation are relatively high in Moldova, with level of prices in December generally more than 10% higher than in January. Moreover, there are remarkable seasonal price differences, especially for food items, with prices in the summer much lower than in winter and spring. At the same time, across all seasons there are also regional price differences. In particular in large cities (Chisinau and Balti), prices are relatively higher than in the rest of the country. Therefore, since the HBS interviews households throughout the year, in order to properly measure their living standards, expenditure values need to be corrected for price differences over time and across different areas of the country.

To correct for price differences it is necessary to construct a price index, which is made of two components: 1) prices and 2) budget shares that determine the importance of different items. When the household expenditure is divided by the price index it adjusts for price differences and makes expenditure of each household comparable to those of others. If the value of the price index for some households is lower than one it means that prices faced by these households are lower than the average prices in the country, and at the same nominal expenditure they can actually buy more items than the average household. The opposite applies when the value of the index is above one. Differences in price indices can come both from prices and consumption patterns (importance of items).

The household budget survey provides information on budget shares for all households, but it does not collect information on prices themselves and the implicit prices is obtained by dividing expenditure by quantities purchased. Inevitably, implicit prices represent also differences in quality of the item purchased. Quality differences are generally considered acceptable for food items, but are more problematic for non-food items, which are likely to be less homogenous in nature. However, actual prices are collected by another department within the National Bureau of Statistics, and such prices¹⁰ are used to compute the official consumer price index at the national level.

The official consumer price index properly corrects for inflation, but does not take into account regional price differences. However, it is reasonable to expect regional price differences for non-food items and services. Indeed for some items prices might be more expensive in villages than in cities. This was confirmed by work conducted using price data of 2004 and analyzing price differences in 11 cities/towns in the country. Therefore, assuming that there are not regional price difference for non-food items and services it is possible to use the official CPI for these two large groups of items, and therefore taking into account inflation for such items.

Combining HBS data and official CPI for services and non-food items is possible to construct a Paasche price index at the level of each survey area and for each month of the survey. Indeed, generally in each survey area and month at least 4 households are interviewed and it is reasonable to expect that prices as well as consumption patterns of such household will be very similar. By pooling together some households the constructed price index is generally more robust and not affected by possible outliers.

The Paasche price index for survey area i can be obtained with the following formula:

¹⁰ The list of items for which prices are collected is much better defined than in the HBS and being a permanent activity prices are collected in the same outlets and with more precise guidelines about the type of item for which the price is sought. However, as it is usually the case, price collection does not cover rural areas, but 11 cities/towns in the country.

$$P_i^P = \left[\sum_{k=1}^n w_{ik} \left(\frac{P_{ik}}{P_{0k}} \right)^{-1} \right]^{-1} \quad (1)$$

where w_{ik} is the budget share of item k in the survey area i ;

P_{ik} is the median price of item k in the survey area i ;

P_{0k} is the national median price of item k .

We constructed two indexes one only with food items, alcohol and tobacco (exclusively using survey information), and a second overall index that includes also services and non-food items (using price indexes from the CPI).

Results of the first index are shown in table A.1, where the price indexes are summarized by month, and for villages, towns and cities (Chisinau and Balți).

Table A1 Mean food, alcoholic beverages and tobacco price index by month and strata, 2006

Month	HBS implicit price index				Official CPI
	Cities	Towns	Villages	Overall	Food
January	1.06	0.97	0.94	0.97	0.98
February	1.05	0.98	0.95	0.98	0.99
March	1.08	1.01	0.96	1.00	1.00
April	1.08	1.04	0.98	1.01	1.02
May	1.14	1.09	0.98	1.04	1.03
June	1.18	1.04	0.97	1.03	1.03
July	1.10	1.00	0.94	0.99	0.99
August	1.10	0.95	0.89	0.96	0.96
September	1.03	0.96	0.91	0.94	0.97
October	1.08	1.02	0.96	0.99	0.99
November	1.15	1.03	0.98	1.03	1.02
December	1.15	1.05	1.00	1.05	1.04
Total	1.10	1.01	0.95	1.00	1.00

Source: 2006 HBS data and official food CPI.

It is important to note that such index is normalized so that the reference is the average price in the country in 2006. The results are very encouraging because the index does capture well seasonality, and inflation. The index by month computed using HBS data and the official CPI are very similar and therefore it is a strong sign that results are consistent and of high quality. Regional food price differences are found to be on average of about 15%.

The second index (overall consumption) is simply obtained as the sum of three aggregated budget shares and respective price indexes, using the formula below:

$$priceindex = \sum_i w_i p_i$$

The three groups of items are: food items (including alcoholic beverages and tobacco), non-food items and services. CPI for non-food items and services were expressed at the average price

level for 2006. Table A2 shows the results of the overall price index in the same format of the previous table.

Table A2 Mean overall price index by month and strata, 2006

Month	HBS implicit price index				Official CPI Overall
	Cities	Towns	Villages	Overall	
January	0.99	0.95	0.94	0.95	0.95
February	0.99	0.96	0.95	0.96	0.96
March	1.01	0.98	0.96	0.98	0.97
April	1.02	1.01	0.98	0.99	0.98
May	1.04	1.02	0.98	1.00	1.00
June	1.06	1.01	0.98	1.00	1.00
July	1.05	1.00	0.96	0.99	0.99
August	1.06	1.00	0.96	0.99	1.00
September	1.04	1.00	0.97	0.99	1.01
October	1.06	1.03	1.00	1.02	1.03
November	1.10	1.05	1.02	1.05	1.05
December	1.11	1.06	1.03	1.06	1.06
Total	1.05	1.01	0.98	1.00	1.00

Source: 2006 HBS data and official food CPI.

It is important to note that for the complete price index, regional price differences are lower than when considering just food items. Once again comparison with the official CPI is made on monthly values of the index and results are very similar and therefore encouraging.

Annex B: Poverty line food basket

Item	unit	Calories per unit	Monthly quantity per adult equivalent	Daily calories provided	Price per unit (Lei)	Monthly value of quantity consumed (Lei)
Rice	kg	3198	0.77	80.53	8.97	6.87
White bread	kg	2255	4.14	306.99	5.57	23.07
Rye, rye-wheat bread	kg	2052	0.05	3.17	7.17	0.34
Pastes	kg	3306	0.83	90.49	8.00	6.66
Wheat flour	kg	3247	6.98	745.31	3.31	23.10
Corn flour	kg	3167	1.63	169.79	3.36	5.48
Cakes, fancy cakes, honey-cakes	kg	3190	0.04	3.82	26.46	0.96
Biscuits, ring-shaped rolls, dried crusts	kg	4320	0.33	46.71	15.53	5.11
Other cereals	kg	3136	0.59	61.21	9.20	5.46
Flour half-products	kg	3440	0.02	1.91	27.66	0.47
Beef and wheel	kg	1320	0.04	1.52	41.24	1.45
Pork	kg	2980	0.33	31.92	43.66	14.22
Mutton, lamb, goat meat	kg	1380	0.08	3.45	32.43	2.47
Other animal meat	kg	1375	0.05	2.04	36.46	1.65
Poultry meat	kg	1699	1.65	91.98	30.06	49.51
Meat products and half-finished products	kg	2460	0.03	2.81	35.45	1.23
High quality sausages	kg	2799	0.10	9.07	54.40	5.36
Boiled sausages	kg	2799	0.29	26.82	32.58	9.49
Liver sausages and others	kg	2799	0.01	1.20	27.81	0.36
Smoked sausages	kg	2799	0.01	0.51	59.18	0.33
Culinary products (pork, beef, chicken etc.)	kg	1840	0.05	3.26	35.55	1.91
Canned meat	kg	2408	0.06	4.95	32.72	2.05
Sub-products	kg	1108	0.07	2.68	20.61	1.51
Wild animals and birds' meat	kg	1150	0.00	0.05	35.88	0.05
Fresh, cooled , frozen fish	kg	541	0.71	12.64	16.51	11.73
Salted, smoked, dried fish including herrings	kg	1193	0.19	7.64	24.83	4.84
Other all sort of sea products	kg	810	0.00	0.01	21.96	0.01
Canned fish	kg	1358	0.04	1.93	34.90	1.51
Fish culinary	kg	820	0.01	0.16	32.90	0.19
Milk	lt	550	3.05	55.18	4.47	13.65
Canned milk and dry milk	lt	3019	0.01	0.58	30.40	0.18
Yoghurt	kg	790	0.01	0.28	27.09	0.30
Curd cheese	kg	1715	0.73	40.97	17.59	12.78
Fermented cheese	kg	2905	0.21	19.91	37.15	7.74
Cream	kg	2050	0.49	32.73	16.38	7.96
Sour milk products	kg	560	0.31	5.78	6.72	2.11
Eggs	no	75	17.31	42.68	0.98	17.01
Butter	kg	6770	0.15	33.40	40.22	6.04
Margarine and fats	kg	7078	0.12	27.51	11.73	1.39
Olive oil	lt	8970	0.00	0.01	177.39	0.01
Oil	lt	8541	1.32	369.29	11.10	14.60
Non-smoked bacon, other animal fats	kg	8510	0.20	56.87	18.70	3.80
Citrus	kg	380	0.04	0.56	16.58	0.74
Seed fresh fruits	kg	430	0.69	9.82	4.59	3.19
Stone fresh fruits	kg	460	0.38	5.68	3.41	1.28
Exotic fresh fruits	kg	580	0.04	0.71	16.16	0.60

Item	unit	Calories per unit	Monthly quantity per adult equivalent	Daily calories provided	Price per unit (Lei)	Monthly value of quantity consumed (Lei)
Fresh grapes	kg	600	0,24	4,83	4,94	1,21
Garden berries	kg	410	0,15	2,01	9,64	1,44
Wild fruits and berries	kg	420	0,00	0,02	9,06	0,01
Dry fruits and berries	kg	2734	0,01	0,49	16,42	0,09
Dry grapes	kg	2734	0,00	0,18	29,14	0,06
Nuts	kg	3244	0,12	13,16	13,60	1,68
Canned fruit and berries, frozen fruits and berries	kg	578	1,65	31,30	5,70	9,38
Cabbage	kg	177	1,28	7,44	2,74	3,51
Pickled cabbage	kg	140	0,40	1,85	5,18	2,08
Tomatoes	kg	140	1,28	5,89	3,51	4,50
Cucumbers	kg	140	0,53	2,45	3,77	2,01
Mild pepper, paprika	kg	296	0,53	5,15	3,62	1,91
Eggplant	kg	296	0,15	1,50	3,17	0,49
Garlic	kg	391	0,17	2,16	15,77	2,65
Other vegetables	kg	296	0,06	0,60	9,86	0,60
Pickled tomatoes	kg	80	0,71	1,86	5,10	3,60
Pickled cucumbers	kg	80	0,27	0,70	5,60	1,50
Beet	kg	293	0,49	4,70	4,04	1,97
Carrot	kg	293	0,88	8,50	4,46	3,94
Other roots	kg	293	0,08	0,76	8,56	0,68
Onions	kg	275	1,73	15,65	3,97	6,87
Pumpkins, vegetable marrow	kg	212	0,20	1,36	3,02	0,59
Melons, water-melons	kg	380	1,06	13,21	1,37	1,45
Mushrooms	kg	426	0,02	0,26	23,90	0,44
Seeds (beans)	kg	2782	1,09	100,04	7,05	7,71
Sunflower	kg	5980	0,01	1,92	11,85	0,12
Other seeds	gr	0	0,00	0,00	27,24	0,00
Canned vegetables	kg	553	0,46	8,45	10,99	5,11
Potatoes	kg	589	5,59	108,27	4,54	25,36
Other potatoes products	kg	3410	0,00	0,04	86,32	0,03
Sugar and its substitutes	kg	3956	1,05	136,72	11,15	11,72
Porridges, jams	kg	2589	0,35	30,00	13,01	4,58
Bee honey (natural)	kg	3026	0,02	2,41	38,76	0,94
Chocolate, chocolate candies	kg	4570	0,03	4,94	42,03	1,38
Other sweets, halvah, creams etc.	kg	4148	0,20	26,94	20,85	4,12
Ice-cream	kg	1718	0,06	3,34	23,14	1,37
Salt	kg	0	0,25	0,00	1,74	0,44
Coffee beans	100gr	223	0,95	6,94	0,26	0,25
Instant coffee	100gr	223	2,26	16,60	0,33	0,74
Tea	gr	0	16,69	0,00	0,11	1,80
Cocoa and cocoa beverage	100gr	380	0,40	5,06	0,08	0,03
Mineral water	lt	0	0,47	0,00	2,69	1,26
Free alcohol beverages	lt	330	0,52	5,60	2,88	1,48
Fruit and berries juices	lt	610	0,16	3,25	9,88	1,60
Vegetable juices	lt	300	0,09	0,93	8,10	0,76
TOTAL				3004		404,2

Annex C: Alternative poverty estimates

We have also computed poverty estimates for different poverty lines:

- 1) Poverty estimates for international comparisons: these are computed using per capita estimates and a poverty line equal to 2.15 or 4.3 dollars a day in purchasing power parity.
- 2) Relative poverty line is set using 60% of the median consumption expenditure
- 3) Poverty line is set using an upper poverty line, as described in page 6.

Upper poverty line

As explained in page 6 once the food poverty line is set, the overall poverty line can be computed using two different methodologies, either considering the multiplier of households whose total consumption is approximately equal to the food poverty line or the multiplier of households whose food expenditure is approximately equal to the food poverty line. The report used the first approach and here we also present the results of the second approach.

Using the second approach the poverty line is equal to 820 lei per month per adult equivalent.

At this poverty line the main resulting poverty estimates are reported in table C.1 below.

Table C1 Poverty estimates for the upper poverty line

	Headcount (P0)	Poverty gap (P1)	Severity of poverty (P2)
Cities	25.1	7.1	3.0
Towns	36.5	10.1	4.1
Villages	41.2	11.3	4.5
Total	36.5	10.1	4.1

Relative poverty line

Relative poverty line is another particular measure of inequality, where the poverty line is determined in relation to the mean or the median of the distribution. In the EU the relative poverty line is generally computed as 60% of the median consumption level. There were 15.8% people below such line, and similar estimates are obtained if we compute the relative poverty line as 50% of the mean consumption levels (14.4%).

Annex D: Poverty profile

	Poverty rate, %	Structure of poor, %	Structure of non-poor, %	Structure of whole population, %
Place of residence				
Urban	24,8	34,3	45,1	41,8
Rural	34,1	65,7	54,9	58,2
Total	30,2	100,0	100,0	100,0
Household size				
1 person	29,6	7,3	7,5	7,4
2 persons	24,9	15,9	20,7	19,3
3 persons	21,8	17,1	26,5	23,6
4 persons	28,4	25,9	28,1	27,4
5 persons	38,5	16,2	11,2	12,7
6 persons and more	55,9	17,7	6,0	9,6
Total	30,2	100,0	100,0	
Household type				
Single person household	29,6	7,3	7,5	7,4
Couple without children	25,7	11,2	14,0	13,2
Couple with children	29,0	24,2	25,6	25,1
Single parent with children	27,1	2,6	3,0	2,9
Other households with children	34,9	38,0	30,7	32,9
Other households without children	27,3	16,7	19,3	18,5
Total	30,2	100,0	100,0	100,0
Number of children in household				
1 child	25,1	23,3	30,1	28,0
2 children	31,7	24,2	22,5	23,0
3 children	47,6	11,1	5,3	7,0
4 children and more	65,4	6,2	1,4	2,9
Without children	27,2	35,2	40,8	39,1
Total	30,2	100,0	100,0	100,0