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Poverty and Inequality in Bosnia and Herzegovina 2007-2011



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INSTITUTE OF STATISTICS

Poverty and Inequality in Bosnia and Herzegovina 2007-2011

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Executive summary

This report presents the poverty and inequality trends for Bosnia and Herzegovina between 2007 and 2011, and also provides a discussion of shared prosperity. The update of poverty and inequality figures for BiH relies on data from the EHBS 2011 survey, and the World Bank poverty methodology. In addition, given the newly adopted World Bank's goals of eliminating extreme poverty and shared prosperity, this report also provides a brief discussion of shared prosperity, defined here in terms of the growth of household consumption expenditures for the bottom 40 percent of the population based on household welfare.

During 2007 and 2011 the poverty headcount remained stable at the national level. The poverty measure based on World Bank's methodology changed from 14 percent in 2007 to 15 percent in 2011, but the change is not statistically significant. At the same time, at the subnational level, there was an increase in poverty in FBiH, albeit this is sensitive to the choice of threshold. Income dynamics during 2007-2011 reveal countervailing effects of self-employment wages and remittances on the one hand, and pensions, social assistance benefits and employee wages on another.

The population in the 30th to 90th percentiles experienced declining expenditures during 2007-2011, mainly due to urban areas. Across entities, expenditures fell by more in RS on average, but in FBiH the losses were larger at the lower end of the expenditure distribution, whereas the reverse was the case in RS. At the same time, consumption expenditure patterns remained stable, as consumption expenditures fell across almost all product categories. Inequality in BiH remained stable during 2007-2011.

The poverty profile confirms the important links between education and labor market attachment and poverty. Individuals with low education levels continue to experience much higher incidence of poverty, and increasingly (and significantly) so in the aftermath of the financial crisis. The data also provide supporting evidence for both channels of the negative association between education and poverty: (i) better education improves the chances of employment; and (ii) better education gives access to better jobs. Differences in education account for half of the difference in poverty rates across rural and urban areas.

Average consumption expenditures of the bottom 40 percent of the population grew faster than the national mean pre-crisis, especially in rural areas, and fell less during the crisis period. During 2004-2007, consumption expenditures in the bottom 40 percent of the population (B40) grew by 3.7 percent annually. This compares to 3.2 percent of the wealthiest 60 percent of the population. This reflects the strong pre-crisis growth and employment performance in areas such as agriculture, manufacturing and construction. During 2007-2011, expenditures fell at an annualized rate of 1.06 percent overall, and by 0.8 percent in the B40 group. This population group is more heavily concentrated in rural areas and in RS, and these geographic patterns remained unchanged between the 2007 and 2011 survey rounds.

The analysis of the income generating capacity of the bottom 40 percent of the population, based on the assets framework proposed by Bussolo and Lopez-Calva (2013) shows that it is difficult for this group to contribute to economic growth. The bottom 40 percent are characterized by larger households to care for, combined with a lower stock of assets (human and otherwise) to draw upon. Crucially, the bottom 40 percent are characterized by lower levels of education, lower employment rates, particularly among women, and higher unemployment rates among youth. Moreover, among

those members of this group who are employed, a higher share work based on temporary or no contracts, and they are also less likely to be in occupations and sectors of activity that rely on highly skilled labor.

1. Introduction

In 2010 the World Bank together with the Department of Economic Planning of Bosnia-Herzegovina published a report which sought to “update our knowledge of poverty outcomes ... at a time of great uncertainty” (World Bank 2010). Four years later, the uncertainty on the consequences of the Big Recession on living standards remains. The lack of a new household budget survey (HBS) has so far prevented an update of the poverty trends, which remained frozen at the year 2007. And significant uncertainty remains on future prospects, as the recovery since 2009 has been fragile and unsteady, with a second downturn in 2012. Now growth seems to have resumed but, as for other countries in the region, it is expected to pick up only slowly. Against this background, this note seeks to update the estimates of poverty and inequality in the country, and to further our understanding of the continued impact of the crisis.

While the latest data available – the Extended Household Budget Survey 2011 – are already several years old, they represent an extremely interesting source of information. This survey piloted a new approach to the standard HBS that is typically conducted in the SEE6, with the addition of modules covering the information needed to measure poverty and social exclusion in EU Member states. In this way, the EHBS represents a hybrid solution between collecting a HBS and a Survey of Income and Living Conditions (SILC),¹ the official tool for measuring poverty and social exclusion in the EU, which omits expenditure information.

The design of the EHBS 2011 survey aims not to compromise comparability of poverty measurement vis-à-vis the previous HBS survey. The survey design follows the recommendations of an expert panel convened by DFID, Eurostat, The World Bank and a few statistical offices of EU countries to explore strategies for Western Balkan countries to adapt to some of the requirements of the European Union statistical acquis (Carletto, 2013). In particular, not to overburden the respondents, the additional modules in the EHBS are administered on a rotating basis as an add-on to a standard HBS designed to collect detailed information on household expenditures. Importantly, with the exception of minor additions in consumption categories which account for a very small part of consumption expenditures and do not affect broad COICOP aggregates, the expenditure modules in the EHBS remained unchanged with respect to the previous survey round (2007), allowing for comparability of definitions and categories of expenditures.²

The note takes one of many possible angles of describing poverty and exclusion in BiH. This note describes the trends in, and composition of, absolute poverty based on household expenditures (see below), and is thus concerned, as a matter of policy objectives, with access of the population to a particular minimum standard of living. This should be viewed as complementary to the companion note

¹ The EU-SILC became a requirement for EU member states under the Framework Regulation 1177/2003. While its implementation is compulsory each country has to develop its own national surveys or administrative registers to support the implementation of SILC. SILC is meant to be implemented annually with a common component every year (primary variables) and rotating modules which are alternated in different years (secondary variables). The survey also includes a longitudinal component, which calls for a rotating panel sample structure.

² The analysis of expenditures by COICOP group for 2007 and 2011, including the inspection of kernel densities of expenditures by COICOP group, does not reveal any discrete jumps across expenditure categories.

on social exclusion based on Europe 2020 indicators including the relative at-risk-of-poverty (AROP) rate, focuses on low income in relation to other residents in a given country. In addition to the analysis of absolute poverty, the note also presents an analysis of inclusive growth, aimed at assessing whether income growth (losses) benefit (impact) differentially the lowest part (here, bottom forty percent) of the distribution. Other approaches, such as those including measures of poverty based on current income, or self-reported measures of affordability, or approached that differ in the way they set the poverty threshold exist (see below).

The poverty dynamics and the detailed poverty profile in this note are based on World Bank's poverty methodology that relies on the LSMS poverty line (KM 205/person/month). In BiH, the headline poverty measure is a relative measure with a threshold fixed at 60 percent of median consumption expenditures. In addition, national absolute poverty estimates are also computed based on the national methodology and on the World Bank's methodology; FBiH and RS specific methodologies are also being used. (see Table 1 for a summary of key features of various poverty measures in BiH). The choice of World Bank's methodology for purposes of this report is primarily on pragmatic grounds: (i) it allows for the analysis of trends during 2007-2011; (ii) the same methodology was adopted in the previous report (World Bank 2009) to analyze poverty trends during 2004-2007, thus providing a longer trend; (iii) it allows for comparisons of trends across the entities of BiH. For a detailed analysis of the 2011 poverty profile using both the relative poverty approach, and the national absolute poverty methodology, see IBHI (2013).

Table 1: Summary of poverty measures in BiH (2001-2011)

	2001 World Bank poverty line		2007 poverty lines
	2001 LSMS	2004, 2007 & 2011 HBS	2007 & 2011 HBS
Survey			
Coverage			
FBiH	Yes	Yes	Yes
RS	Yes	Yes	Yes
BD	No	Yes	Yes
Fieldwork	October-November	January-December	January-December
Consumption			
Components			
Food	Yes	Yes	Yes
Nonfood	Yes	Yes	Yes
Housing	Yes	Yes	Yes
Health	Excluded	Included	Excluded
Durable goods	Value of services	Purchases	Purchases
Price adjustments			
Temporal	No	No	No
Spatial	Yes*	No	Yes**
Adjustments for household composition and size	Per capita	Per capita	Per capita
Poverty line (at 2007 prices)			
WB 2001		KM 205	-
HBAS, FOS, RSIS 2007	-	-	KM 238
RSIS 2007	-	-	KM 201

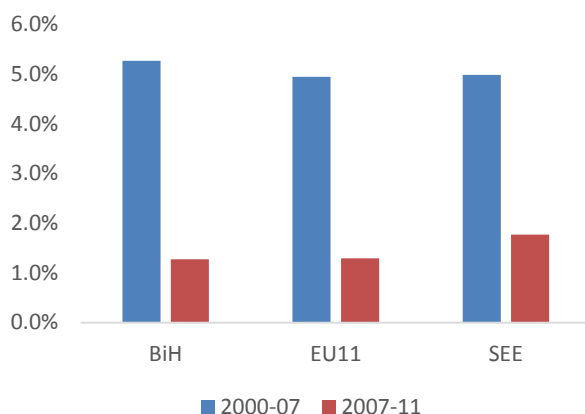
* Based on a food Paasche index by municipality. The data come from the own LSMS.

** Based on food and nonfood CPI data at the Coicop level by entity and region.

2. Macroeconomic context

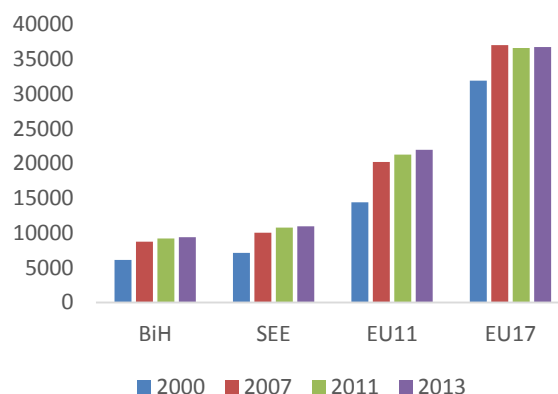
BiH experienced rapid economic growth during 2000-2008, but post-2008 growth was stalled by the financial crisis. During 2008-2013 growth averaged just 0.3 percent y-o-y, and the period saw a “double dip” recession with negative growth in 2009 and 2012. Between the most recent two survey rounds (2007 and 2011) GDP per capita grew only by 1.3 percent y-o-y. Both pre-crisis and the post-crisis growth performance in BiH are aligned with South-East European (SEE) and EU11 countries. In terms of GDP per capita, in 2013 BiH was at 86 percent of SEE average and 43 percent of EU11 average in 2013.

Figure 1: Per capita growth



Source: WDI and staff calculations

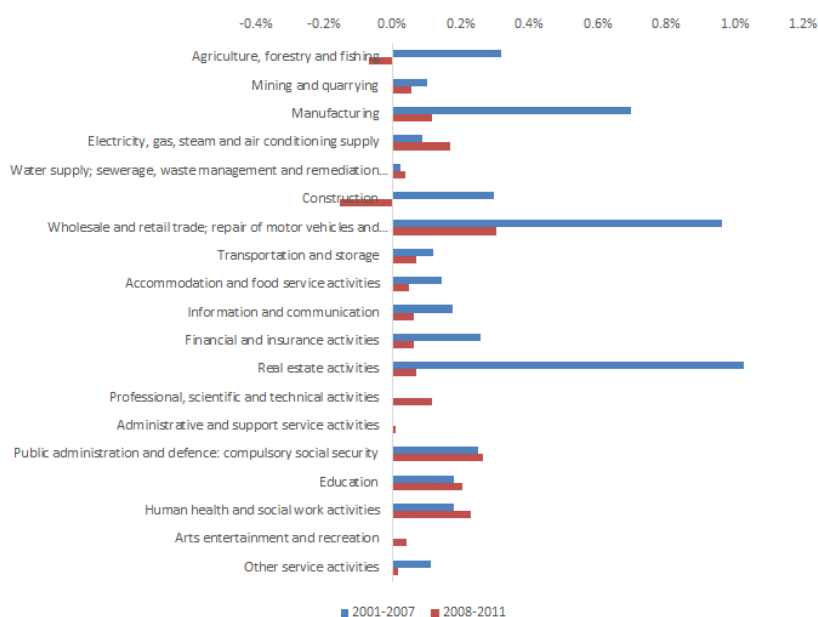
Figure 2: GDP per capita, PPP, 2011 Int'l USD



Source: WDI and staff calculations

Pre-crisis economic growth was driven primarily by services and industry. Growth in services (wholesale/retail trade, real estate, construction, transportation, administration, accommodation / restaurants, public services and other services) contributed over two thirds of overall growth during the 2001-2007 period. The remainder came primarily from growth in manufacturing, electricity, mining and agriculture. During 2008-2011 growth rates fell sharply across all branches of economic activity, and the same holds more generally for the post-crisis period through 2013. It should be noted, however, that the relative contribution of public administration / education / health to GDP increased considerably, driven by the slowdown in agriculture, construction, as well as industry.

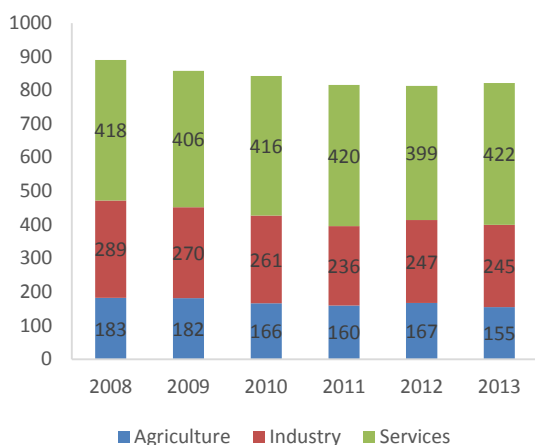
Figure 3: Sectoral contribution to growth before and after the crisis, percentage points of GDP



Sources: BiH Agency for Statistics and staff estimations

The financial crisis led to declining employment. Overall employment in the economy fell from 890,000 people in 2008 to 813,000 people in 2012, with over half of the net job losses in the industrial sector. As the result of the relatively larger job losses in industry, the relative contribution of the services sector to overall employment increased from 47 percent in 2008 to 51 percent in 2013; the increase was even higher among males. In 2013 just 22 out of every hundred people were employed. Net wages increased at the rate of 6.7 percent per year during 2001-2008. During 2009-2013 net wages experienced no growth in real terms; in fact wages fell in real terms in 2009 and then again in 2012 as the economy experienced a double-dip recession.

Figure 4: Employment by sector, 2008-2013



Source: BiH Agency for Statistics and staff calculations

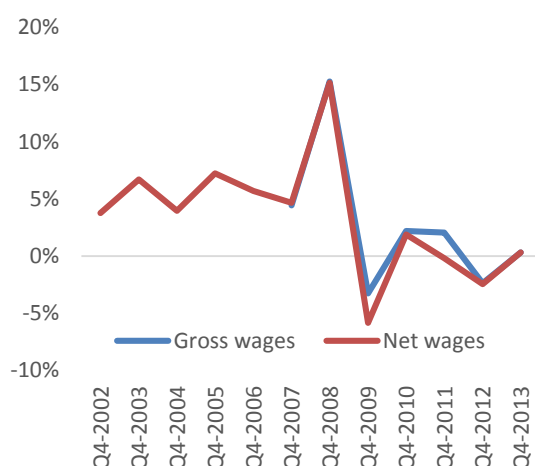
Figure 5: Structure of employment in 2008 and 2012



Source: BiH Agency for Statistics and staff calculations

The crisis also halted the growth in wages. Real wages grew steadily at over 5 percent on an annualized basis between 2001 and 2007. However, wages fell in real terms in 2009, then again in 2012. Overall, during the 2009-2013 period (during 2008-2011 net wages fell by 1.4 percent on annualized basis).

Figure 6: Y-o-Y change in gross and net wages (%)



Source: BiH Agency for Statistics and staff calculations.

3. Recent poverty trends

This section provides an overview of poverty rates in Bosnia and Herzegovina between 2007 and 2011. It describes the dynamics of household expenditures between 2007 and 2011, as well as dynamics of poverty indicators during this period. It also explores the robustness of this analysis to assumptions implicit in the World Bank poverty methodology.³

Poverty incidence remained stable during the 2007-2011 period. The national poverty incidence, at 15 percent of the population in 2011, was slightly higher, but not statistically different from the pre-crisis 2007 estimate. The incidence of poverty remained stable during the period both in urban and rural areas of BiH (Table 2). Across regional entities, an increase in poverty was registered in FBiH (this is sensitive to the level of the poverty threshold) and a reduction in BD, whereas poverty incidence remained stable in RS. Compared to 2007, there has been a 14 percent increase in the poverty gap (FGT1) and 23 percent increase in the poverty severity (FGT2), similarly on account of statistically significant increases in these indicators in FBiH (Table 4), albeit only the increase in the FGT2 indicator is statistically significant at the 95% confidence level.

Table 2: Poverty incidence, 2007-2010 (%)

	2007	2011	Change
Urban	8.2	9.2	1.0
standard error	0.62	0.69	0.93
Rural	17.8	19.0	1.2
standard error	0.70	0.71	1.00

Entity

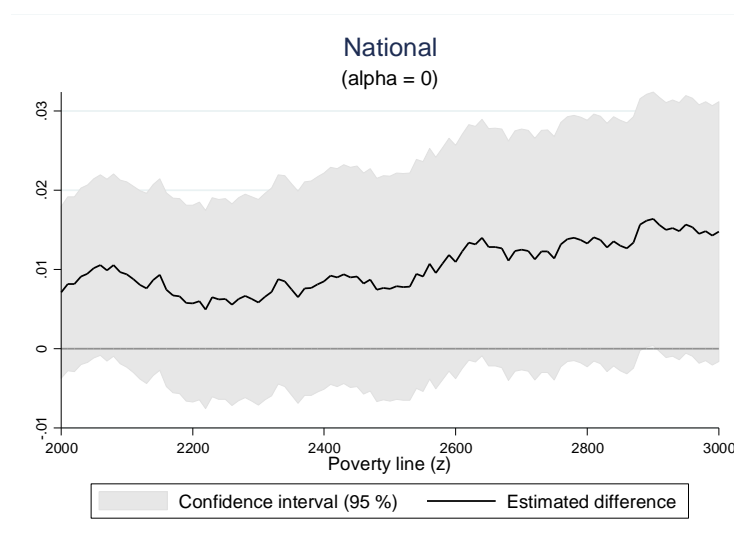
³ EHBS 2011 is the most recent survey source for poverty estimates. World Bank (2015) provides a discussion of more recent poverty trends, but these are based on projections.

FBiH	13.4	15.1	1.8
standard error	0.62	0.63	0.89
RS	15.0	14.9	-0.2
standard error	0.85	0.91	1.25
BD	18.8	10.4	-8.4
standard error	2.70	2.13	3.44
<hr/>			
National	14.0	15.0	0.9
standard error	0.50	0.51	0.71

Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

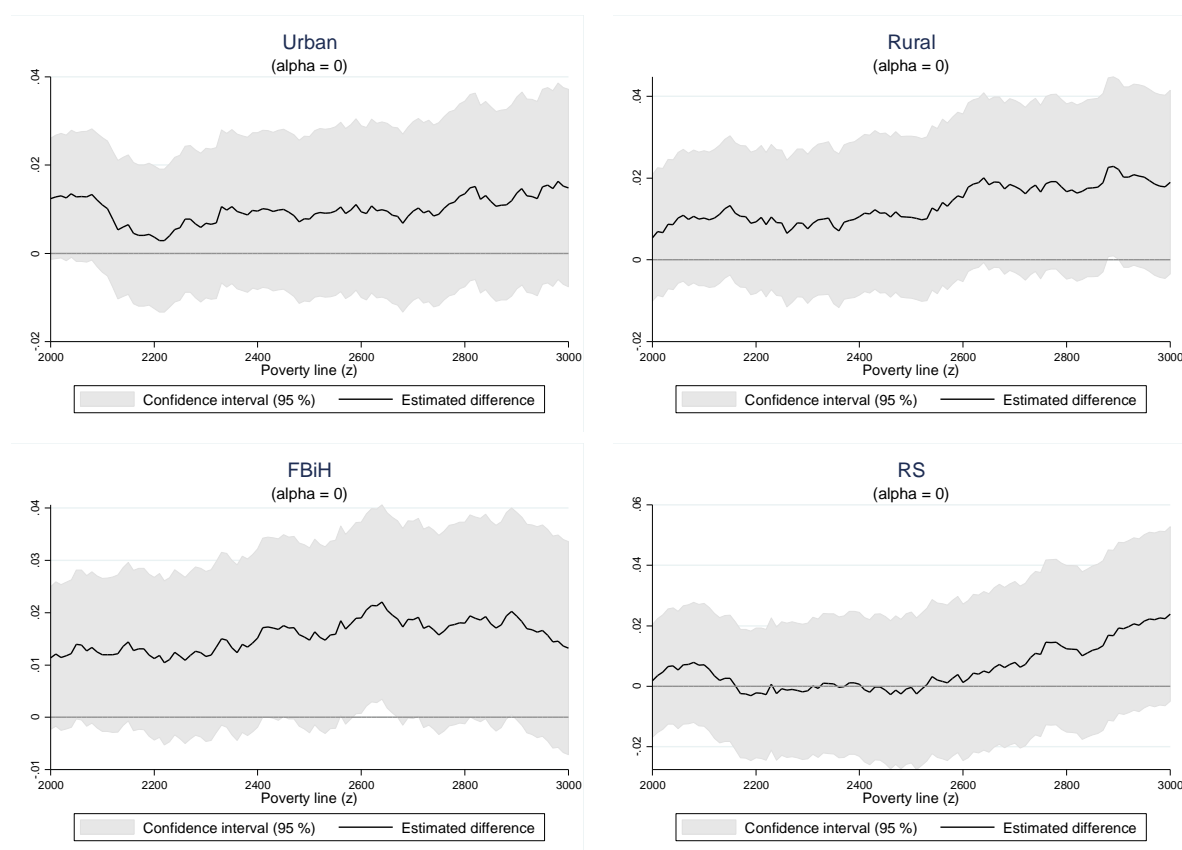
The poverty dynamics in BiH are robust to the choice of the poverty line. The stable poverty dynamics during the 2007-2011 period in BiH are not an artifact of the particular choice of the poverty threshold. Figures 7 and 8 give the difference between FGT0 curves for 2011 and 2007, with a 95 percent confidence interval, over the range of +/- 20 percent of the poverty line. There are generally no statistically significant increases in poverty during 2007-2011 over this range of poverty threshold values either nationally or in urban/rural areas, as well as sub-nationally and RS. One can observe marginally significant increases in poverty incidence in FBiH during this period for some poverty thresholds in the +/- 20% range of the actual poverty threshold, although for most thresholds in this interval the increase in poverty incidence is not significant either. Differences in the poverty deficit and severity curves (Figure 49 in Appendix) lead us to a similar conclusion for poverty defined in terms of FGT1 and FGT2 indices respectively. In the +/- 20 percent range of the poverty line, there are no increases in the poverty deficit or severity, except in FBiH, where both increase over the entire range (although the increase is small in magnitude).

Figure 7: Differences between 2011 and 2007 FGT0 curves (+/- 20% of the poverty line)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

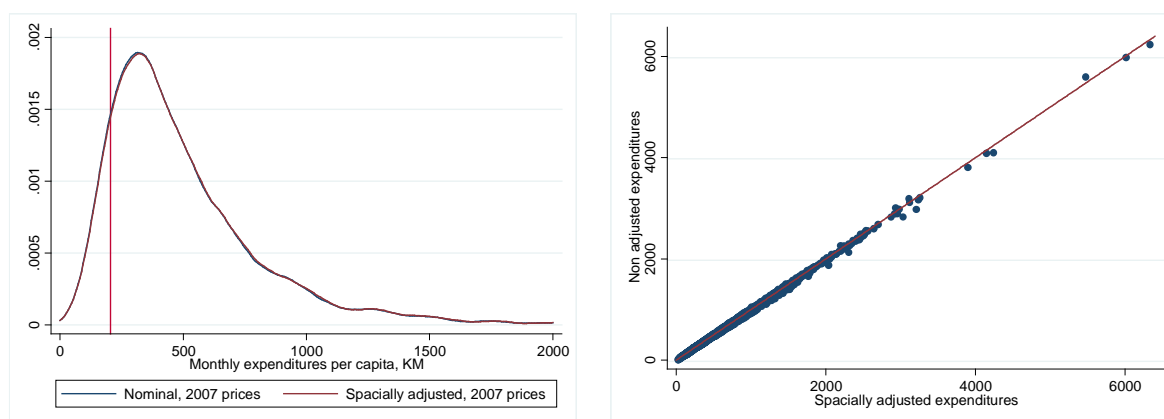
Figure 8: Differences between 2011 and 2007 FGT0 curves (+/- 20% of the poverty line)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Two poverty methodologies currently in use differ with respect to spatial price adjustments, but this does not appear to affect poverty incidence. The methodology that employs the KM205 poverty threshold, used in this note, and also in the previous poverty report (World Bank 2010), does not apply spatial price deflators. By contrast, the methodology based on the KM238 poverty threshold computed in BiH implements a spatial adjustment based on consumer price index data at the COICOP level (12 categories) and covering 12 regions. The spatial deflation based on consumer price indices is applied instead of computing unit values from within the HBS because quantity information is not available for most of the non-food items (for more details see BHAS et al., 2007). A comparison of total household expenditures per capita in nominal 2007 prices with spatially adjusted expenditures based on COICOP indices reveals no notable density shifts around the poverty threshold (Figure 9, left panel), or significant household re-ranking (Figure 9, right panel).

Figure 9: Comparison between nominal and spatially adjusted expenditures

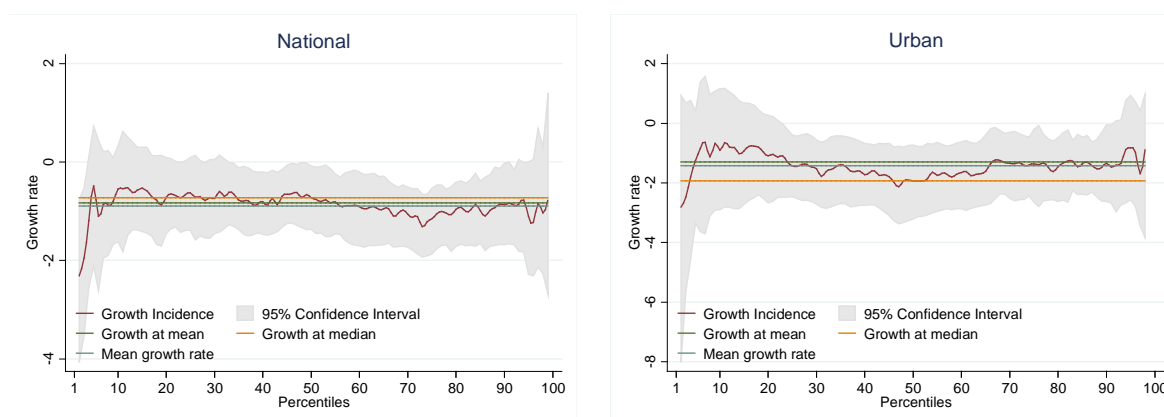


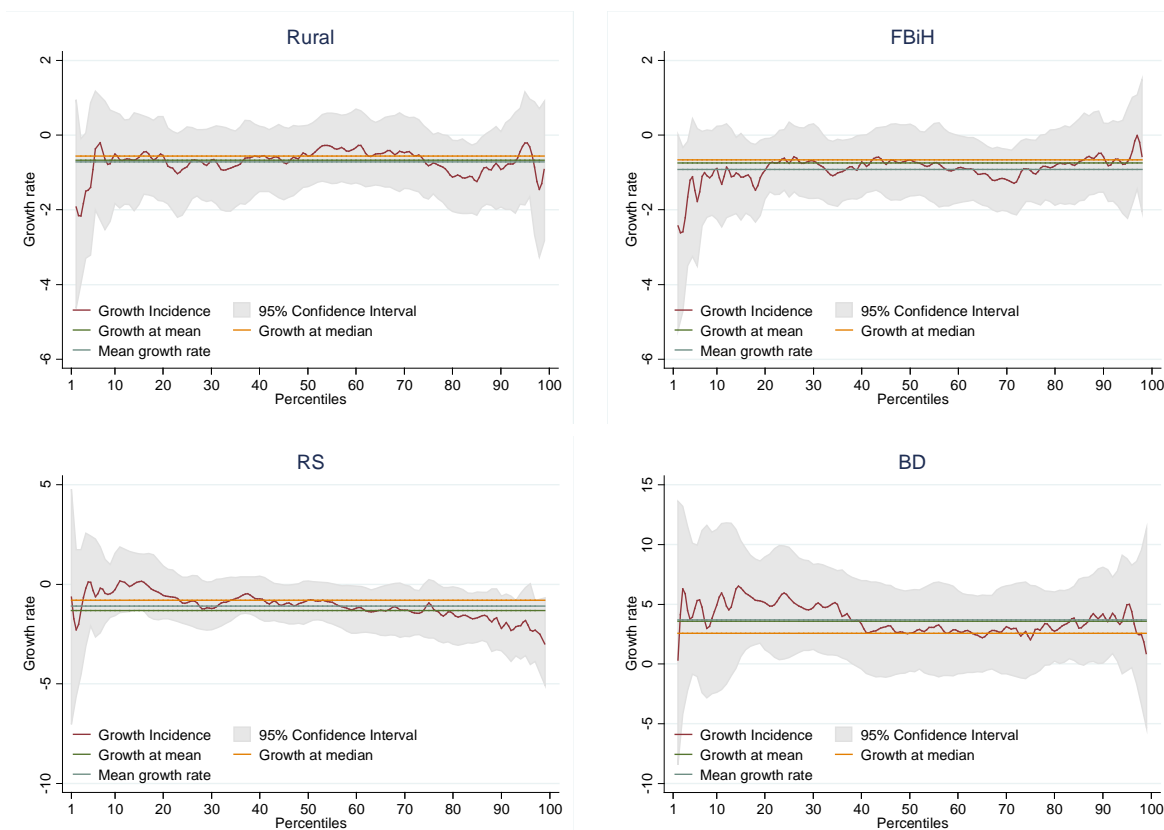
Source: Staff calculations based on EHBS 2011 data.

Between 2007 and 2011 household consumption expenditures fell, particularly in urban areas. Expenditures per capita fell in real terms during the 2007-2011 period across the BiH population, and this loss was statistically significant for those between the 30th and 90th percentile of the population, as ranked by the household’s per capita expenditures. This was driven mainly by declining expenditures in urban areas, where expenditures fell by 1.3 percent on annualized basis. In rural areas expenditures fell by 0.7 percent per year on average, but the 95% confidence intervals around the GIC crosses zero over most of the percentile range.

Expenditure losses affected different parts of the distribution in FBiH and RS. On average, expenditures fell more sharply in RS (1.3 percent per year, on average) compared to FBiH (0.7 percent per year, on average), but in FBiH losses were larger at the lower end of the expenditure distribution, whereas the reverse was the case in RS. For instance, expenditures fell by 1.7 percent per year at the 10th population percentile and by 1.5 percent at the 20th in FBiH, compared to 0.6 percent and 0.4 percent respectively in RS. On the other hand, the top expenditure quintile in RS experienced a statistically significant reduction in expenditures during 2007-2011, whereas in FBiH the change in expenditures during this period was not statistically different from zero.

Figure 10: Growth incidence curves, 2007-2011 by entity and urban/rural area.





Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Expenditure fell in almost all consumption expenditure categories, while consumption patterns remained stable. During 2007-2011 average consumption expenditures fell across most COICOP groupings, most notably for alcoholic beverages, recreation and transport (Table 3). Expenditures on food and non-alcoholic beverages fell by 6.5 percent. The only categories where expenditures were higher in 2011 were clothing/footwear and education. In terms of relative shares of COICOP categories in total household expenditures, there were no notable changes between 2007 and 2011. Poor and non-poor households had broadly similar expenditure profiles, on average. As expected, household below the poverty threshold devoted a larger share of expenditures to food items and to housing/utility expenditures, and a lower share of expenditures to clothing, transport and recreation. Between 2007 and 2011, non-poor households exhibit a larger reduction in the share of expenditures devoted to food and transport, and a larger increase in the share of clothing/footwear expenditures, although expenditure trends during 2007-2011 by COICOP group do not differ drastically between poor and non-poor households.

Table 3: Monthly per capita expenditure by COICOP, 2007 and 2011

	2007		2011		Change	
	Mean	Share (%)	Mean	Share (%)	Proportional (%)	Share (%)
Food and beverages	150	34.3	140	33.4	-6.5	-0.9
Alcoholic beverages	15	3.4	13	3.1	-12.1	-0.3
Clothing and footwear	25	4.7	30	5.8	18.7	1.1
Housing and utility expenses	103	24.2	103	24.5	-0.3	0.3
Furniture	26	4.7	24	4.6	-6.1	-0.1
Health care	19	3.8	19	3.7	-2.4	-0.1

Transport	53	9.6	49	9.1	-8.4	-0.5
Communications	15	3.3	15	3.4	-5.3	0.0
Recreation and culture	17	3.0	15	2.9	-12.9	-0.1
Education	2	0.4	4	0.7	49.1	0.2
Hotels and restaurants	13	2.3	13	2.2	-6.8	-0.1
Other	30	6.1	33	6.7	8.0	0.6

Notes: Expenditures for both years expressed in 2007 prices. Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Figure 11: Share of COICOP categories, 2011

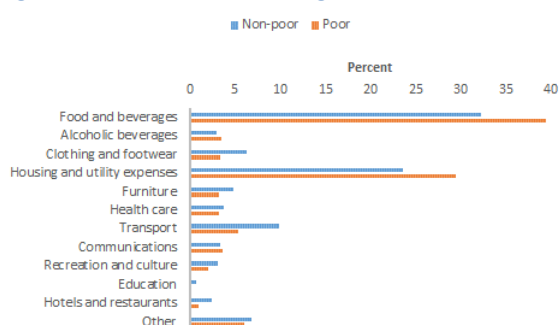
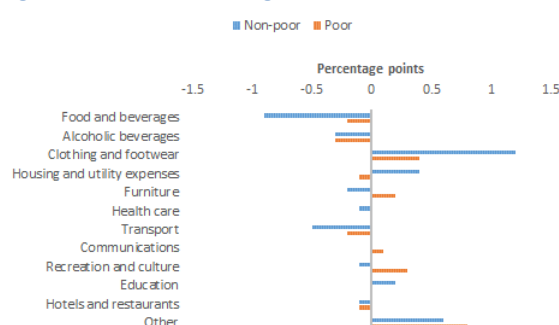


Figure 12: 2007-2011 change in the COICOP share



Source: Staff estimates based on HBS 2007 and EHBS 2011 data.

The decomposition of the poverty changes during 2007-2011 shows that changes were driven by the growth component and not by the redistribution component. At the national level changes in mean expenditures contributed 1.36 percentage points to the overall change in the poverty headcount, whereas changes in the distribution of expenditures had a negative contribution of -0.32 percentage points. These figures are similar across urban and rural areas and are consistent with the marginally pro-poor shape of the growth incidence curves. In the case of the poverty gap and the squared poverty gap, both the growth and the distribution components had positive contributions to the overall change in the corresponding indicators; the relative contribution of the growth and redistribution components was also more balanced in the case of FGT(1) and FGT(2) indices. Inequality in BiH is discussed in more details in Section 4.

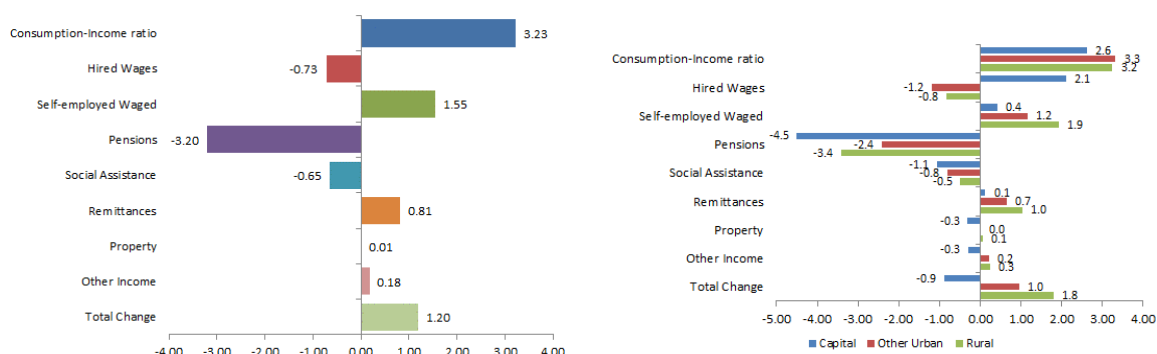
Table 4: Growth and Redistribution Decomposition of Poverty Changes

	2007	2011	Actual change	Change in incidence of poverty		
				Growth	Redistribution	Interaction
Poverty Headcount (FGT0)						
Urban	8.23	9.18	0.96	1.42	-0.03	-0.43
Rural	17.78	18.96	1.18	1.24	-0.04	-0.03
Total	14.04	14.95	0.91	1.36	-0.32	-0.13
Poverty Gap (FGT1)						
Urban	1.80	2.31	0.52	0.37	0.18	-0.03
Rural	4.44	4.92	0.49	0.37	0.12	0.00
Total	3.40	3.85	0.45	0.37	0.10	-0.02
Squared Poverty Gap (FGT2)						
Urban	0.62	0.93	0.31	0.14	0.18	0.00
Rural	1.69	1.96	0.27	0.15	0.12	0.00
Total	1.27	1.54	0.27	0.15	0.12	0.00

Note: Changes shown between years 2007 and 2011. Statistically significant changes, based on a 95% confidence interval in **Bold**. Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

The dynamics of self-employed wages and of pensions had opposing effects on poverty dynamics during 2007-2011. The Shapley decomposition of poverty changes by income source suggests a poverty-increasing effect for self-employed wages and remittances (as well as the changes in the consumption-income ratio resulting from falling consumption expenditures), and a balancing poverty-decreasing effect of pensions, as well as social assistance benefits and wage incomes of employees. The protective influence of pensions during the 2007-2011 period is not restricted only to those below the poverty threshold (see section 5.2 below). The dynamics of self-employed wages and of remittances are also consistent with the sectoral dynamics in figure 3 above and with the EU-wide effects of the financial crisis, which led to the decline in the flow of remittances into BiH. The income dynamics are broadly similar across urban and rural areas, but there are some differences in Sarajevo, where both employee and self-employment wages had a poverty-increasing effect, but, on the other hand, the counter-balancing effect of pensions and social assistance was also larger.

Figure 13: Decomposition of poverty headcount changes by income source (2007-2011)



Notes: Estimates based on the sub-sample of households with non-zero household incomes. Source: HBS 2007 and EHBS 2011 data.

4. Poverty profile in 2011 and notable changes over time

Poverty incidence is highest among the young and its prevalence increased since 2007. The poverty incidence was highest (and above national average) for the 0-14 age cohort, and lowest (and below national average) for the 50+ age group. Moreover, the prevalence of poverty among children (ages 0-14) and youth (ages 15-24) increased between 2007 and 2011; among the elderly the incidence of poverty was actually lower in 2011. On the other hand, there were no notable differences in the poverty incidence among men and women either in 2007 or in 2011, although in 2011 poverty was slightly lower in female-headed households compared to male-headed households.

Figure 14: Poverty incidence by age cohort and sex (2007-2011)

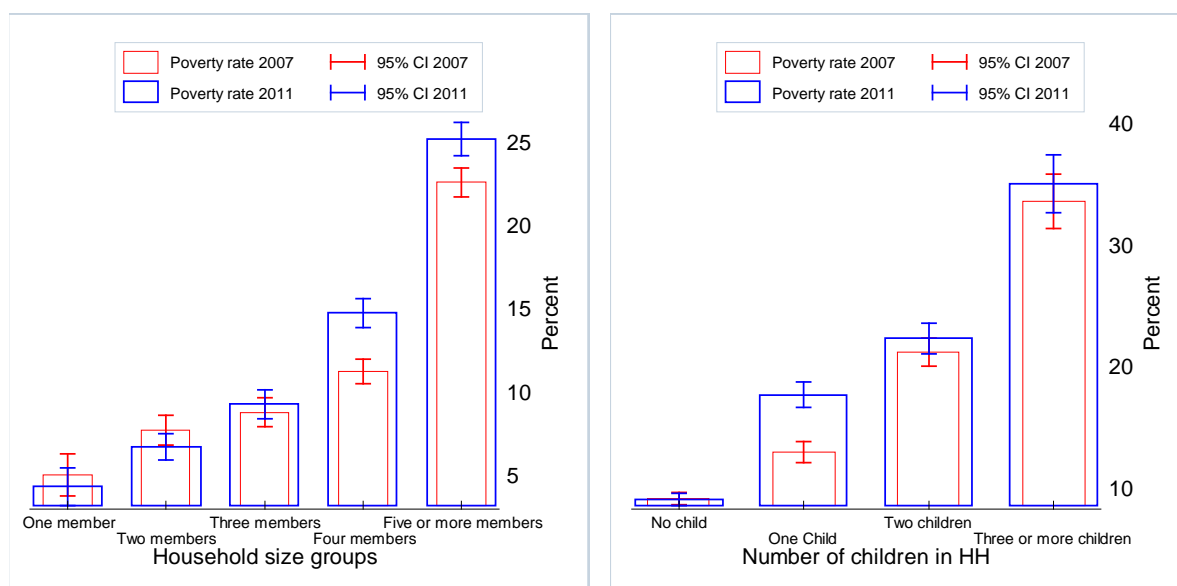


Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Poverty is more prevalent among larger households and those with a larger number of children.

Consistent with the high poverty incidence in the 0-14 age group, poverty incidence increases monotonically with the number of children under the age of 15 in the household. In 2011 poverty incidence was only 9 percent in households without children, but it was 22 percent for households with 2 children and as high as 35 percent for households with 3 children. It is also the case, more generally, that poverty prevalence is greater for larger households, as in these households the share of working age adults who can provide for the needs of the household members tends to be lower. The 2007-2011 period only saw an increase in poverty for large households (of four persons and above), as well as an increase in poverty among households with one child (but not in those with more children).

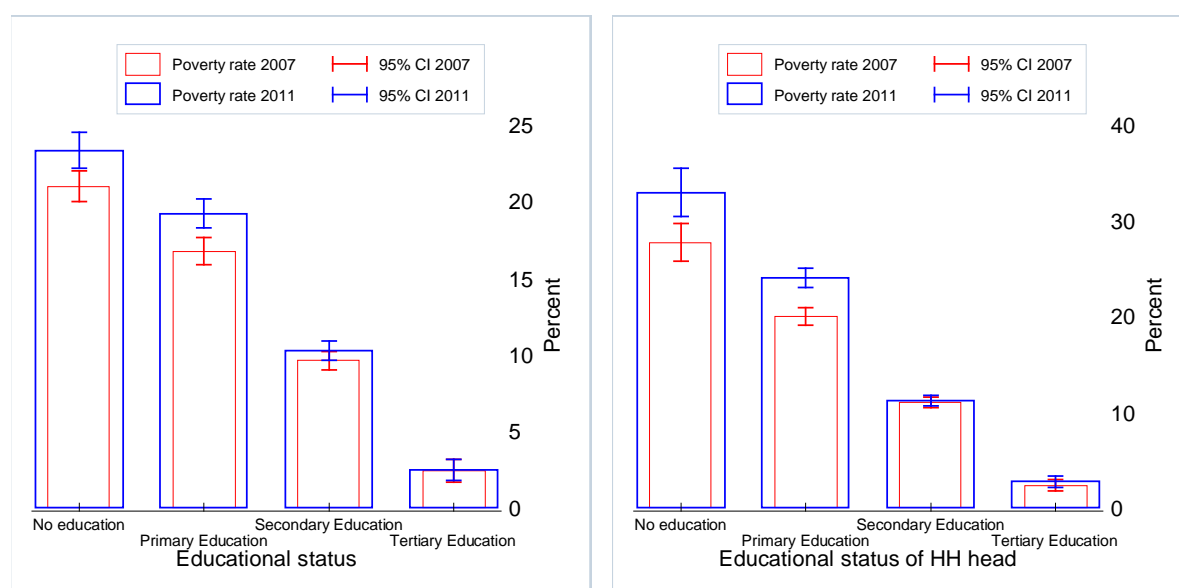
Figure 15: Poverty incidence by household size and number of children in HH



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Disadvantage associated with low levels of education increased in 2011. Individuals with low education levels (primary education or below) continue to experience much higher incidence of poverty, and poverty among these groups increased significantly during 2007-2011 period in the aftermath of the financial crisis. Poverty among those with secondary education or lower remained unchanged between the two survey rounds. The incidence of poverty associated with low education levels is higher still if the low level of education is held by the head of the households. While 17 percent of those with primary education were below the poverty line in 2011, 24 percent of individuals residing in households where the household head only completed primary education. This is notable in light of the fact that 40 percent of the population the 25+ age group had only a primary level of education or lower, although younger cohorts report higher levels of education (50 percent of the 45+ age group had primary education or less in 2011, compared to 22 percent in the 25-44 age cohort). Large discrepancies in educational attainment remain between urban and rural areas; in the 25+ age group 22 percent of urban population had primary education or less, compared to 53 percent of the rural population.

Figure 16: Poverty incidence by education level of respondent and of household head (2007-2011)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

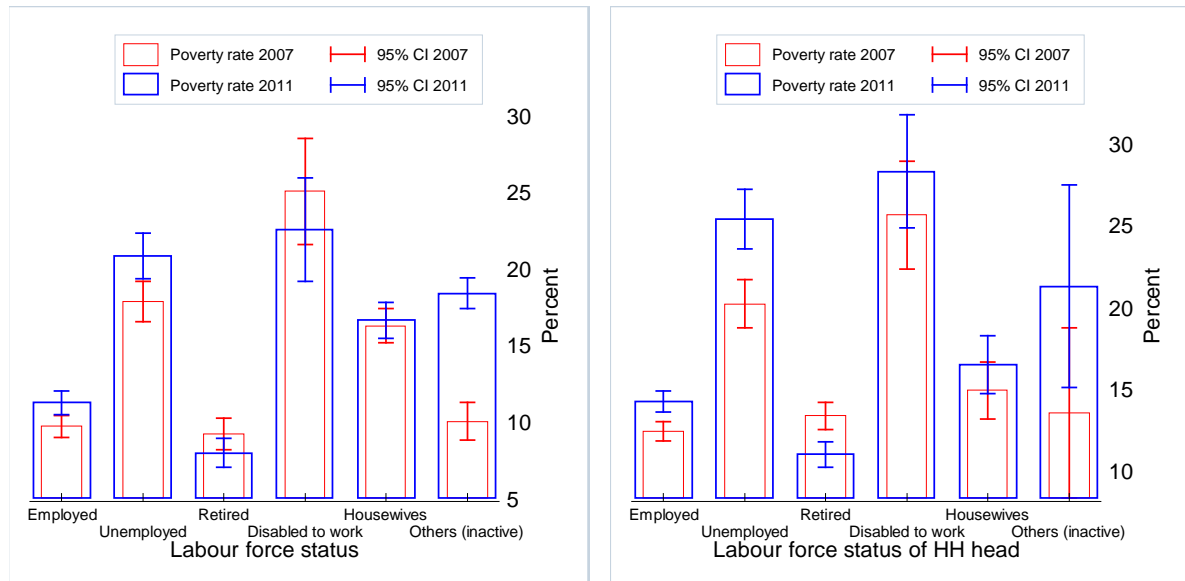
Attachment to the labor market is also a strong determinant of welfare. Poverty rates are lower among the employed in comparison with the unemployed or inactive (particularly inactive due to disability). Poverty rates among the retired appear to be relatively low, and in the case of households headed by a retiree, they fell during the 2007-2011 period. These relative patterns are similar across entities and across urban / rural areas, although poverty incidence is lower in absolute terms in urban areas – 6 percent of those employed in urban areas were below the poverty line compared to 15 percent in rural areas, likewise poverty incidence was 16 percent among the urban unemployed compared to 24 percent among rural unemployed. As with the level of education, poverty associated with unemployment or inactivity is higher if unemployment / inactivity is a characteristic of the head of household.

The unemployed benefit from access to health insurance. Health insurance is provided through the public purse for those registered as unemployed. With an official unemployment rate of over 40 percent compared to an unemployment rate of around 27 percent according to the ILO definition (which counts unregistered workers as employed) it seems likely some people register as unemployed while working in the grey economy. Evidence suggests that one of the main reasons for this is the provision of free health insurance to the unemployed. Just under half of the population is covered by compulsory health insurance, and it is equally distributed across age groups, socio-economic quintiles, type of activity, or education level.

As the result, individuals' health costs are reasonably well covered with fairly low levels of catastrophic expenditures and low poverty increases as a result of out-of-pocket expenses. About 10 percent of households are estimated to have out-of-pocket expenditures (OOP) of 10 percent of total household expenditures, and OOP of over 25 percent of total expenditures are reported by around 2 percent of households. Less than 10 percent of households are impoverished due to out-of-pocket expenditures, most of them are already below the poverty threshold and are being pushed further down

as the result of health payments. OOP are estimated to increase the poverty headcount by around 1 percentage point based on 2011 data.⁴

Figure 17: Poverty incidence by labor force status of respondent and of household head (2007-2011)

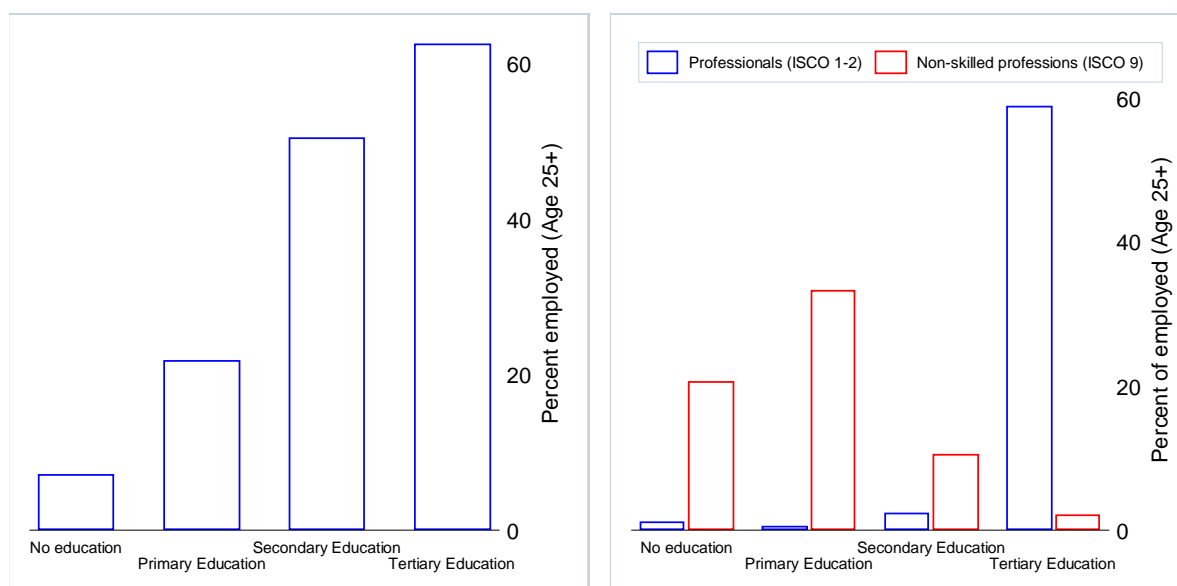


Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Education and employment are clearly linked. The negative association between education and poverty can be due to two channels, both of which have a positive welfare effect: (i) better education improves the chances of employment; and (ii) better education gives access to better jobs. Figure 18 suggests that both are at play in BiH. In the 25+ age group, among those with tertiary education over 60 percent report to be employed in 2011, compared to only 22 percent of those with primary education, and only 7 percent of those with no education. Among the employed in the same age group, 58 percent of those with tertiary education have professional occupations (and only 2 percent have elementary occupations). On the other and, very few of those without tertiary education (including those with secondary education), have professional jobs, while the prevalence of non-skilled occupations is quite high (one third of those with primary education are in non-skilled occupations).

⁴ Note that self-reported health status appears to be stable across expenditure quintiles, even though within each quintile it improves with the level of education of the respondent. This would be consistent with uniform health insurance coverage and low OOP levels.

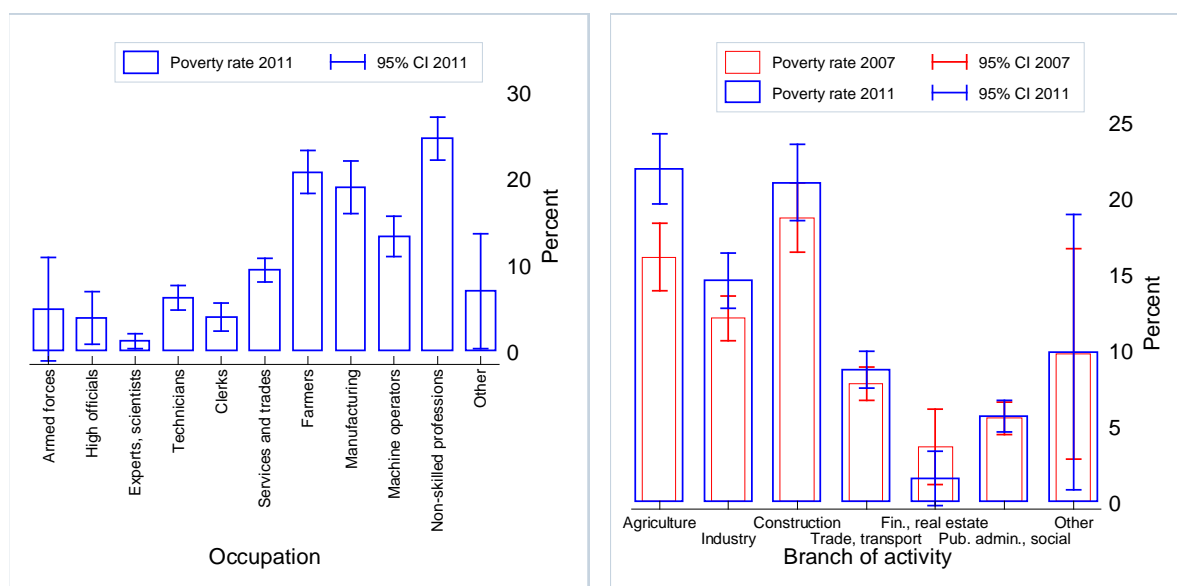
Figure 18: Employment and professional occupation by level of education (2011)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

What type of job one has matters a lot. Poverty incidence varies considerably across occupational categories and economic sectors (Figure 19). Across occupations, it was very low among professionals (legislators, scientific and other professional occupations), and it was also reasonably low in occupations such as technicians and clerks (comprising one third of the 25+ age cohort), while farmers and non-skilled professions record poverty rates in excess of 20 percent of the population in that group in 2011 (the situation was similar in 2007). Across sectors, those employed in the financial/real estate sector, public administration, as well as trades/services sectors recorded relatively low poverty levels, and the opposite was the case in agriculture, industry and construction. Here it should be noted that the increase in the poverty incidence in agriculture and construction between 2007 and 2011 is consistent with the macroeconomic indicators of sectoral growth during this period, which show declines in both areas (Figure 3). Finally, across cohorts, one observes a shift from the agricultural sector / occupations to the trades and services sector / occupations among younger age cohorts (20 percent of those in the 45+ age group were in the trade and services sector, compared to 31 percent in the 25-44 age group).

Figure 19: Poverty incidence by occupation and sector

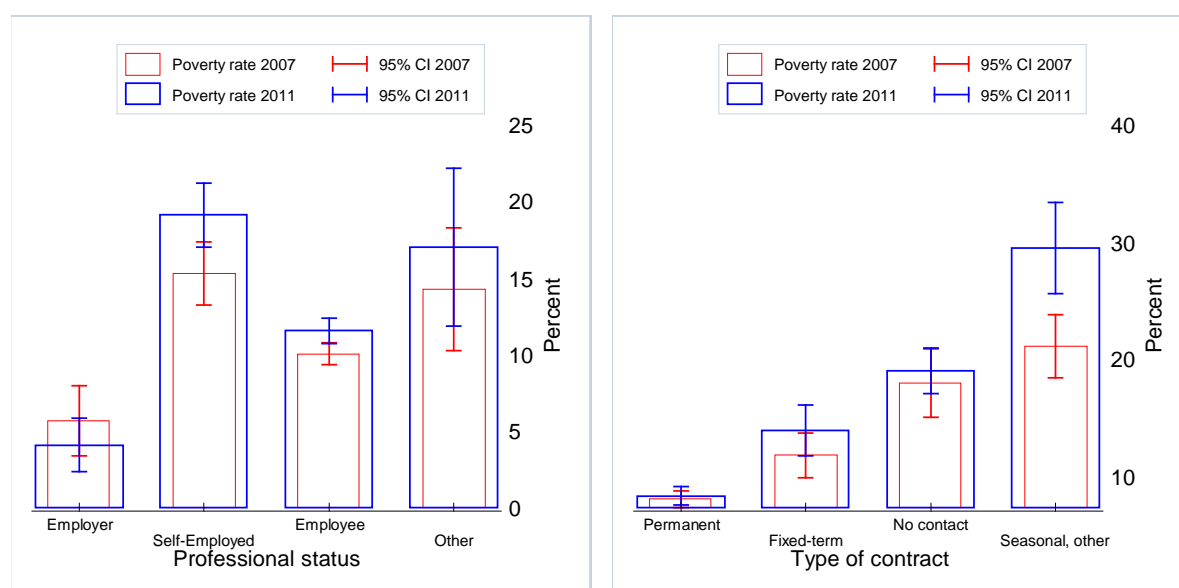


Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Formal, longer-term job contracts are associated with lower poverty levels. Only 8 percent of those with permanent contracts in 2011 were below the poverty line, compared to 19 percent of those working with no contract and 29 percent of those undertaking seasonal work. The data reveal an overall shift away from permanent contracts during 2007-2011; their share declined from 70 percent of the employed population in the 25+ age group to 63 percent. The share of those working without contracts rose from 8 percent to 19 percent during the same period. Across age cohorts, the younger employees appear to have less secure contracts – in 2011 permanent contracts were held by 59 percent of those in the 25-44 age group and by 68 percent of those in the 45+ age group.

Employers and employees report lower poverty rates than those who were self-employed. Three quarters of the employed reported being employees in 2011 and a further 16 percent were self-employed, with a small reduction of the overall share of employees over time. Employers (comprising both agricultural and non-agricultural businesses) record low poverty incidence in both 2007 and 2011. Self-employment was associated with above average poverty incidence in 2011 (but not in 2007). Across age cohorts, a somewhat higher share of the younger cohorts (age 25-44) is comprised of wage workers (77 percent vs 71 percent), and a lower share are self-employed (14 percent vs 19 percent).

Figure 20: Poverty incidence by professional status and type of contract, 2007-2011



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

All of these job characteristics are inter-related. About three quarters of employers and employees had a permanent contract in 2011, compared to only 13 percent among the self-employed. Likewise, over 80 percent of those in professional occupations (ISCO 1-3) had permanent contract arrangements, compared to only 48 percent of non-skilled professionals. Across sectors of economic activity, permanent contracts were most prevalent in public administration and financial services, and much less common in construction and agriculture.

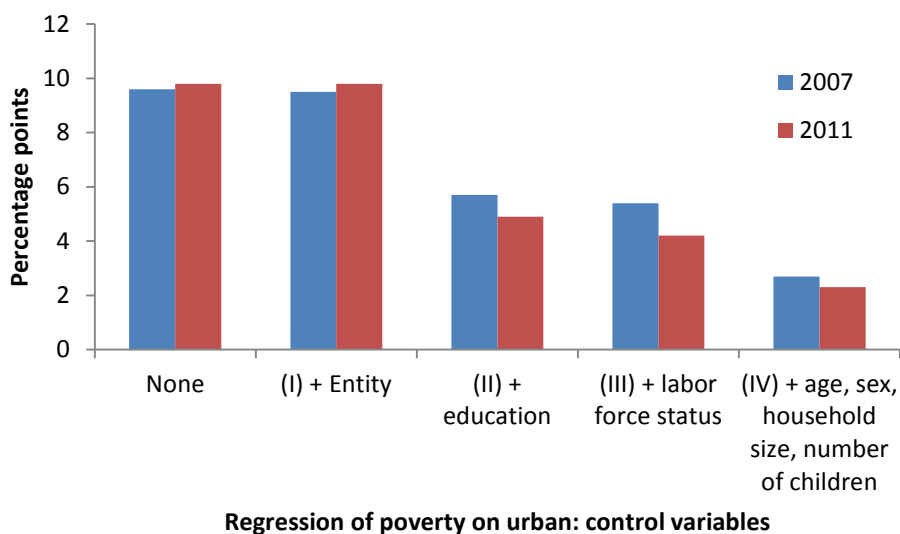
The multivariate profile of poverty confirms the importance of education and labor market attachment, as well as the higher poverty incidence among families with children. The probability of the household being poor decreases as the educational attainment of the household head improves, even when other important characteristics of the household such as its size, or labor market participation of the head of household are held constant. Likewise, unemployment is associated with a greater probability of being below the poverty line, even abstracting from the differences in the levels of education between the employed and unemployed. The relationships between education and unemployment on the one hand, and poverty on the other hold across both 2007 and 2011 surveys, and across urban and rural areas. At the same time, the conditional correlation between retirement and poverty is no different than that of employment and poverty. Finally, the multivariate profile confirms that larger households are more likely to be poor, on average, and that even controlling for the total household size, a larger number of children in the household is associated with greater poverty. This is primarily the case in rural areas.

Among those who are employed, the type of employment matters. Table 6 reports regression coefficients for each job characteristic separately, as well as jointly; all estimates conditional on the set of the baseline socio-demographic characteristics in table 5. The estimates confirm the higher

conditional probability of being in poverty among those with informal or non-existing contracts, relative to those with permanent contract arrangements. Even accounting for variation in contract type, it is still the case that households where the household head is employed in agriculture, industry or construction (relative to trade/transport) are more likely to be poor. Similarly, households where the household head is in a non-skilled occupation are more likely to be poor, even accounting for differences in contract type, sector of employment and type of employment. At the same time, note that the unconditionally lower (higher) poverty in the public administration (construction sectors (relative to trade/transport) is mostly on account of differences in other related characteristics such as contract type, or occupation and once these are accounted for, the differences in poverty rates disappear. Similarly, the higher unconditional poverty incidence among the self-employed disappears once other job characteristics are taken into account; in fact, self-employment of the head of household is associated with a lower probability of being below the poverty line in 2011, according to estimates in column (V).

Household characteristics – most prominently education – account for most of the higher poverty incidence in rural areas. The raw difference between poverty incidence in rural and urban areas was cca 10 percentage points in 2011, and this difference persists once we account for differences between FBiH and RS. However, taking into account differences in educational attainment (here of the head of household) between rural and urban areas reduces the differential between rural and urban poverty incidence by half (Figure 21). Once we also hold constant characteristics such as labor force status and household demographics, the differences in poverty rates between urban and rural areas falls to just over 2 percentage points in 2011 (the patterns appear to be similar in 2007 data).

Figure 21: Urban-rural poverty headcount differential



Notes: “None” shows the raw difference between rural and urban poverty headcount in percentage points. Subsequent columns show remaining difference after accounting for various household characteristics.

5. Inequality and inclusive growth in BiH

5.1. Overall income inequality in BiH

Inequality in BiH is relatively moderate and remained stable during the 2007-2011 period.⁵ The country-wide Gini index⁶ in 2011 stood at 33.4. Across entities, inequality is higher in FBiH than in RS; it is also higher in urban areas compared to rural areas (both differences are statistically significant). Overtime, there were no statistically significant changes recorded in the level of inequality (as measured by the Gini index), either for BiH overall, or for the regional entities or urban/rural areas. This can also be seen by looking at the Lorenz curves for 2007 and 2011 (Figure 23).

Table 5: Overall inequality (Gini coefficient), 2007-2011

	2007	2011
Urban	32.8	33.3
Rural	31.8	31.9
FBiH	33.7	34.3
RS	32.1	31.0
BD	32.7	32.2
Total	33.3	33.4

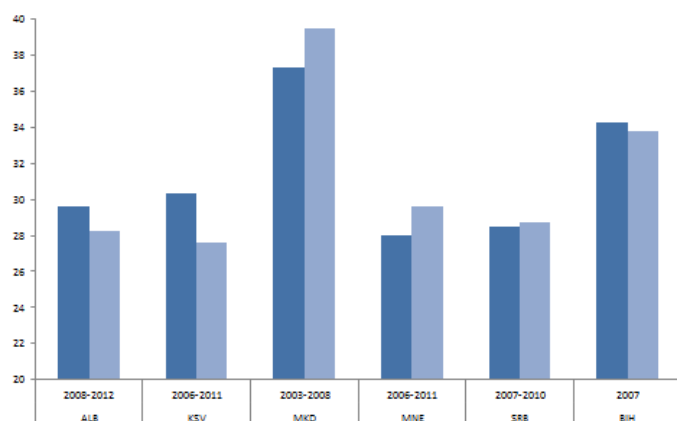
Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

The level of inequality in BiH is higher than elsewhere in the Western Balkans region, with the exception of FYR Macedonia. Cross-country comparable ECAPOV estimates of household expenditures suggest that the Gini index of inequality in BiH is some 4 or 5 points higher than in other countries such as Albania, Kosovo, Montenegro or Serbia. The only country in the Western Balkans with a higher level of inequality is FYR Macedonia, where the latest available estimates (for 2008) put the Gini index just shy of 40 (Figure 22). In terms of the recent dynamics of inequality, no uniform patterns can be observed -- Albania and Kosovo experienced falling inequality throughout the period of the crisis and early recovery, while the opposite is observed for Montenegro, and, pre-crisis, for FYR Macedonia.

⁵ Inequality measures the distribution of the welfare indicator (in this case total per capita consumption expenditure, not regionally deflated) in the total population. If all individuals in the population have the same per capita consumption expenditures there is no inequality. If all individuals but one have zero per capita consumption expenditure and all expenditure is concentrated in only one individual, inequality is at the highest possible level.

⁶ The Gini index which takes a value of 0 if there is no inequality and 100 if there is complete inequality.

Figure 22: Inequality (Gini index) over time across the Western Balkans

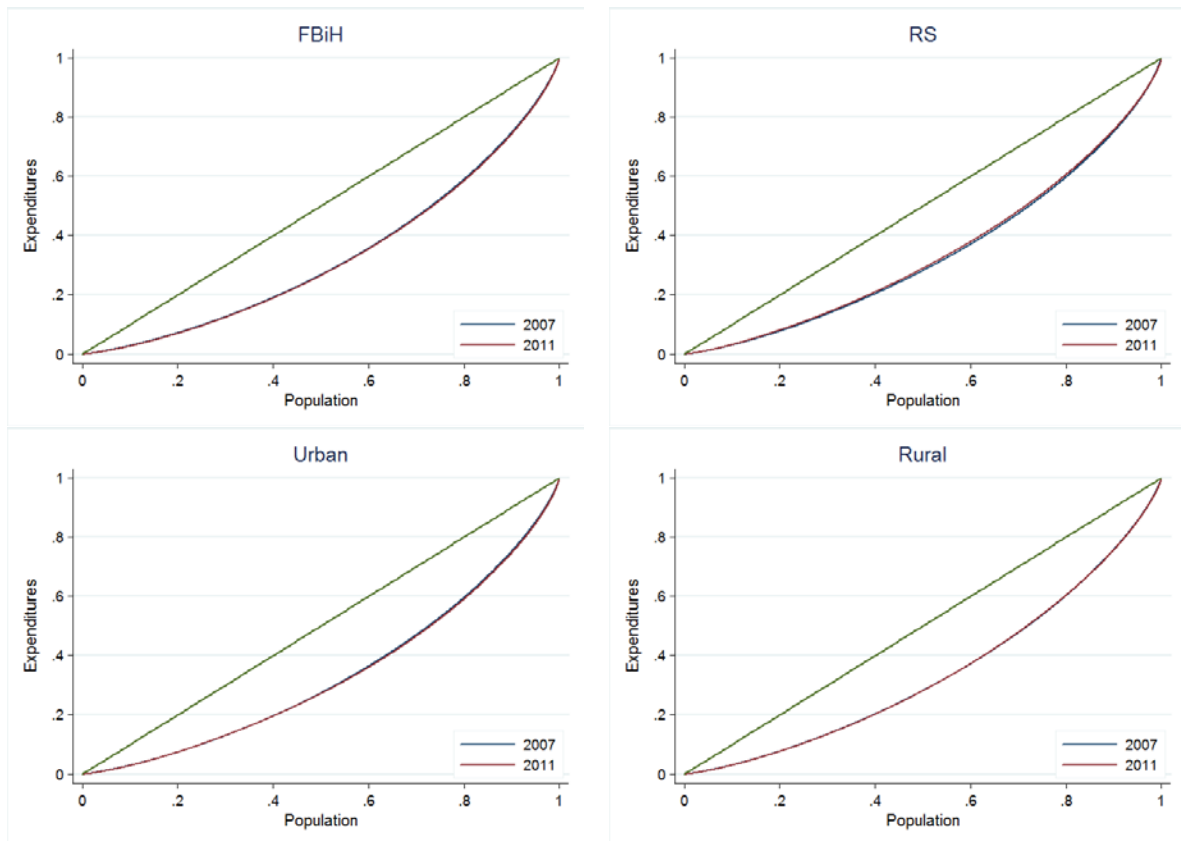


Notes: Cross-country comparable ECAPOV estimates.

No general deterioration of welfare between 2007 and 2011 can be observed from the data. The Generalized Lorenz curves (Figure 25) which allow one to make judgments about changes in welfare according to a broad range of welfare functions⁷, do not reveal second-order stochastic dominance between 2007 and 2011. At subnational level, welfare was higher in urban areas in 2011 (in the sense of second-degree stochastic dominance), while it is not possible to rank the subnational entities (FBIH and RS) according to a similar criterion (Figure 26).

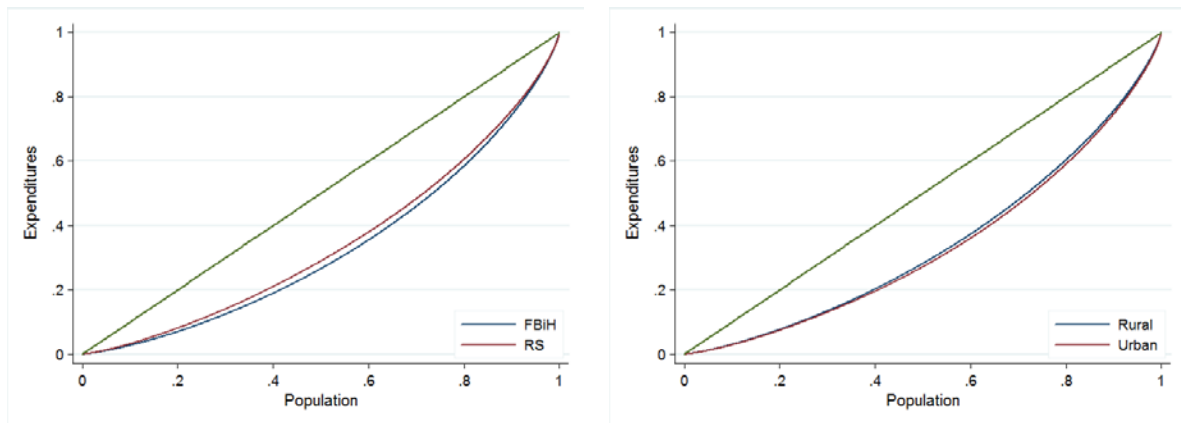
⁷ In fact, for every utilitarian welfare function with identical and increasing utility function that exhibits diminishing marginal utility (for a detailed discussion, see Foster et al., 2013).

Figure 23: Subnational Lorenz curves, by year



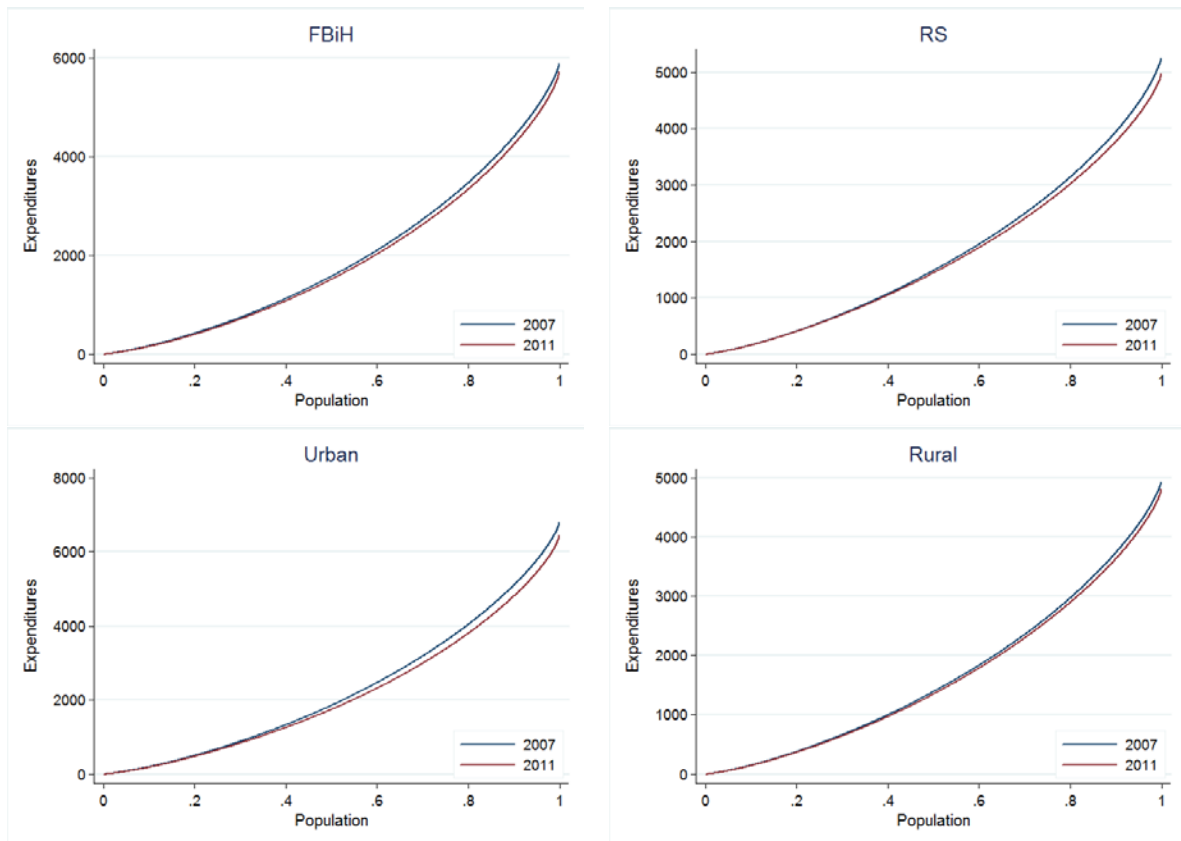
Source: Staff calculations based on EHBS 2011 data.

Figure 24: Subnational Lorenz curves, 2011



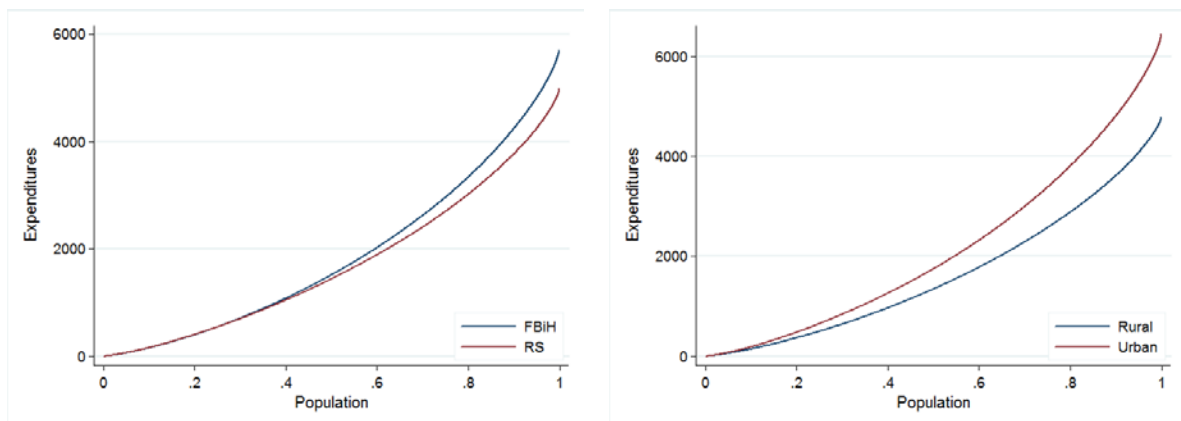
Source: Staff calculations based on EHBS 2011 data.

Figure 25: Generalized Lorenz curves for sub-national entities, by year



Source: Staff calculations based on EHBS 2011 data.

Figure 26: Sub-national generalized Lorenz curves, 2011



Source: Staff calculations based on EHBS 2011 data.

5.2. Inclusive growth

While section 5.1 presented an overall picture of income inequality in BiH, this section looks in more detail at income dynamics across the distribution. Has economic growth been shared by all segments of society, and, likewise, has the financial crisis affected some groups (especially those already poor or vulnerable) more than others? In this section inclusive growth is assessed through the lens of *shared prosperity* which focuses on the growth of incomes of the bottom 40 percent of the population in BiH and some of its key drivers (see Box 1 for definition and rationale).

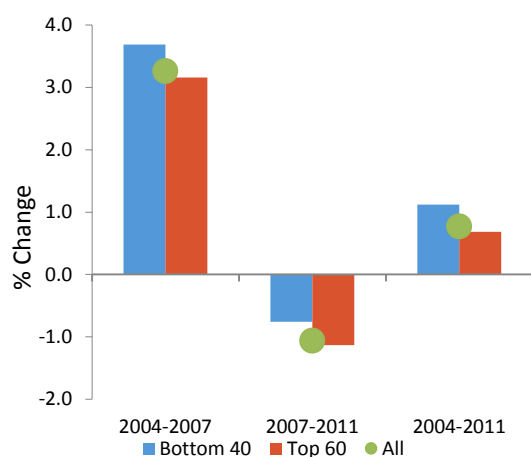
Box 1: Shared Prosperity – concept and rationale

The World Bank operationalizes *shared prosperity*, or inclusive economic growth, in terms of fostering income growth of the bottom 40 percent of the population in every country. Given the focus of ending extreme poverty (in terms of the population living below US\$1.25/day) in the poorest countries in the world, the concept of shared prosperity reinforces the World Bank’s commitment to increasing the welfare of poor and vulnerable individuals in all countries of the world. This is because, judged by national standards, significant pockets of poverty remain in many developing countries; hence raising the incomes of the poor in BiH and other countries means ensuring that rising prosperity benefits the less well-off. The bottom 40 percent of the population as the target for the shared prosperity goal, while arbitrary, roughly coincides with the proportion of the population that is considered moderately poor in middle-income countries. Importantly, while shared prosperity emphasizes the need to raise the incomes of the worse off, the goal is not redistributing a pie of a given size, but rather expanding the size of the pie in such a way that the welfare of those at the lower end of the income distribution rises as quickly as possible.

Source: World Bank. 2013. “The World Bank Group Goals: End Extreme Poverty and Promote Shared Prosperity,” Washington, DC.

The bottom 40 percent of the population appear to have benefited significantly from the pre-crisis episode of economic growth. Between 2004 and 2007, the B40 saw average annual growth in consumption expenditures of around 3.7 percent. This compares to 3.2 percent of the wealthiest 60 percent of the population (T60) (Figure 27). This reflects the strong growth and employment performance in areas such as agriculture, manufacturing and construction during the pre-crisis period.

Figure 27: Historic income dynamics 2004-2007, 2007-2011 and overall.



Source: HBS 2004, 2007; EHBS 2011 data.

During 2007-2011 average consumption expenditures among the bottom 40 percent of the population fell less than the national average.⁸ Overall, expenditures fell at an annualized rate of 1.06 percent, but expenditures for the bottom forty percent of the population (B40 group) fell by 0.76 percent on annualized basis. The consumption expenditure dynamics in BiH are similar to those in Albania, where the consumption expenditures of the B40 group fell during the crisis, but marginally less so than the consumption expenditures for the population overall. Serbia also experienced falling consumption expenditures in the B40 group, but there it fell proportionally more than the population average. Not all countries in the Western Balkans share the pattern of falling expenditures during the financial crisis, though. In Kosovo and in Montenegro expenditure dynamics of the bottom 40 percent were positive, and in the case of Kosovo they outpaced the average growth of consumption expenditures in the country.

Figure 28: Shared prosperity in the Western Balkans

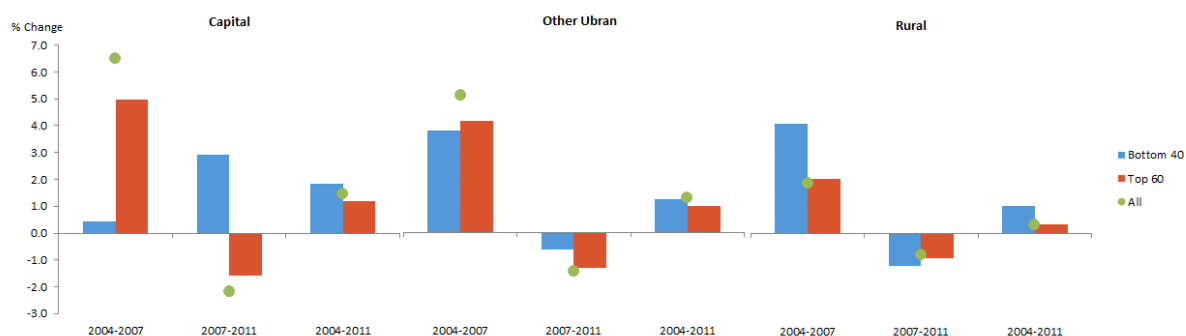


Source: World Bank (2014); EHBS 2011 data.

The B40 group in rural areas performed significantly better than their T60 and their urban counterparts during the pre-crisis growth period, but also was more affected by the crisis. The B40 in rural areas grew at an annual average of 4 percent between 2004 and 2007 compared to 2 percent for the rural T60. Indeed, growth rates for the B40 between 2004 and 2007 were faster in rural areas than in urban ones. In addition to strong agricultural growth during this period, this may also reflect the effect of the social protection system, including war-related benefits. On the other hand, in Sarajevo pre-crisis growth favored those in the upper tail of the (national) distribution, with the economic crisis affecting a similar segment of the population, even though the overall period performance during the 2004-2011 period favors the B40 group.

⁸ Note that the shared prosperity analysis is based on harmonized ECAPOV consumption expenditure aggregates.

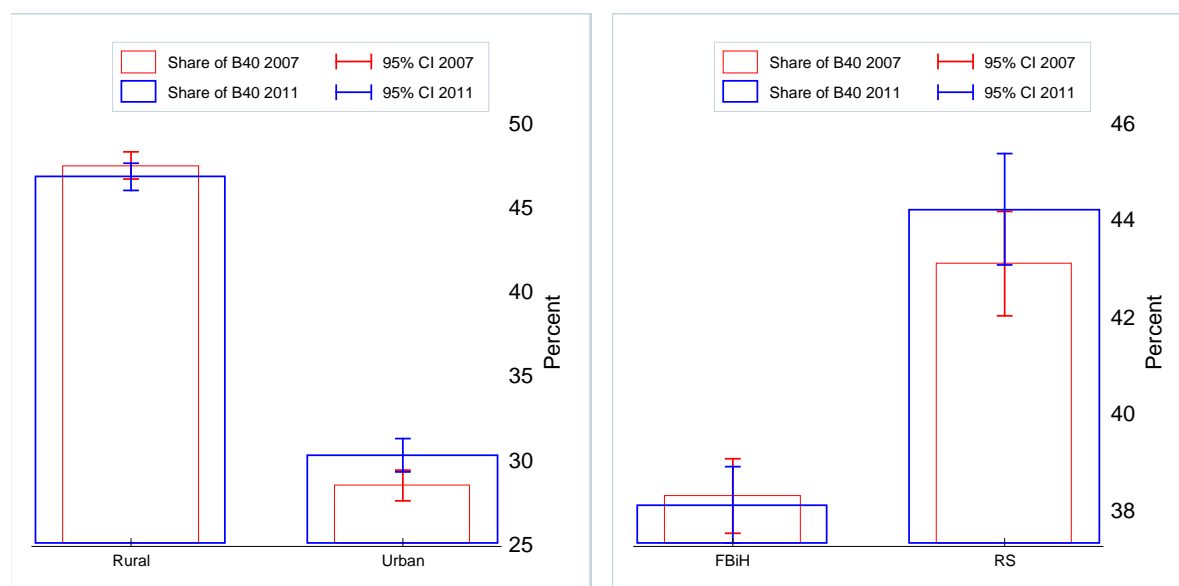
Figure 29: Shared prosperity for rural and urban areas



Source: HBS 2004, 2007; EHBS 2011 data.

In terms of geographic location, the incidence of the B40 group is higher in rural areas, as well as in RS. Recall that poverty incidence in BiH is higher in rural areas, but does not differ across the Federation and Republika Srpska. In the case of the bottom 40 percent of the population in terms of welfare, both in 2007 and in 2011, they are also more heavily concentrated in rural areas, but also in RS, as compared to FBiH, and these patterns have been generally stable during the 2007-2011 period.⁹ While some of the higher incidence of the B40 group in RS is due to its smaller share of urban population, it is also the case that urban population in FBiH has higher welfare on average compared with the urban population in RS – 27 percent of the FBiH urban population were in the (nationally defined) B40 group, compared with 36 percent of the urban population in RS.

Figure 30: Geographic incidence of the B40 group



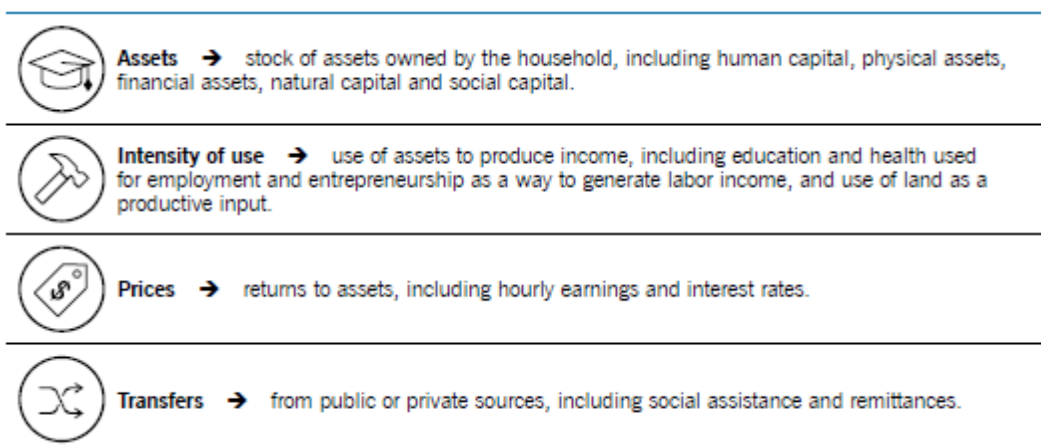
Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

In order to shed some light on the drivers of shared prosperity in BiH, the analysis in this chapter relies, subject to data availability, on the recently developed assets framework. Bussolo and Lopez-

⁹ Note that shared prosperity is defined in terms of the anonymous bottom 40 percent of the population, i.e. it does not track the position of the starting period (2007) bottom 40 percent of the population in the 2011 data, rather the B40 group in 2011 is defined in terms of the bottom 40 percent of the population according the 2011 welfare distribution.

Calva (2013) propose a useful framework for understanding the long-term productive capacity of the household, which allows them to boost their income over time. The framework identifies key drivers of this productive capacity (i) the asset endowment of the household; (ii) the intensity with which the assets are used to generate income; (iii) the returns to those assets; and (iv) transfers from public and private sources into the households (Figure 31). As noted by Bussolo and Lopez-Calva (2013), the asset framework helps highlight the differential income-generating capacity of the B40 group as resulting from differences in asset accumulation, intensity of asset use, and returns to assets. The comparisons between the B40 and T60 groups presented in this section aim to highlight this differential capacity.

Figure 31: What determines the medium and long-term productive capacity of the household?



Source: World Bank (2014, p.10), based on Bussolo and Lopez-Calva (2013).

The bottom 40 percent rely on a smaller share of working age adults providing for the needs of the household. The share of large households (with at least 5 members) is considerably higher in the B40 group compared with the complement T60 (top 60 percent of the population). In this respect the B40 is very similar to the bottom quintile of the population. In addition to larger households, households in the B40 group also have a higher ratio of dependents to working age adults. Notably, the B40 group and the T60 group are similar in terms of the share of elderly (age 65+) dependents; it is the higher share of children under the age of 15 that mainly distinguishes the B40 group from the T60 group.

Figure 32: Share of households with at least 5 members

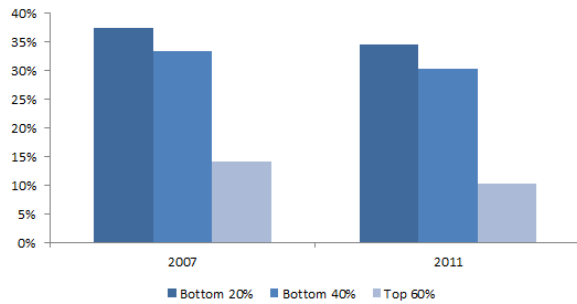


Figure 33: Ratio of dependents (children + elderly) to working age adults (15-64)

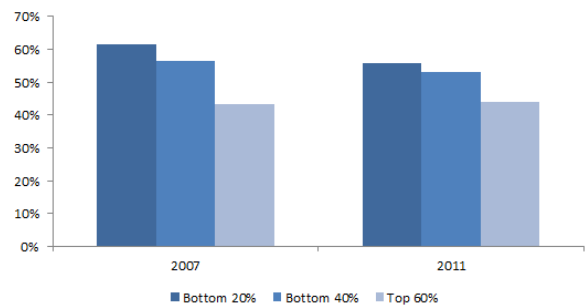


Figure 34: Ratio of children to working age adults

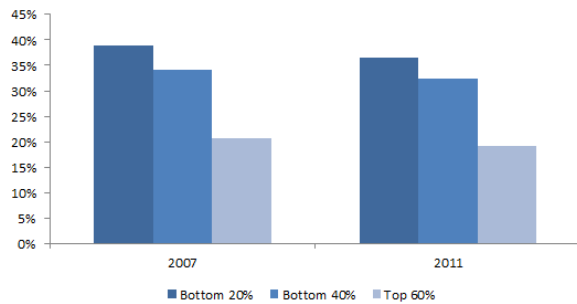
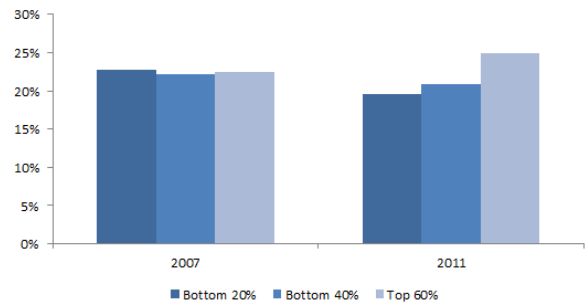


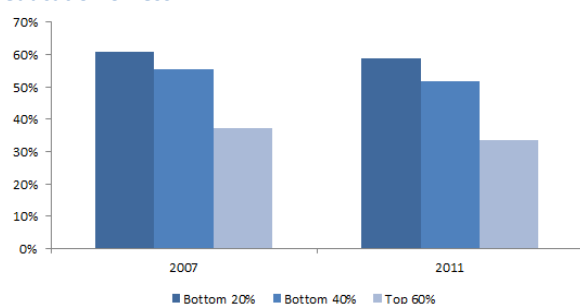
Figure 35: Ratio of elderly to working age adults



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

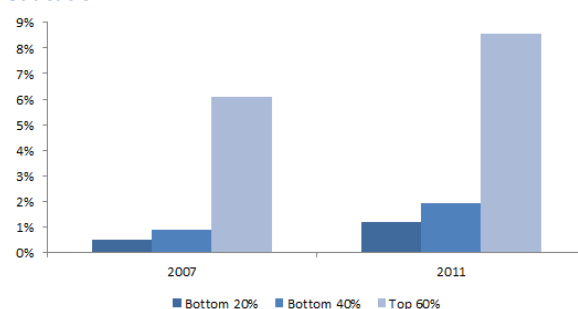
The stock of human capital in the B40 group remains quite low, both in absolute terms and in comparison with other Western Balkans countries. More than half of individuals in the B40 group had completed at most the primary education level in BiH, whereas only 2 percent had completed tertiary education. In comparison, the share of tertiary education was 4 times higher (and the share of primary-or-lower education was almost 20 percentage points lower) in the T60 group. Across the Western Balkans countries the B40 group in BiH has the lowest share of individuals with a tertiary level of education.

Figure 36: Share of individuals (15+) with primary education or less



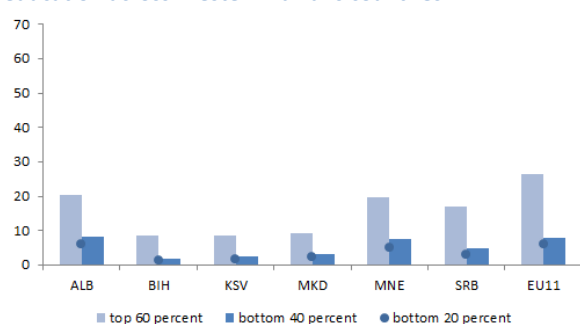
Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Figure 37: Share of individuals (15+) with tertiary education



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Figure 38: Share of individuals (15+) with tertiary education across Western Balkans countries



Notes: World Bank (2014, figure 11) with data for BiH updated from 2007 to 2011. Data for other countries as follows: Albania (2012), Kosovo (2011), FYR Macedonia (2008), Montenegro (2011), Serbia (2010), EU11 (2010).

The stock of other assets in the B40 group is also lower vis-à-vis the T60 group. Recent analysis reveals that across all countries in the Western Balkans the households in the B40 group have a lower stock of financial assets, as measured by the share of households who were able to save any money over the previous year. While it is difficult to obtain systematic estimates for other types of assets, such as land or social capital, findings from several countries in the region also suggest that in comparison with the T60 group, the B40 population has lower access to arable land, a higher incidence of exclusion of certain groups such as women from land ownership, and smaller informal support networks (for details, see World Bank, 2014).

The population in the B40 group has a more precarious attachment to the labor market. In the Western Balkans region, BiH has one of the lowest shares of employed individuals in the working age population in the B40 group (World Bank 2014). Within BiH, a larger share of the working age population in the B40 group is unemployed, and a smaller share is employed in comparison with the T60 group, and the discrepancy between the two groups in terms of the unemployed population has increased between 2007 and 2011.

Key differences are observed particularly for women. Decomposing employment rates by gender reveals a lower (higher) share of employed (unemployed) men in the B40 group relative to the T60 group. However, the differences are even more pronounced among women of working age. In the B40 group, 23 percent of women in this age bracket were employed in 2011, compared to 40 percent in the

T60 group. The key difference is that the B40 group is characterized by a higher share of women who declare themselves to be housewives (51 percent vs 36 percent in 2011).

Figure 39: Labor force status (25-64 age group)



Figure 40: Labor force status (men, 25-64 age group)

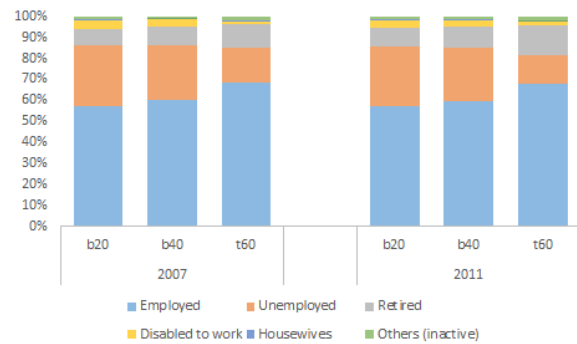
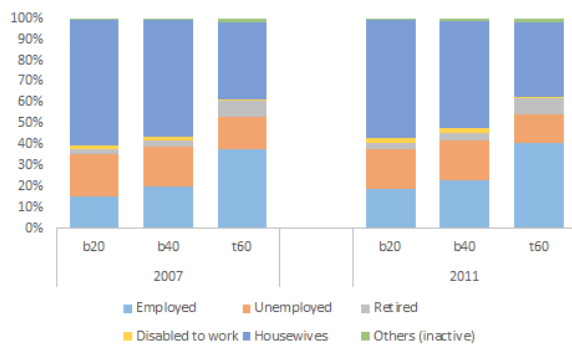


Figure 41: Labor force status (women, 25-64 age group)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Unemployment in the B40 group is particularly high among youth. Overall in 2011, the difference between the share of unemployed adults of working age in the B40 group and the T60 group was about 8 percentage points. Among youth (15-24), 30 percent were unemployed in the B40 group, compared to 19 percent in the T60 group. Among those nearing retirement (age 55-64) the differences between the B40 group and the T60 group are more muted, with the main difference being a somewhat lower share of employed individuals, and a higher share of housewives in the B40 group. In both cases, the distribution of employment in the B40 group appears to resemble rather closely the distribution in the bottom consumption expenditure quintile.

Figure 42: Labor force status (15-24 age group)



Figure 43: Labor force status (55-64 age group)

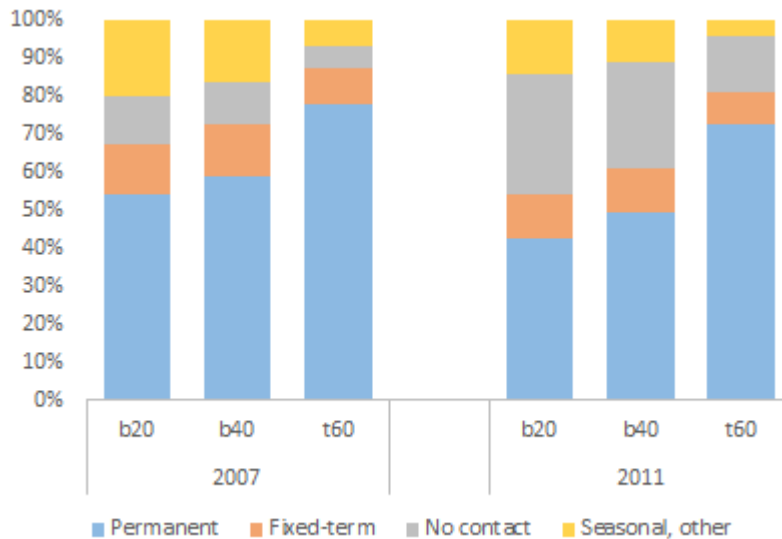


Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Akin to the population below the poverty line, the B40 group is characterized by less formal contractual arrangements. Just under 50 percent of the employed population (age 15-64) in the B40 group had permanent contracts, compared to over 70 percent in the T60 group. Notably, the share of

those with permanent contracts decreased in the aftermath of the financial crisis, with a much higher share of those without contracts across the distribution. In the meantime, the relative share of fixed contracts remained stable through the crisis, while the share of seasonal contract decreased. The reliance on informal contracts by firms was a common strategy of coping with the effects of the crisis in many European countries, and there appears to be good evidence of this taking place in the context of BiH.

Figure 44: Type of contract (employed, 15-64 age group)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Notable discrepancies between the B40 and the T60 groups persist, particularly in highly skilled occupations and in sectoral composition. While the share of the employed in the 15-64 age group with services/trades occupations is similar across B40 and T60 groups, and, to a smaller extent, among machine operators, there are notable differences between the composition of employment across the B40 and T60 groups for occupations that are either highly skilled or unskilled. A much smaller share of the B40 group reports professional, or even technical and clerical occupations, relative to the T60 group. At the other end of the skill distribution, a much higher share of the B40 group reports being employed in farming or unskilled occupations. These patterns appear to be broadly similar across the 2007 and 2011 rounds of the HBS survey. Across sectors, a much higher share of the T60 group is employed in the public sector (public administration, social services), whereas in the B40 group agriculture and construction play a more prominent role. Other sectors, such as industry, appear to be more uniformly distributed.

Figure 45: Occupational distribution (15-64 age group)

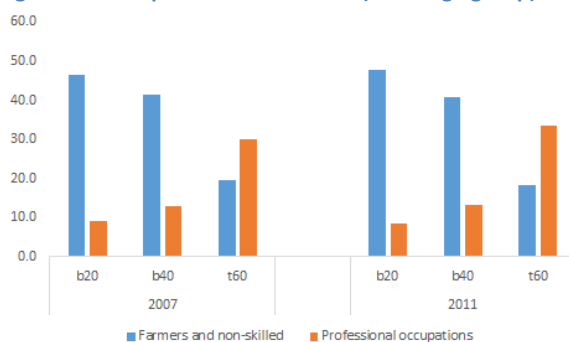
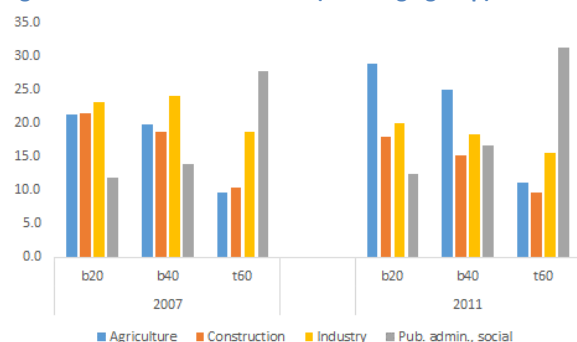


Figure 46: Sectoral distribution (15-64 age group)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Low wage earners can face disincentives to work from labor taxation and social protection. Recent research from the Western Balkans region suggests that low wage face higher implicit tax rates associated with foregoing unemployment benefits upon returning to the labor market (this is known as the unemployment trap). Similarly, those receiving social assistance are can face reduced incentives of re-engaging with the labor market, depending on the design of the social assistance programs (this is known as the inactivity trap). The evidence suggests, however, that compared to other countries in the Western Balkans, both the inactivity trap and the unemployment trap are relatively less pronounced (see World Bank 2014 for a detailed discussion).

The B40 group is also characterized by lower wages, not fully explained by differences in underlying characteristics. According to 2011 data wages in the B40 group were 40 percent lower than in the T60 group. An Oaxaca-Blinder decomposition of the B40/T60 wage differential suggests that only 40 percent of the difference in wages in explained by the difference in the underlying characteristics of the two groups, including location, age, education, sector of employment, occupation, and type of work contract. The largest differences in returns (the unexplained component of the decomposition) are observed across sectors (in particular in agriculture and construction), and across contract types (permanent vs non-permanent), as well as in urban areas outside of Sarajevo.

The B40 group in BiH is characterized by a somewhat lower share of wage income and a higher share of pensions and social assistance. According to 2011 data, income from wage employment accounted for about 54 percent of total income in the B40 group, compared to 60 percent in the T60 group. On the other hand, the B40 group relied to a somewhat greater extent on income from non-wage sources, particularly social assistance. These patterns are consistent with the lower levels of employment in the B40 group and the more informal occupations among those who are employed, although differences in the household income composition appear to be muted.

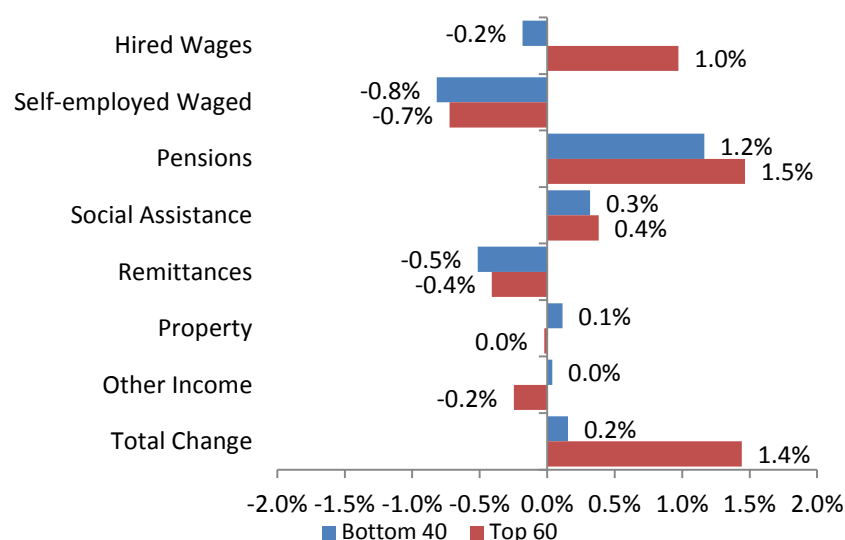
Table 6: Share of total household income by income source (%)

	2007		2011	
	B40	T60	B40	T60
<i>Labor income</i>	67.9	71.5	65.6	69.2
Hired wage	52.0	58.9	53.9	59.7
Self-employed wage	16.0	12.6	11.7	9.6
<i>Non-labor income</i>	32.0	28.5	34.3	30.8
Pensions	17.4	17.0	21.2	20.8
Social Assistance	7.0	4.8	8.1	5.9
Remittances	5.1	4.0	2.1	2.1
Property	0.2	0.5	0.3	0.5
Other	2.5	2.1	2.7	1.5
Total	100	100	100	100

Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

Between 2007 and 2011 there is an observable decrease in the share of self-employed wages and remittances, and a corresponding increase of the relative importance of pensions across the entire distribution, but especially for the B40 group. Overall there has been no observed real increase in incomes in the B40 group between 2007 and 2011. This is in contrast to a 6 percent increase in total income for the T60 group. While income dynamics by source of income are broadly similar for most categories, there was a decrease in wages in the B40 group, whereas in the T60 group this income category has experiences a positive growth of 4 percent.

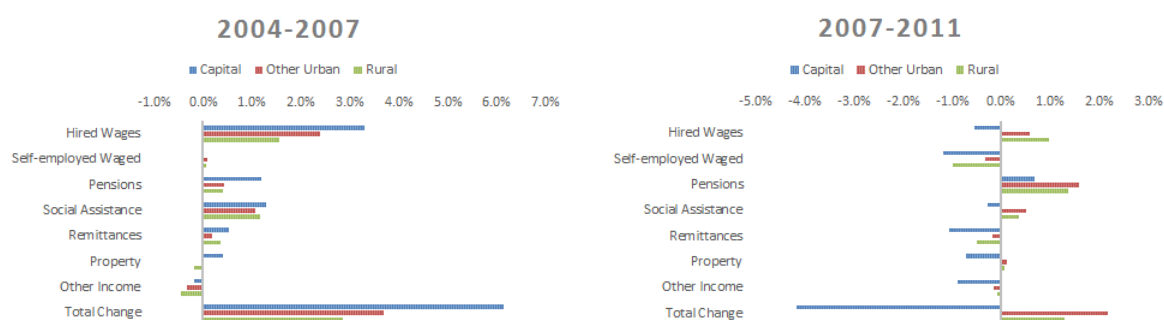
Figure 47: Income dynamics (annualized) for B40 and T60 groups by income source, 2007-2011



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

The increase in the relative importance of pensions during the 2007-2011 period was most prominent in rural areas as well as urban areas outside of the capital. Growth in hired wages was negatively affected primarily in Sarajevo, where it declined during 2007-2011, whereas changes in hired wages during the period were positive outside of the capital. In Sarajevo, all sources of income with the exception of pensions record a negative growth spell during the crisis. Remittances appear to have played a secondary role during the pre-crisis growth period, at least in relative terms, and they do not appear to be counter-cyclical in that the economic slowdown is also associated with a fall in remittances.

Figure 48: Income dynamics in urban and rural areas (2004-2007 and 2007-2011)



Source: Staff calculations based on HBS 2007 and EHBS 2011 data.

New data confirm earlier findings that it is difficult for the B40 group to contribute to economic growth. The recent analysis of cross-country data for the Western Balkans region concluded that the population in the B40 group faces a number of obstacles, including larger households to care for, combined with a lower stock of assets (human and otherwise), and a lower intensity of asset use (World Bank, 2014). This is confirmed by the new data from the EHBS 2011. The B40 population has lower levels of education, lower employment rates, particularly among women, and higher unemployment rates among youth. Moreover, among those in the B40 group who are employed, a higher share work

based on temporary or no contracts, and they are also less likely to be in occupations and sectors of activity that rely on highly skilled labor.

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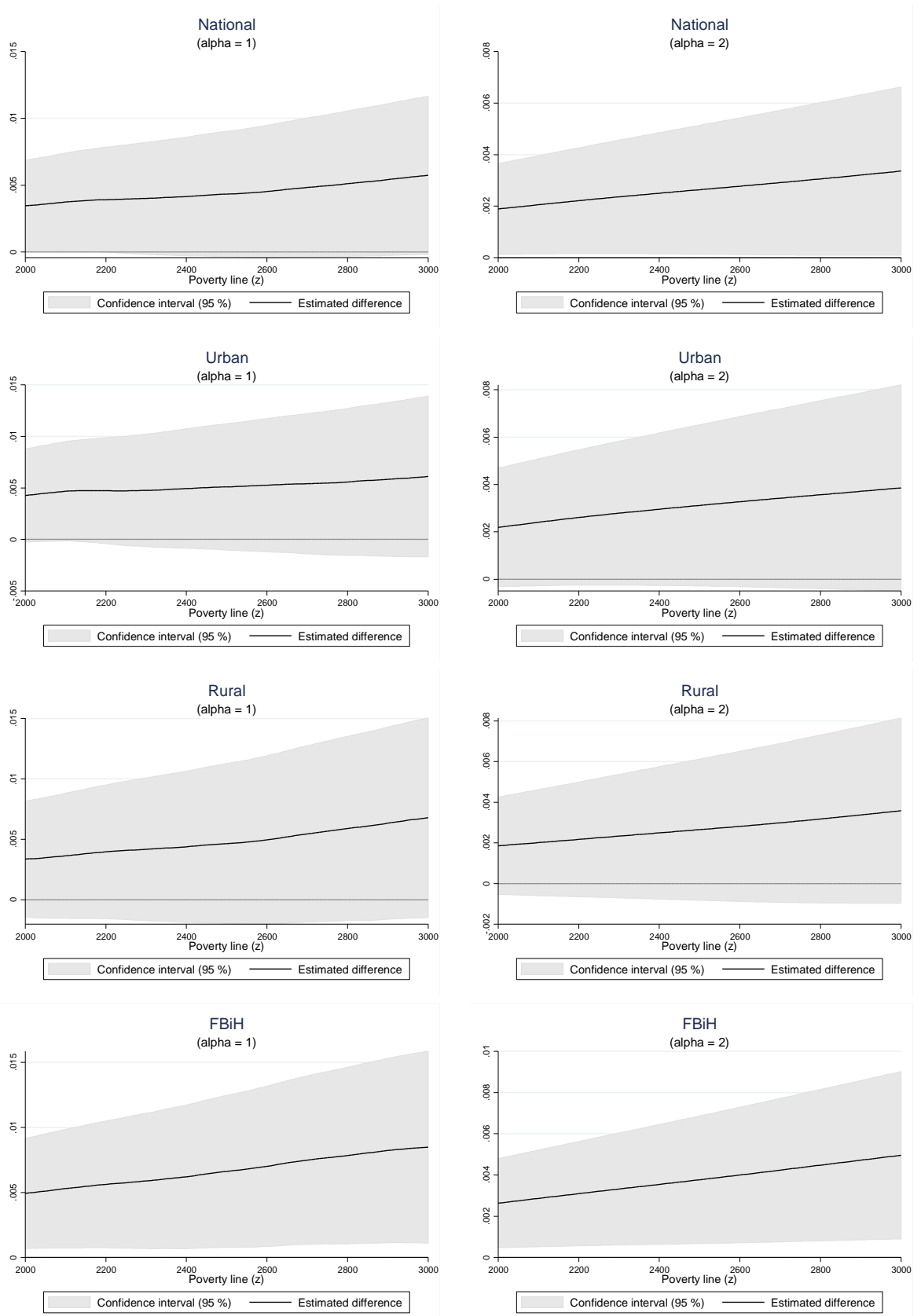
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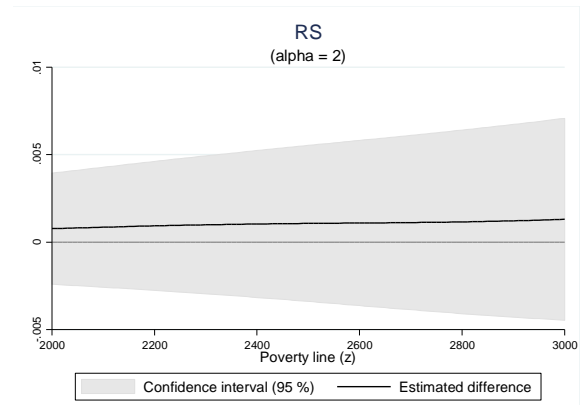
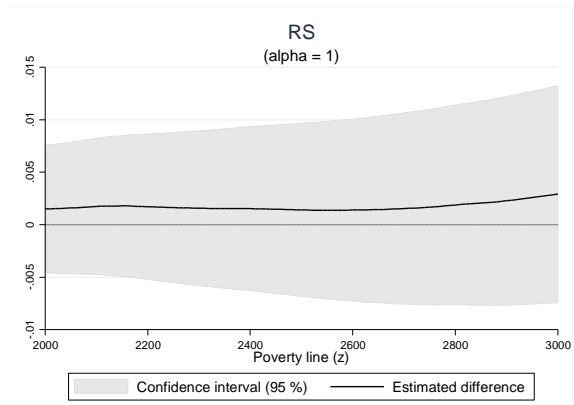
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Annexes

Figure 49: Difference between 2011 and 2007 FGT1 and FGT2 curves over +/- 20% range from the poverty threshold





Notes: Differences normalized by the poverty line. Source: Staff estimates based on HBS 2007 and EHBS 2011 data.

Table 7: Labor market characteristics and poverty among the employed, 2011

Dep var: 1 if below the poverty line	(I)	(II)	(III)	(IV)	(V)
<i>Baseline occupation (Services and trades)</i>					
Armed forces	-0.084*** (0.020)				-0.064*** (0.023)
High officials	-0.038* (0.020)				-0.028 (0.021)
Experts, scientists	-0.004 (0.018)				-0.007 (0.018)
Technicians	-0.024 (0.015)				-0.040** (0.016)
Clerks	-0.005 (0.019)				-0.001 (0.019)
Farmers	0.043* (0.024)				-0.051 (0.040)
Manufacturing	0.068*** (0.024)				0.026 (0.026)
Machine operators	0.001 (0.019)				-0.013 (0.019)
Non-skilled professions	0.096*** (0.024)				0.056** (0.024)
Other	-0.004 (0.054)				-0.002 (0.057)
<i>Baseline sector (Trade, transport)</i>					
Agriculture		0.067*** (0.022)			0.072** (0.034)
Industry		0.040** (0.016)			0.041** (0.017)
Construction		0.076*** (0.020)			0.032 (0.021)
Fin., real estate		0.005 (0.021)			0.011 (0.021)
Pub. admin., social		-0.01 (0.013)			-0.017 (0.014)
Other		0.001 (0.066)			-0.018 (0.072)
<i>Baseline professional status (Employee)</i>					
Employer			-0.051*** (0.014)		-0.064*** (0.015)
Self-Employed			0.024 (0.016)		-0.058*** (0.022)
Other			0.086 (0.094)		0.024 (0.093)
<i>Baseline contract type (Permanent)</i>					
Fixed-term				0.006 (0.022)	-0.012 (0.022)
No contract				0.067*** (0.018)	0.092*** (0.022)
Seasonal, other				0.155*** (0.029)	0.171*** (0.034)
<i>Socio-demographic controls</i>					
Constant	-0.065*** (0.022)	-0.081*** (0.022)	-0.053*** (0.021)	-0.073*** (0.021)	-0.078*** (0.024)
R-squared	0.135	0.13	0.125	0.138	0.157
Obs	3267	3267	3267	3267	3267

Notes: Estimates from weighted OLS regressions. Socio-demographic controls include all variables reported in table 2, along with a dummy for urban/rural area of residence. Robust standard errors in parentheses.

Table 8: Oaxaca-Blinder decomposition of wages, 2011

Factor	Endowment	Coefficients	Interaction
Median-standardized age	0.0091 ***	0.0006	0.0010
Median-standardized age squared	-0.0040 *	-0.0100	-0.0008
Male	-0.0417 ***	-0.1129 ***	0.0162 ***
<u>Marital Status (Base = Married)</u>			
Single	0.0009	-0.0182	-0.0018
Living together	0.0001	-0.0009	0.0000
Divorced/Separated	0.0005	0.0003	0.0001
Widow/er	0.0049 **	-0.0073 **	-0.0038 *
Male x Single	-0.0006	0.0247	0.0004
Male x Living together	0.0003	0.0048	-0.0004
Male x Divorced	-0.0002	0.0016	0.0001
Male x Widow/er	-0.0001	-0.0007	-0.0003
<u>Education (Base = General Secondary)</u>			
No education	0.0049	0.0056	-0.0032
Incomplete Primary	0.0250 ***	0.0246	-0.0147
Special Secondary	0.0140 ***	-0.0042 *	-0.0070 *
Tertiary	0.0432 ***	-0.0013	-0.0044
<u>Location (Base = Rural)</u>			
Capital	0.0041	0.0022	0.0026
Other urban	-0.0006	0.0392 ***	0.0163 **
<u>Entity (Base = FBiH)</u>			
RS	0.0150 ***	0.0413 *	-0.0058 *
Brcko	0.0008	-0.0007	-0.0004
Capital x RS	0.0003	-0.0042	-0.0003
Other urban x RS	0.0020	-0.0165 *	-0.0031
Other urban x Brcko	-0.0008	-0.0011	-0.0009
<u>Household Size (Base = 4)</u>			
1	-0.0290 ***	0.0057 **	0.0258 ***
2	-0.0161 *	0.0034	0.0063
3	0.0007	-0.0077	-0.0052
5	-0.0032	-0.0016	0.0009
6	-0.0132 ***	-0.0217 **	0.0132 **
7	-0.0001	0.0235 ***	-0.0177 ***
8+	0.0009	0.0071	-0.0062
<u>Labor Regime (Base = Permanent)</u>			
Temporary	0.0668 ***	0.0310	-0.0128
Other	0.0537 ***	0.0251	-0.0147
<u>Type of occupation (Base = Other skilled labor)</u>			
Non-skilled labor	0.0124 *	-0.0139	0.0076
Skilled agricultural and fishery	-0.0130	-0.0301	0.0155
Professional	0.0140	0.0144 *	0.0188 *
Temporary x Non-skilled labor	0.0054	0.0001	-0.0001

Factor	Endowment	Coefficients	Interaction
Temporary x Skilled agric and fishery	0.0185 **	-0.0149	0.0080
Temporary x Professional	0.0004	-0.0079 **	-0.0028
Other x Non-skilled labor	-0.0011	-0.0032	0.0024
Other x Skilled agric and fishery	0.0007	-0.0049	0.0026
Other x Professional	-0.0004	-0.0012	0.0004
Sector (Base = Services)			
Agriculture	0.0393 ***	0.042445	-0.0215
Manufacturing, mining and utilities	0.004 **	0.002578	-0.0004
Construction	0.0059 *	0.029409 ***	-0.0106 **
Wholesale/retail	-0.0034 *	0.000814	0.0001
Government	0.0143 ***	-0.0037	-0.0060
Constant		0.27481 ***	
Total difference	0.2344 ***	0.3168 ***	-0.0065
Share of total difference	43.0%	58.2%	-1.2%

Source: EHBS 2011. Notes: Expenditure based percentiles. Reference group – B40.