BASIC CONSUMPTION AND INCOME BASED INDICATORS OF ECONOMIC INEQUALITIES IN BOSNIA AND HERZEGOVINA: EVIDENCE FROM HOUSEHOLD BUDGET SURVEYS

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Introduction

• In last two decades poverty indicators in Bosnia and Herzegovina were calculated on the basis of data collected within LSMS and HBS.
• In both surveys, household consumption expenditure was used as a monetary measure of people`s well-being
• Need for the harmonisation of poverty and inequality measures to EU standards
• Need for comparison of consumption and income poverty indicators
• Hypothesis that poverty and inequality measures in BiH were underestimated when measured by consumption in comparison to those measured by income
Monetary measures of well-being (1)

• The concept of poverty is based on income or consumption expenditure as monetary measures of well-being
• Aiming to decide which monetary indicator should be used, it is needed to perceive their advantages and disadvantages
• In advocating pros and cons, specificities and development level of the country must be considered
• Usually, income is used in developed and consumption expenditure in developing countries
Monetary measures of well-being (2)

Basic Foster–Greer–Thorbecke poverty indices

- Headcount ratio (incidence of poverty or poverty rate)
- Poverty gap index (depth of poverty)
- Poverty severity index (weighted poverty gap index)
Basic inequality indicators

• Gini coefficient
Defined based on the Lorenz curve as the share of concentration area compared to maximum concentration area

• Quintile Ratio S80/S20
Ratio of total equalized household consumption expenditure or income of the top quintile to that spent by the lowest quintile
Poverty and inequality measures based on income and consumption (1)

- Data from HBS 2015 (n=7,702 HHs)
- Monetary poverty measures used for construction and calculation of poverty and inequality indices are equivalised monthly household’s consumption expenditure and equivalised monthly household’s income
- Household monthly consumption expenditure and household monthly income are divided by adjusted household size, obtained by using modified OECD scale.
- For both indicators relative poverty thresholds are calculated as 60% of median of used monetary measure
Poverty and inequality measures based on income and consumption (2)

Mean and median of household’s income and consumption expenditure

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Sample (7,702 households)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
</tr>
<tr>
<td>Mean</td>
<td>541.84</td>
</tr>
<tr>
<td>Median</td>
<td>410.00</td>
</tr>
</tbody>
</table>

Poverty threshold based on equivalised monthly household’s consumption expenditure amounts **389.26 BAM**, while poverty threshold based on equivalised monthly household’s income amounts **246.00 BAM**.
Poverty and inequality measures based on income and consumption (3)

FGT indices based on income and consumption expenditure (B&H, FB&H, RS and BD, HBS 2015)

<table>
<thead>
<tr>
<th></th>
<th>Headcount ratio ($P_0$)</th>
<th>Poverty gap index ($P_1$)</th>
<th>Poverty severity index ($P_2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
<td>Consumption</td>
<td>Income</td>
</tr>
<tr>
<td>B&amp;H</td>
<td>0,255</td>
<td>0,165</td>
<td>0,599</td>
</tr>
<tr>
<td>FB&amp;H</td>
<td>0,228</td>
<td>0,160</td>
<td>0,631</td>
</tr>
<tr>
<td>RS</td>
<td>0,309</td>
<td>0,174</td>
<td>0,562</td>
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<tr>
<td>BD</td>
<td>0,198</td>
<td>0,159</td>
<td>0,470</td>
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</table>
Poverty and inequality measures based on income and consumption (4)
Poverty and inequality measures based on income and consumption (5)

Poverty severity index

<table>
<thead>
<tr>
<th>Method</th>
<th>Income</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>B&amp;H</td>
<td>0.488</td>
<td>0.094</td>
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<tr>
<td>FB&amp;H</td>
<td>0.524</td>
<td>0.102</td>
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<tr>
<td>RS</td>
<td>0.447</td>
<td>0.082</td>
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<tr>
<td>BD</td>
<td>0.315</td>
<td>0.077</td>
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</tbody>
</table>
Poverty and inequality measures based on income and consumption (6)


<table>
<thead>
<tr>
<th></th>
<th>Gini coefficient (%)</th>
<th>S80/S20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
<td>Consumption</td>
</tr>
<tr>
<td>B&amp;H</td>
<td>48.7</td>
<td>31.2</td>
</tr>
<tr>
<td>FB&amp;H</td>
<td>48.9</td>
<td>31.0</td>
</tr>
<tr>
<td>RS</td>
<td>47.9</td>
<td>31.4</td>
</tr>
<tr>
<td>BD</td>
<td>52.8</td>
<td>31.7</td>
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</table>
The aim of this paper is to present methodology of calculation of several main poverty and inequality indicators and to compare results of their applications on consumption and income data.

Based on data from HBS 2015, we calculated Foster-Greer-Thorbecke poverty indices:

- headcount ratio,
- poverty gap index and
- poverty severity index

and the inequality measures:

- Gini coefficient and
- quintile ratio
Conclusion and future work (2)

- In case of income, we used non-edited and non-imputed data because it was not undoubtedly clear whether some households had very low and/or zero incomes in certain income kinds or incomes were not reported.

- Although we were aware of this lack, we believe that results based on non-cleaned income data satisfactorily indicate the main direction of relationship between poverty and inequality indicators based on income or consumption expenditure.
Conclusion and future work (3)

• Incidence of poverty is from four to thirteen percentage points higher when measured by income in comparison to their consumption counterparts.

• Values of the depth and severity of income poverty are from two to four times higher, respectively, compared to consumption poverty.

• Inequality measures indicate greater income inequality level in all regions, in certain cases for more than 15 percentage points for Gini coefficient and about four times higher values in quintile ratios.

• Need for editing and imputation of income data in order to get full comparability of results.

• Introduction of the full-scale EU-SILC in BiH in order to increase the level of harmonisation of poverty methodology.
Thank you for the attention!

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