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Some Non-monetary Indicators of Poverty in Bosnia and Herzegovina: A Subjective Measurement

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Abstract

Poverty is measured in Bosnia and Herzegovina on the basis of data on household consumption expenditures, which is collected within Household Budget Survey (HBS). European methodology of relative poverty and modified OECD scale were used as a standard approach in measuring this phenomenon. There are efforts for introduction of the first full-scale survey on income and living conditions (EU-SILC), which will be a step forward towards better harmonization of poverty methodology. For these purposes, two pilot ILC surveys were conducted in 2015 and 2017, while the first full-scale ILC survey should be launched in 2019 or 2020.

Poverty analysis provided several very standard indicators of monetary dimensions of poverty. In order to enrich the poverty profile of the country, survey instruments in the last two household budget surveys were extended by ad hoc module(s) of EU-SILC type. The aim of these extensions was to build a bridge to EU-SILC and to produce basic non-monetary indicators of living standards and poverty of Bosnian people, in the period until the SILC survey is conducted.

This paper deals with data collected within ad hoc module(s) and it presents several basic non-monetary indicators of people's well-being. These are related to financial restrictions faced by households, their problems in making ends meet, minimum household income necessary for the reproduction of lives, material deprivation issues, social inclusion and access to basic public services, health, housing and living conditions for children. Our aim is to show which non-monetary poverty indicators based on subjective measurement could be produced and how they could be disaggregated in order to describe social perception of poverty and to contribute to 2030 Sustainable Development Goals. Several of presented indicators will be disaggregated by age, gender, region and poverty status. In the same time, paper discusses existing imperfections of data collection instruments and planned improvements in poverty measurement, which should be gained from EU-SILC and from its coordination with HBS in the future. The paper ends with conclusions and several proposals for further development of living standards statistics.

Keywords: poverty, non-monetary indicators,
JEL classification: I310

1. Introduction

The first poverty assessments in Bosnia and Herzegovina were made in 2001 and 2004 on the basis of data collected within LSMS-Living Standards measurement Survey. Since 2004, Household Budget Survey was used for this purpose and European methodology of relative poverty was applied. The only difference compared to European methodology was in use of household consumption expenditure instead of household income as a monetary measure of

well-being. This methodological drawback will be eliminated by introduction of EU-SILC, which is expected in 2019 or 2020.

No matter which household survey or poverty methodology was used for poverty estimate in Bosnia and Herzegovina, the poverty profile has been built by presentation of several classic indicators of this phenomenon. Very little or nothing was done in order to describe non-monetary components of poverty. Therefore, the picture of poverty was incomplete, due to insufficient data on social exclusion and access to basic public services, material deprivation financial restrictions, etc.

Since pre-conditions for the introduction of EU-SILC were still not fulfilled, the Agency for Statistics of Bosnia and Herzegovina extended survey instruments within household budget surveys in 2011 and 2015 by ad-hoc module(s) of SILC type in order to enrich the poverty profile of the country by several basic non-monetary indicators.

This paper aims to present basic non-monetary components of the poverty profile of Bosnian population in 2015. Section 2 presents the overview of basic references on non-monetary dimension of poverty. In the section 3 poverty indicators related to social inclusion and access to basic public services are presented, while section 4 deals with living conditions of children. The paper ends with conclusions and proposals for future work.

2. Literature review

Poverty analysts have long ago recognized the multidimensional nature of this phenomenon. Measuring poverty only with one, usually monetary, dimension was not enough to describe overall living standard of the target population. Therefore, the poverty was explored using following three different measures applied at the same time on the same sample: lacking socially perceived necessities; being subjectively poor and having a relatively low income (Bradshaw and Finch, 2003). These authors found out that it is not safe to rely on one measure of poverty, while results obtained are just not reliable enough. They indicated that accumulation might be a better way of using overlapping measures of poverty than by giving priority to one dimension over another. Nolan and Whelan (1996) explored what poverty means in developed countries. They showed that understanding and measuring poverty requires widening the focus beyond current income. By using broader measures of poverty, authors showed how poor can be more accurately identified.

Whiteford (1997) identified the disconnection between having an income below the poverty line and actually experiencing deprivation, while Saunders (2008) concluded that income approach to measuring poverty needs to be accompanied by other frameworks and indicators that enable the consequences of low income to be better understood. He underlined the necessity of linking low incomes and lack of resources to instances of unmet need in ways that can help to benchmark poverty lines and contribute to monitoring the impact of a broad range of policy interventions.

The literature review has highlighted following elements:

- a) It is not safe to rely on one measure of poverty – the results obtained from the single poverty measure are just not reliable enough;

- b) Social exclusion and material deprivation have provided a new lens through which to examine poverty issues;
 - c) Multidimensional approach to poverty and living standards helps to better understandings of these phenomena and contributes to monitoring the impact of a broad range of policy interventions;
 - d) Need for analysis of mutual effects and consistencies of trends in many monetary-based measures of poverty with those in non-monetary poverty indicators,
- and many more.

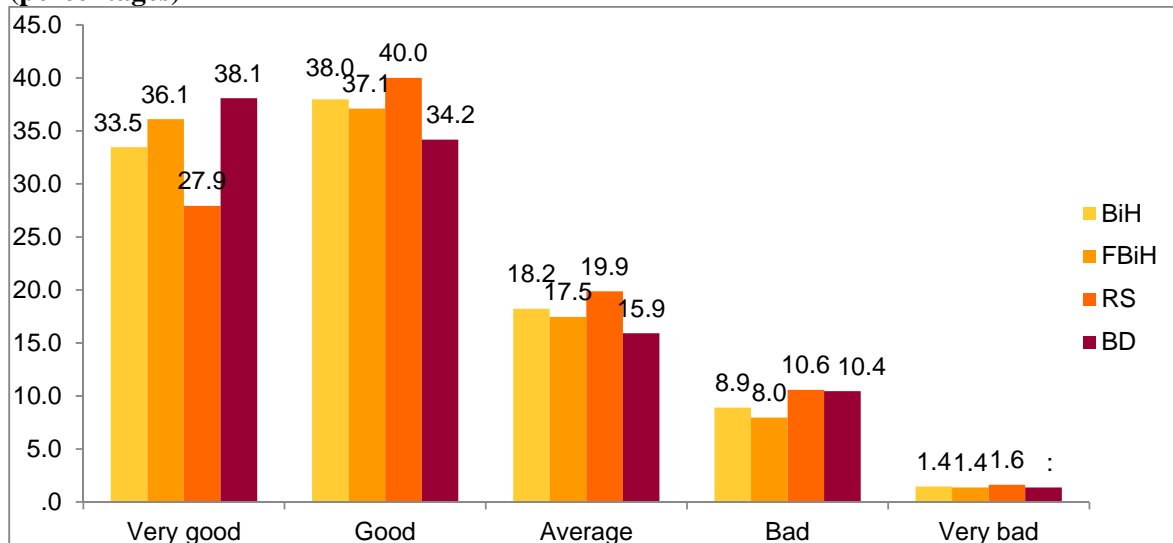
This paper describes basic non-monetary measures of poverty and social inclusion in Bosnia and Herzegovina, which reflect a broader range of factors that contribute to living standards than just consumption or income. Further improvement in poverty assessment is expected from launching the first full-scale EU-SILC in Bosnia and Herzegovina in nearest future.

3. Social Inclusion and Access to Basic Public Services

The results presented in this chapter were obtained on the basis of the subjective perception of living standard of Bosnian population, which were gathered in the ad-hoc module on social inclusion within the household budget survey in 2015. These results are related to issues of health, life satisfaction, access to public services, material deprivation and financial restrictions of households.

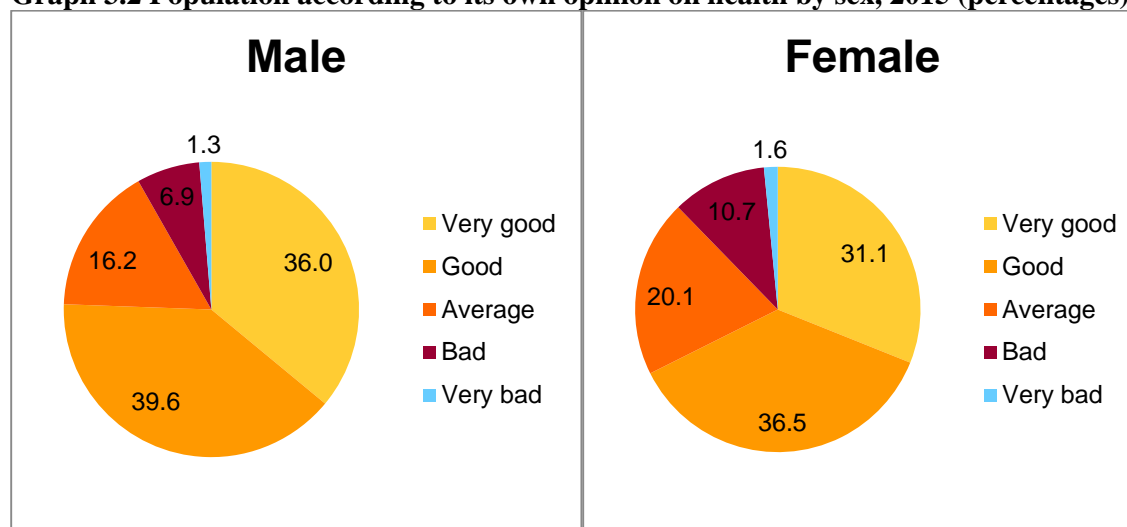
In Bosnia and Herzegovina, 71.5% of the population feels that their general health condition is very good or good, while approximately every tenth resident reported a very bad or bad general health condition. The worst medical condition was reported by residents of Republika Srpska, where the percentage of the population with very good or good health status is the smallest (67.9%), and the percentage of those with very bad or bad health is the highest (12.2%). (Graph 3.1)

Graph 3.1 Population according to its own opinion on health by geographic area, 2015 (percentages)



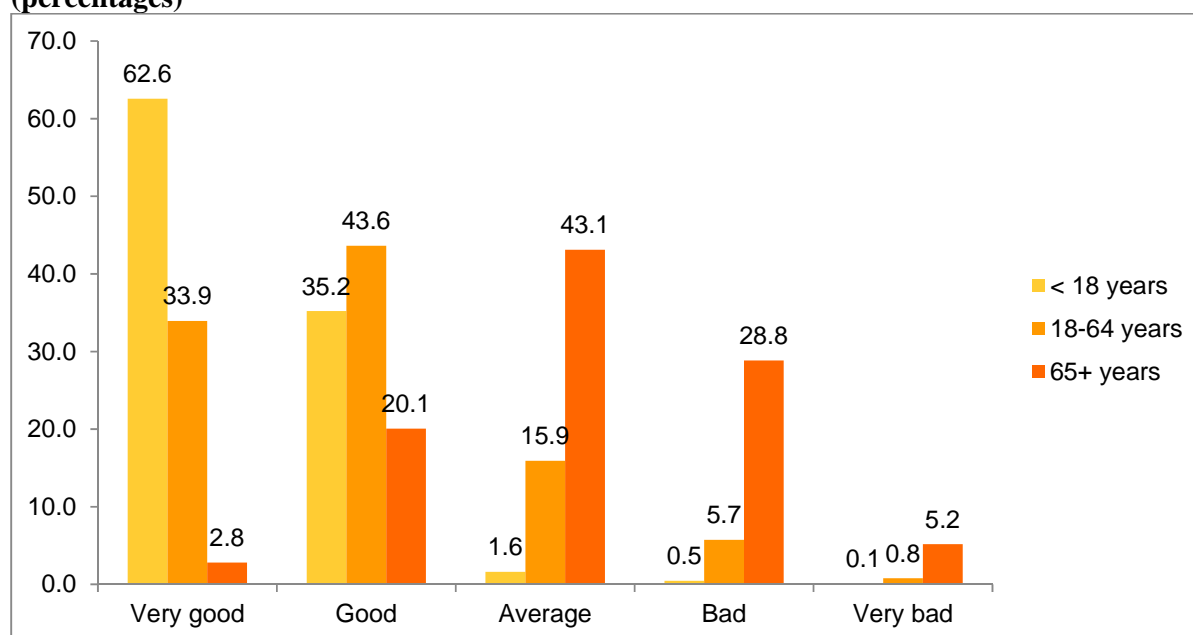
Analysis of the general health by sex of respondents shows that men assess their health better than women, since the share of men reporting very good or good health status is higher than this one of women (75.6% and 67.6% respectively). In the same time, the share of men reporting their health as bad or very bad is smaller than this one by women (8.2% and 12.3% respectively). (Graph 3.2)

Graph 3.2 Population according to its own opinion on health by sex, 2015 (percentages)



The oldest population (65 years or above) reported the highest share of bad or very bad health (34.0%) and the lowest share of good or very good health (22.9%) in comparison to two other age groups. (Graph 3.3)

Graph 3.3 Population according to its own opinion on health by age groups, 2015 (percentages)

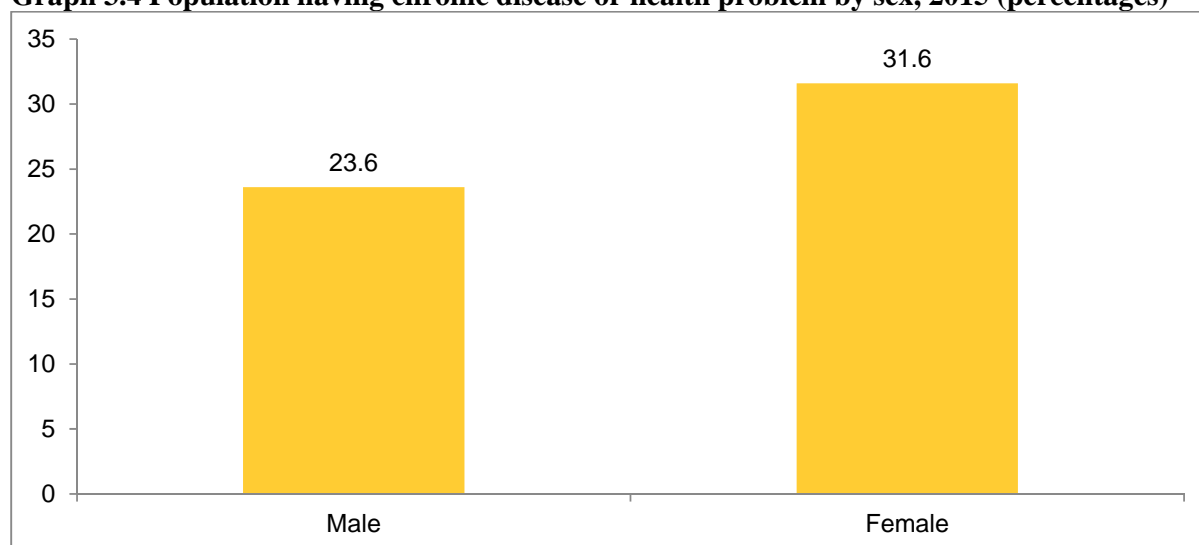


Almost 28 out of 100 people have chronic diseases. There are no significant differences between geographic areas, except in the Brcko District of BiH, where every third resident has chronic disease or health problem. (Table 3.1)

Table 3.1 Population by chronic disease or health problem, 2015 (percentages)

	BiH	FBiH	RS	BD
With chronic disease	27.7	27.3	28.2	33.4
Without chronic disease	72.3	72.7	71.8	66.6
Total	100.0	100.0	100.0	100.0

Gender analysis of this phenomenon shows that chronic diseases are more present in female population. (Graph 3.4)

Graph 3.4 Population having chronic disease or health problem by sex, 2015 (percentages)

The three most common chronic diseases of the population of Bosnia and Herzegovina are hypertension, rheumatism and diabetes.

Compulsory health insurance does not have 2.4% of the population, while private health insurance possesses almost 1 out of 100 inhabitants. (Table 3.2)

Table 3.2 Population by possession of obligatory and private health insurance, 2015 (percentages)

	BiH	FBiH	RS	BD
Obligatory health insurance				
With insurance	97.6	97.4	97.9	99.0
Without insurance	2.4	2.6	2.1	:
Total	100.0	100.0	100.0	100.0
Private health insurance				
With insurance	0.8	0.9	(0.4)	:
Without insurance	99.2	99.1	99.6	99.5
Total	100.0	100.0	100.0	100.0

Note: While statistically unreliable data for the Breko District of BiH in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

In the last twelve months, 5.1% of the population of Bosnia and Herzegovina needed a medical examination, but they did not receive it. In the case of dental services, this percentage was 2.2%. (Table 3.3) The main reason for lack of medical examinations was the inability to afford a medical examination (41.1%), almost every fourth respondent complained for the long waiting list, the same share was of ones who wanted to wait and see if the problem would be solved. When it comes to the need for dental services, the dominant reason was the inability to afford a medical examination (almost eight out of ten respondents reported this reason), every fifteenth respondent complained of a long waiting list, while 5.5% were afraid of a doctor.

Table 3.3 Population who had to have a medical examination in the last 12 months, but did not receive it by type of medical service, 2015 (percentages)

	BiH	FBiH	RS	BD
Medical examination by doctor				
Needed at least once	5.1	6.1	3.2	(3.3)
Did not need	94.9	93.9	96.8	96.7
Medical examination by dentist				
Needed at least once	2.2	2.5	1.7	:
Did not need	97.8	97.5	98.3	99.5

Note: While statistically unreliable data for the Brcko District of BiH in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

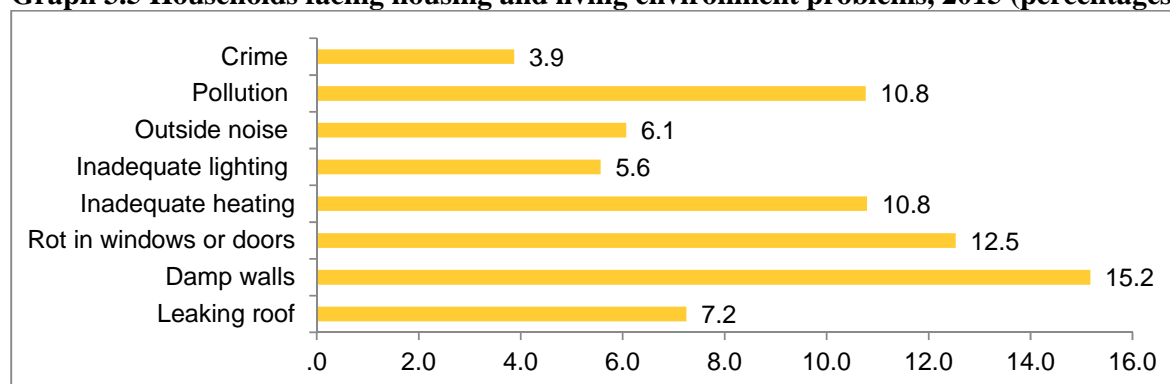
Residents of Bosnia and Herzegovina are most satisfied with their family, friends and themselves. Almost every twelfth inhabitant is dissatisfied with his/her life and school. Special differences between geographical areas are not observed; with the exception that there is a somewhat higher school satisfaction rate in Brcko compared to the state average. (Table 3.4)

Table 3.4 Life satisfaction of Bosnian population, 2015 (percentages)

Geographical area	Subjective opinion	Family satisfaction	Friends satisfaction	School satisfaction	Satisfaction with yourself	Satisfaction with your life so far
BiH	Very satisfied or satisfied	98.0	97.8	91.8	95.6	91.4
	Very dissatisfied or dissatisfied	2.0	2.2	8.2	4.4	8.6
FBiH	Very satisfied or satisfied	98.3	97.9	91.9	95.9	92.1
	Very dissatisfied or dissatisfied	1.7	2.1	8.1	4.1	7.9
RS	Very satisfied or satisfied	97.4	97.5	91.4	95.0	89.9
	Very dissatisfied or dissatisfied	2.6	2.5	8.6	5.0	10.1
BD	Very satisfied or satisfied	98.7	98.6	97.5	95.5	94.2
	Very dissatisfied or dissatisfied	:	:	(2.5)	4.5	5.8

Note: While statistically unreliable data in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

Graph 3.5 Households facing housing and living environment problems, 2015 (percentages)



The most serious problem with the housing in Bosnia and Herzegovina were damp walls that was recorded in almost every seventh household, while every eighth household has a problem with rot in windows or doors. Problems with environmental pollution and inadequate heating have almost every ninth household and the leaking roof almost every fourteenth. The proportion of households having noise problems is 6.1%, in an inadequately lighted house live 5.6% of households, and in the area with crime live 3.9% of households. (Graph 3.5)

The most affordable service we have measured in BiH is a mixed merchandise store, as 79.7% of households stated that such services are easily or very easily to use. This type of service is however harder to access for every fifth household in Bosnia and Herzegovina, especially in rural areas where 31.2% of households still have hard or very hard access, while in urban areas there is only 5.7% such households. While these services in the Federation of BiH are hard or very hard to access for approximately every sixth households, in Republika Srpska almost every fourth household has this problem.

67.3% of households have easily or very easily access to primary health care. However, in rural areas, more than half of households have hard or very hard access to primary health care services. In urban settlements, such problems have almost every twelfth household. Primary health care services are more accessible to households in the Federation of BiH than those in the Republika Srpska (easily or very easily access rates are 70.1% and 61.4% respectively).

Postal services are available to 61.9% households in BiH. Problems in their use has every third household, in the rural areas every second household, and in the urban areas every eighth household. There is no significant differences between the geographic areas in these indicators, with the exception of the Brcko District of BiH where these services are significantly less used (every sixth household does not use postal services).

13.6% of households in BiH does not use public transport. Six out of ten households have an easily or very easily access to public transport services in Bosnia and Herzegovina. Problems in access were reported by every fourth household (in rural settlements almost 4 out of 10

households and every eleventh households in urban settlements have this problem). Public transport is the most accessible for households in the Brcko District of BiH, where almost 7 out of 10 households use it easily or very easily, while hard or very hard access to these services has almost every third household in Republika Srpska and more than 20% of households from the Federation of Bosnia and Herzegovina.

Banking services in BiH use 91.9% of households, almost 54% of households access them easily or very easily, while nearly 4 out of 10 households have problems accessing banking services. More than half of households in rural areas and every sixth household in urban areas have this problem. Households from Brcko District of BiH reported slightly easier access to these services than households in other geographic areas, but also a lower rate of use of these services.

With regard to the accessibility of preschool and primary education, it should be noted that these services only use 39.0% of households in BiH. Easily or very easily access to these services have 3 out of 10 households in Bosnia and Herzegovina, while nearly every tenth household accesses them hard or very hard. (Tables 3.5 and 3.6.) However, if only households using these services are observed, then the participation of households that easily or very easily use pre-school and primary education services is far greater: 75.2%, in total population; 90.9% in urban and 63.1% in rural areas. Viewed by geographic areas, the situation regarding the availability of these services is the best in the Brčko District of BiH, then in the Federation of BiH, and the worst in the Republika Srpska (easily or very easily access have 93.8%; 78.5% and 69.3% of households who use these services, respectively by geographic areas).

Table 3.5 Households by access to public services by type of settlements, 2015 (percentages)

Public service	Hard or very hard			Easily or very easily			Not applicable		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Mixed merchandise store	20.1	5.7	31.2	79.7	94.1	68.6	:	:	:
Banking services	38.1	16.1	55.0	53.8	80.1	33.6	8.1	3.8	11.4
Postal services	33.6	12.6	49.7	61.9	85.4	43.8	4.6	2.0	6.5
Public transport	25.4	8.9	38.0	61.0	76.7	48.9	13.6	14.4	13.1
Primary health care	32.1	8.4	50.3	67.3	90.9	49.2	(0.6)	(0.7)	(0.4)
Pre-school and primary education	9.7	3.6	14.3	29.3	35.6	24.5	61.0	60.8	61.1

Note: While statistically unreliable data in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

Table 3.6 Households by access to public services by geographical areas, 2015. (percentages)

Public services	Hard or very hard			Easily or very easily			Not applicable		
	FBiH	RS	BD	FBiH	RS	BD	FBiH	RS	BD
Mixed merchandise store	17.3	25.7	13.3	82.5	74.1	86.7	:	:	-
Banking services	36.6	41.2	30.9	54.8	51.7	57.0	8.6	7.1	12.1
Postal services	32.9	35.3	25.4	62.2	61.4	58.6	4.9	3.3	16.0
Public transport	22.3	31.4	17.8	62.4	58.0	67.1	15.3	10.6	15.1
Primary health care	29.2	38.3	18.1	70.1	61.4	81.7	(0.7)	:	:
Pre-school and primary education	8.0	13.1	:	29.5	29.5	22.6	62.5	57.4	75.9

Note: While statistically unreliable data in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

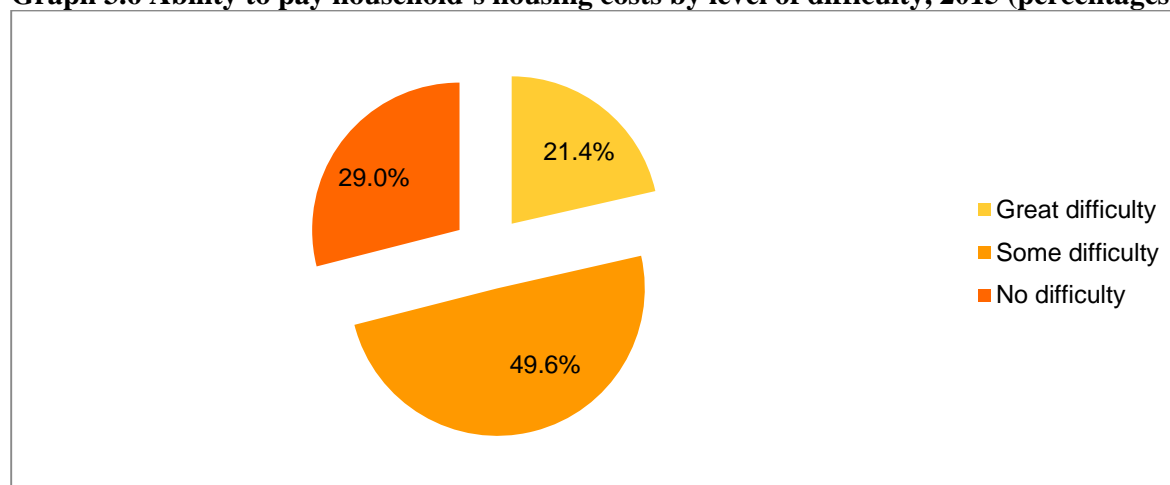
In Bosnia and Herzegovina, almost two thirds of households have difficulty experienced to pay for its usual and necessary expenses. Looking at the status of poverty, relatively poorer households have difficulty ending with their usual monthly costs: 82.7% of such households, compared to 58.7% of such cases in non-poor households. (Table 3.7.) Housing costs represent a burden for 7 out of 10 households. (Graph 3.6) In the case of subtenants, the situation is even worse because housing costs represent a certain or high burden for 74.6% of such households. However, it should be noted that in Bosnia and Herzegovina there are no many households living in rented housing units (less than 3%, according to the results of this survey).

Table 3.7 Households according to the possibility of paying the usual monthly expenses by status in poverty, 2015 (percentages)

Ability to pay the usual monthly costs	Poverty status of household		
	Total	Poor	Non-poor
	% of households		
Total	100.0	100.0	100.0
Very hard	10.6	26.0	7.6
Hard	18.7	32.6	15.9
Certain difficulties	33.4	24.1	35.2
Fairly easily	20.5	11.8	22.2
Easily	15.5	5.1	17.6
Very easily	1.3	:	1.5

Note: While statistically unreliable data for poor households in this table can be calculated, we warn the user that the number of statistical units in the sample for that part of the response to these questions was insufficient to provide a reliable result.

Graph 3.6 Ability to pay household's housing costs by level of difficulty, 2015 (percentages)



In order to analyze the material deprivation of households, several indicators have been calculated whose values are shown in Table 3.8. Almost two thirds of households could not face unexpected financial expenses of 380 KM, one-week holiday cannot afford 71.3% of households, and more than a quarter of households cannot provide meat, chicken or fish meal or vegetarian equivalent every second day. More than a fifth of households face financial difficulties in paying rent, household's costs or loan installments. As we mentioned earlier, problems with adequate heating has almost every ninth household, half of households do not own a car, 7.0% still have no washing machine, while 2 out of 100 households in BiH do not have a TV.

Table 3.8 Material deprivation indicators, 2015 (percentages)

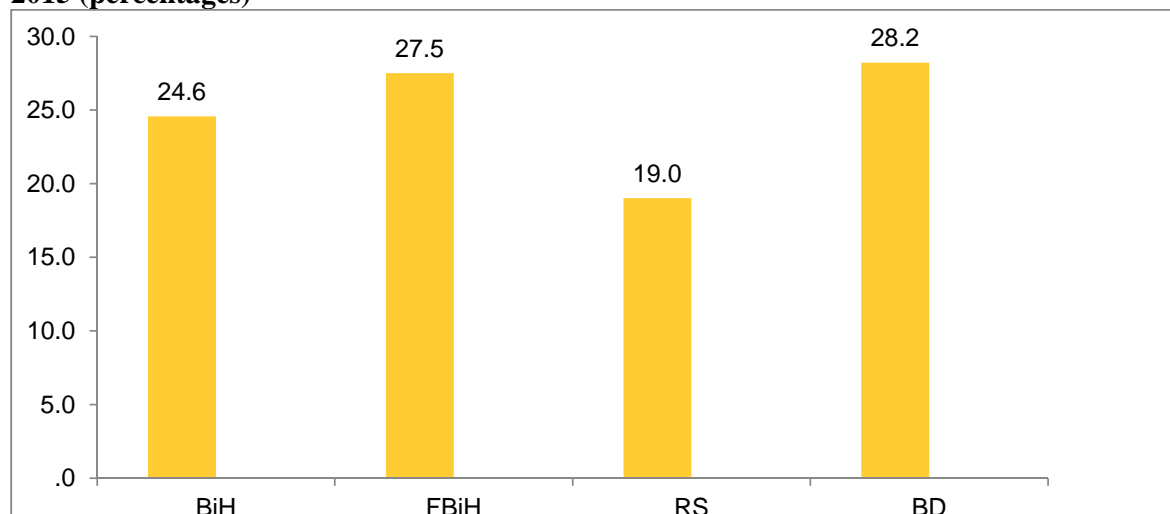
Indicator	% of households
Inability to face financial difficulties in paying rent. household's costs or loan installments	21.4
Can't afford to go on holidays for one week	71.3
Can't afford to eat meat or fish (or vegetarian equivalent) every second day	27.2
Inability to pay unexpected expenses of 380 KM	65.4
Can't afford an adequate heating of the dwelling	10.8
Do not have a car	51.0
Do not have a washing machine	7.0
Do not have a TV	2.2

4. Living Conditions of Children

In Bosnia and Herzegovina, children under the age of 16 lived in approximately every fourth household. In the Federation of Bosnia and Herzegovina, this percentage is slightly higher, 27.5%, in Republika Srpska less than a fifth of households have children of that age, while in the

Brčko District of BiH this phenomenon is present in approximately three out of ten households. (Graph 4.1)

Graph 4.1 Share of households with children younger than 16 years by geographical area, 2015 (percentages)



Approximately every tenth household in Bosnia and Herzegovina with children under 16 years cannot afford new clothes, almost every twelfth cannot afford two pairs of shoes, while a meal of fresh fruit or vegetables at least once a day cannot provide every ninth household. Three meals a day cannot afford 1.7% of such households in BiH, while a meat, fish or vegetarian equivalent cannot provide every seventh households. Books for children cannot afford 2.7% of households, with the notion that 8.7% of households cannot afford books for some other reason. Equipment for out-of-home games cannot afford every tenth household, while every eleventh household cannot afford it for other reason. 7.0% of households do not have home-to-play toys for children and 5.6% of households do not afford them for some other reason.

Children from 51.6% of households participate in regular free activities, and nearly four out of ten households do not provide it for other reason, and 9.7% of households cannot afford it. Children from 14.3% of households do not participate in celebrations for special occasions, of which 3.2% of households cannot afford it, and 11.1% of households do not provide it for some other reason. The situation is similar with the invitation of friends because it is present in 84.7% of households, 1.4% cannot afford it, and approximately every seventh household does not provide it for some other reason. Only seven out of ten households can pay for school trips for children, 5.6% cannot afford it, and nearly a quarter does not want it for some other reason. Approximately every ninth household in BiH cannot afford an adequate place for learning for children, while almost every eighth household does not have open space area for children's play. (Table 4.1)

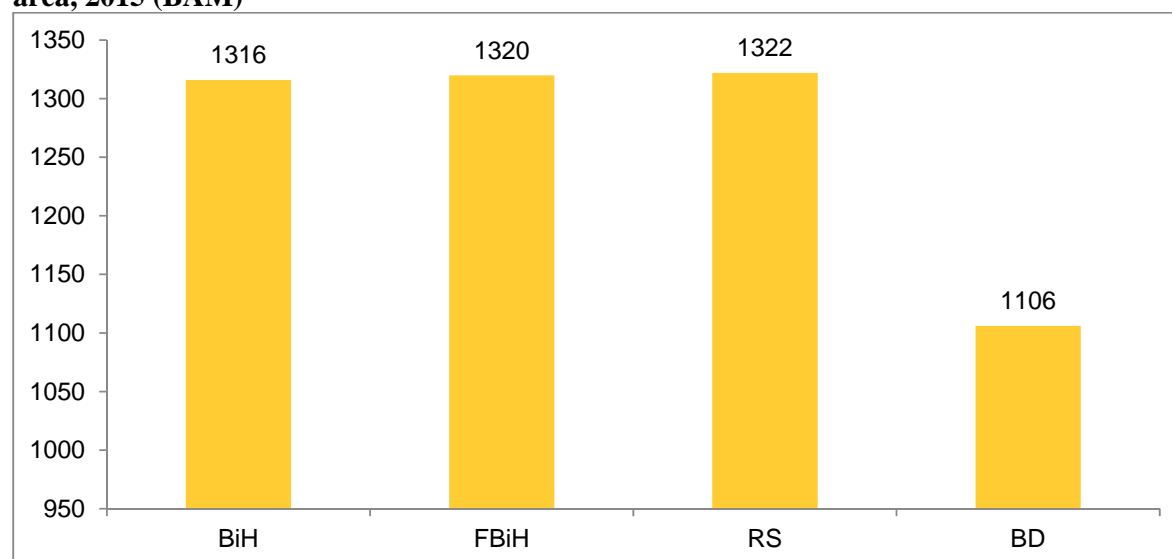
Table 4.1 Households by living conditions for children, 2015 (percentages)

Question	% of households
Do children have new clothes?	
Yes	88.7
No, we can not afford it	9.9
No, for some other reason	(1.5)
Do children have two pairs of shoes of the appropriate size?	
Yes	89.7
No, we can not afford it	8.5
No, for some other reason	(1.8)
Do children eat fresh fruits and vegetables at least once a day?	
Yes	80.7
No, we can not afford it	11.2
No, for some other reason	8.0
Do children have three meals a day?	
Yes	97.5
No, we can not afford it	(1.7)
No, for some other reason	:
Do children have meat, fish or vegetarian equivalent a day?	
Yes	79.2
No, we can not afford it	14.1
No, for some other reason	6.7
Do children have the appropriate books for their age at home?	
Yes	88.5
No, we can not afford it	2.7
No, for some other reason	8.7
Do children have out-of-home play equipment (bicycle, roller blades etc.)?	
Yes	79.2
No, we can not afford it	9.9
No, for some other reason	10.8
Do children have toys to play at home?	
Yes	87.4
No, we can not afford it	7.0
No, for some other reason	5.6
Do children participate in regular free activities?	
Yes	51.6
No, we can not afford it	9.7
No, for some other reason	38.7
Do children participate in celebrations for special occasions?	
Yes	85.7
No, we can not afford it	3.2
No, for some other reason	11.1

Do children invite friends to play together from time to time?	
Yes	84.7
No, we can not afford it	(1.4)
No, for some other reason	13.9
Do children attend school excursions and paid events?	
Da	71.0
Ne, zato sto ne možemo priuštiti	5.6
Ne, iz nekog drugog razloga	23.4
Do the children have an adequate place for learning?	
Yes	88.6
No	11.4
Is there a place in the outdoor area where children can safely play?	
Yes	87.4
No	12.6

The lowest net monthly household income that can satisfy its needs is estimated at 1,316 BAM with no significant differences between entities, with an exception of Brčko district BiH, whose estimated amount is significantly lower. (Graph 4.2)

Graph 4.2 Lowest net monthly household incomes that can satisfy its needs by geographical area, 2015 (BAM)



5. Conclusions

Poverty and living standard are multidimensional phenomena and many authors and analysts proved that measuring them only with one, usually monetary, dimension is a poor analytical approach. Therefore it is needed to explore the poverty by using three different measures: lacking socially perceived necessities; being subjectively poor and having a relatively low income. Only in this way, it is possible to get a complete poverty profile of the country, which is a pre-condition for design of broad range of policy interventions and to go towards SDG-1.

The Agency for Statistics of Bosnia and Herzegovina recognized needs for describing poverty in both, monetary and non-monetary dimensions. Therefore, the Agency extended survey instruments within the household budget surveys in 2011 and 2015 by ad-hoc module(s) of SILC type in order to enrich the poverty analysis. It resulted in calculation of several non-monetary indicators of living standard, which are related to social inclusion and access to basic public services, health status of Bosnian population, financial constraints, material deprivation and living conditions of children. All these indicators in combination with monetary poverty measures could provide more evidence for creating and monitoring socio-economic policies aimed to elimination of poverty.

There is a possibility for disaggregation of above mentioned indicators by several basic socio-economic variables of individuals or households (sex, age, activity status, education, housing tenure, poverty status, region, etc.), which is not completely done in this paper because of the limited space. We have shown that the extension of HBS instruments by ad-hoc modules improved the analysis of living standards in Bosnia and Herzegovina and made a bridge to EU-SILC. Further improvements in poverty diagnostic should be gained from launching the first full-scale EU-SILC in nearest future and from its coordination with HBS. In this way, combination of monetary and non-monetary indicators and combination of consumption and income approach in poverty measurement will yield better result in describing the poverty profile of the country and in harmonizing the methodology with EU regulations and standards.

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