

HOW UNEQUAL IS CROATIA? RESULTS FROM COMBINED SURVEY AND ADMINISTRATIVE TAX DATA

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BigSurv20

Motivation

- ▶ Our knowledge about the distribution of income (wealth) was predominantly based on surveys
- ▶ There is now a plenty of evidence showing that household surveys do not capture top incomes properly (Atkinson et al. (2011), Burkhauser et al. (2012), Jenkins (2017))
 - ▶ Rich individuals are missing in the survey (i.e. unit non-response, coverage error)
 - ▶ Rich individuals are present in the survey but without the information on income (i.e. item-nonresponse)
- ▶ There has been a shift towards using the (administrative) income tax data
 - ▶ Provide a more precise information on top incomes
- ▶ One can combine both the household survey and tax data in order to improve the representativeness of survey data at the top of the income distribution
 - ▶ Different correction approaches exist

This Paper

- ▶ We correct income survey data (EU-SILC) using the income tax data from Croatia over 2011-2017
 - ▶ The correction is done using the methodology of Blanchet et al. (2019)
- ▶ We make use of tax-benefit microsimulation model (EUROMOD) to evaluate the effects of an income tax reform which made the income tax system less progressive
- ▶ Compute and compare the effects with and without correcting the income distribution
 - ▶ Income inequality measures, tax revenues and the effects on working incentives
- ▶ Work-in-progress:
 - ▶ Develop an indirect tax tool by imputing consumption expenditures to EU-SILC

Data

- ▶ We use three sources of data
 1. Income survey data (EU-SILC)
 - ▶ EU-Statistics on Income and Living Conditions
 - ▶ Period: 2012-2018
 2. Income tax data
 - ▶ All individuals subject to income tax
 - ▶ Grouped in 32 income brackets
 - ▶ Employment, self-employment income and pensions
 3. Household Budget survey (HBS)
 - ▶ Necessary for imputing consumption expenditures in EU-SILC

Figure 1: Market income shares histogram: 2017

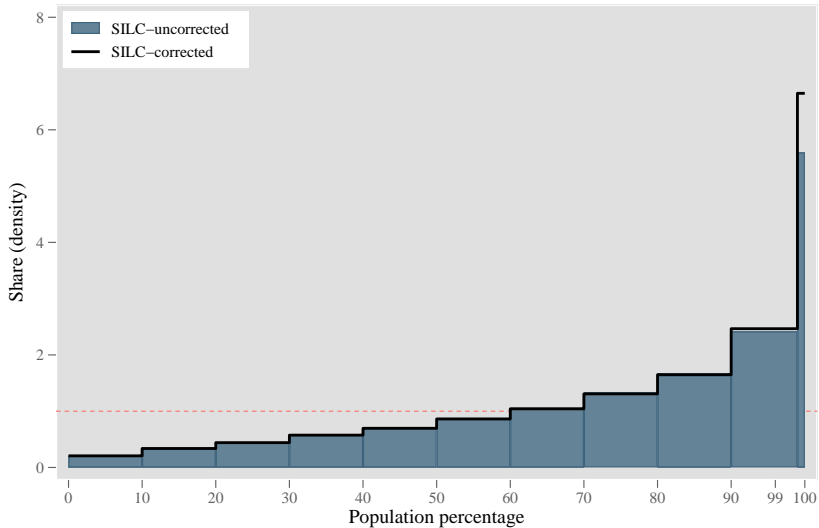


Figure 2: Differences in market income shares (absolute): 2017

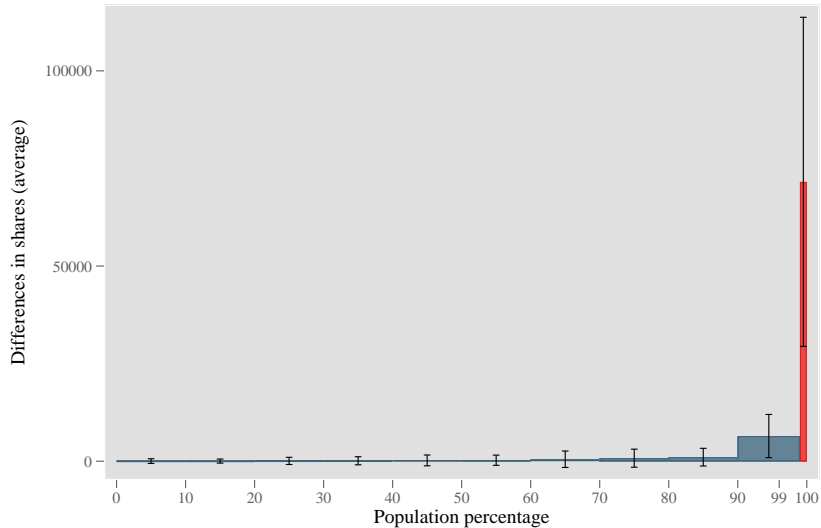


Figure 3: Differences in market income shares (ratio): 2017

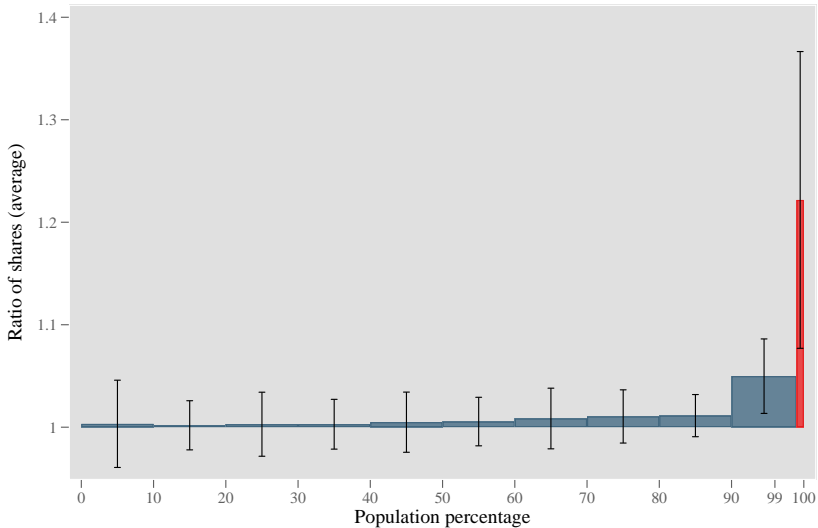


Figure 4: Average market income

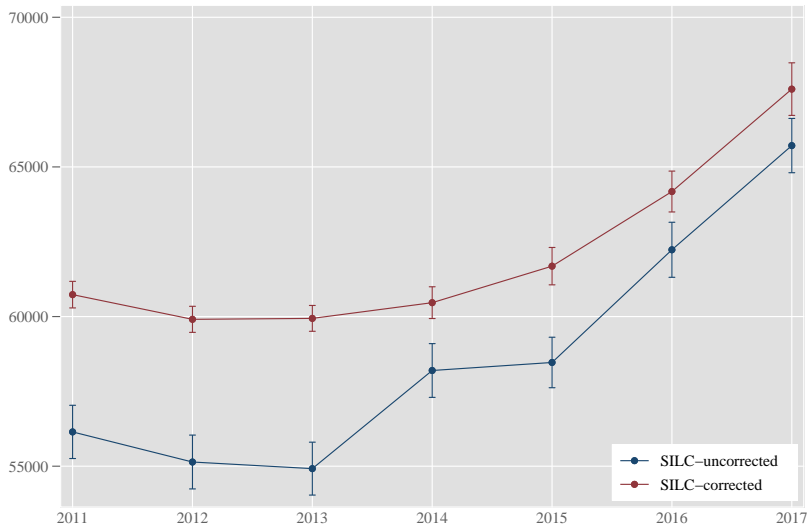


Figure 5: Market income shares

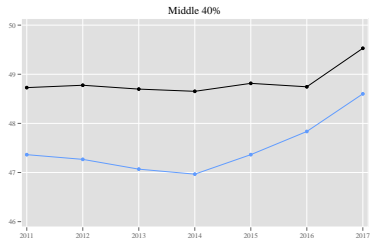
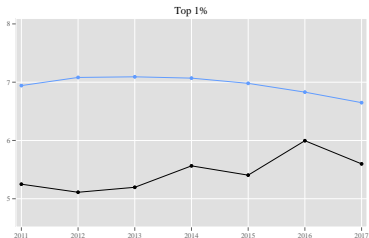
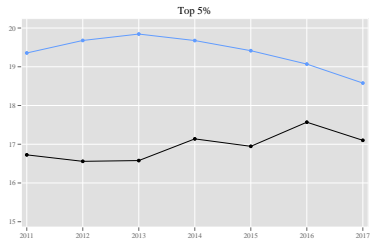
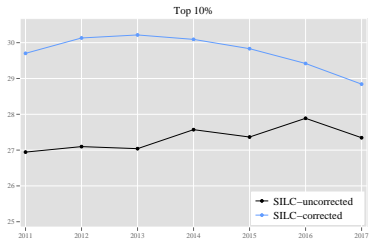


Table 1: Aggregates, billions: 2017

	Uncorrected SILC	Corrected SILC	Difference
[1]	[2]	[3]	[4]
Total market income	176,578.11	181,596.75	5,018.63
(Self) employment income	133,478.33	138,510.87	5,032.54
Direct taxes	8,966.39	10,008.63	1,042.24
Employee SIC	23,982.48	24,597.99	615.52
Social transfers	45,011.36	44,932.94	-78.42
Pensions	3,288.90	3,283.52	-5.39

Yearly amounts in Croatian kunas.

Conclusion

- ▶ We correct survey income data (EU-SILC) using tax income data
 - ▶ Representativeness of other (socio-economic) variables are preserved as well
- ▶ Using EUROMOD we simulate direct taxes, SICs and benefits on corrected and uncorrected EU-SILC
 - ▶ We evaluate the effects of a personal income tax reform (results are not shown)
- ▶ Our results show that income inequality in Croatia is higher once we correct the top tail of income distribution
- ▶ The simulation of income taxes and benefits improves after applying the correction
- ▶ Working on the integration of indirect taxes