

# Discussion:

## *Distributional Income Indicators in a Micro-Macro Data Integration Perspective*

By Filippo Gregorini, Sigita Grundiza, Pierre Lamarche (Eurostat)

IARIW 2016 Session 2a

Discussant: Veli-Matti Törmälehto (Statistics Finland)

# Outline of the paper

## 1. ICW distributions – social statistics perspective

- Background and motivation, data sources
- Survey-based saving rates for EU-28 countries, by income quintile/age
- Comparison of survey saving rates with National Accounts saving rates

## 2. Micro-macro links for the distribution of income

- Generic differences between micro/macro
- Conceptual links between micro/macro: income concepts
- EU-SILC/NA income coverage rates and their stability 2006-2014

## 3. Conclusions

# Background: social statistics perspective

Need to bring social indicators on par with macroeconomic indicators: Aim for availability of harmonised statistics at EU level covering the distributional aspects of household income, consumption and wealth (ICW)

Joint distributions of ICW, multidimensional approach → income, consumption and wealth should be available in a single micro dataset

ICW distributions now come from separate micro data sources: EU Statistics on Income and Living Conditions (EU-SILC), Household Budget Surveys (HBS), and Eurosystem Household Finance and Consumption Survey (HFCS)

The paper briefly discusses the strengths and weaknesses of these data sources (frequency, sample allocation, regional coverage)

Modernisation of EU social statistics, more direct links across different microdata sources in Europe

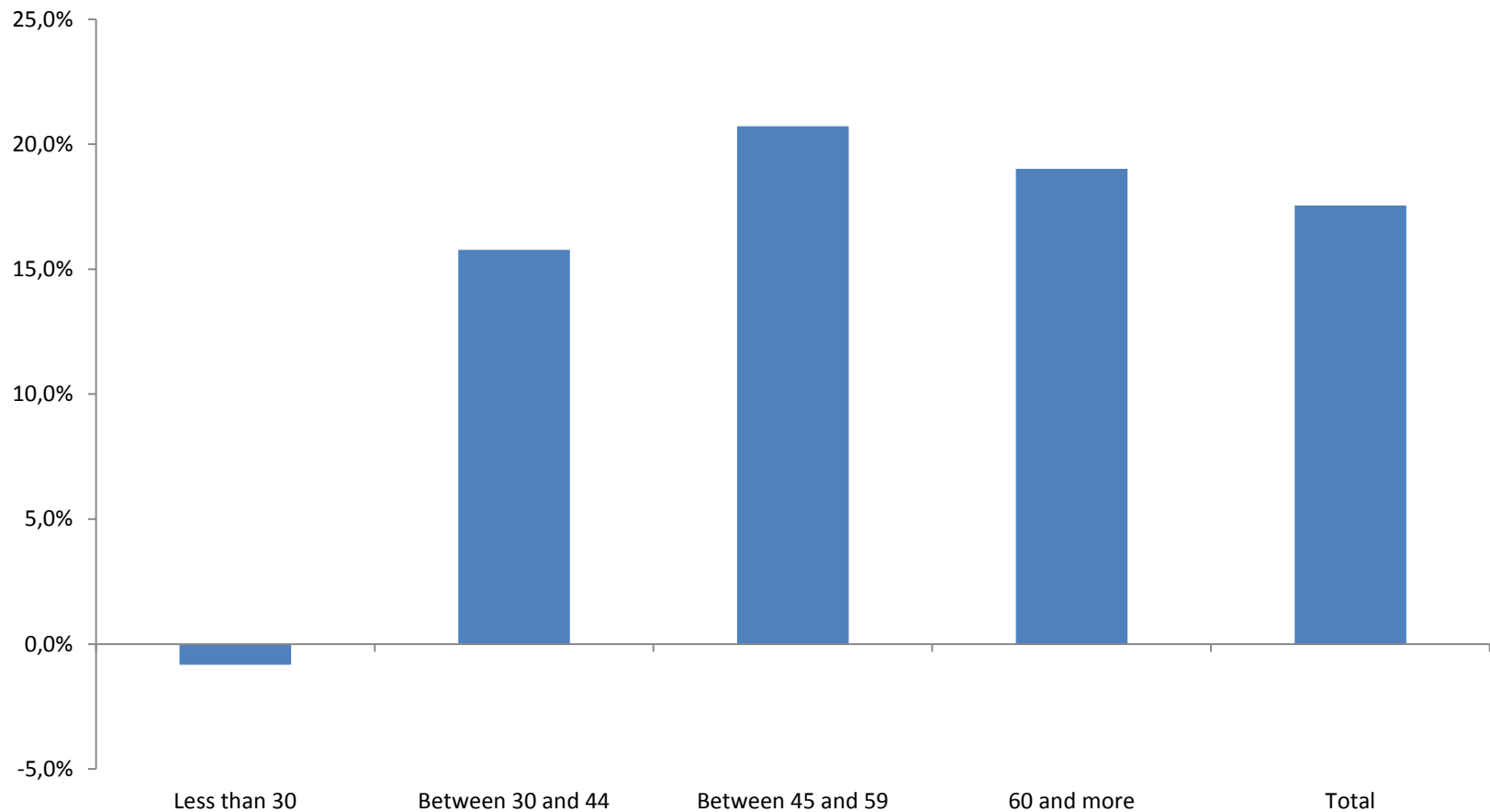
# Survey-based saving rates

The paper proposes that the first step in better integration would be to have income and consumption available in the same dataset

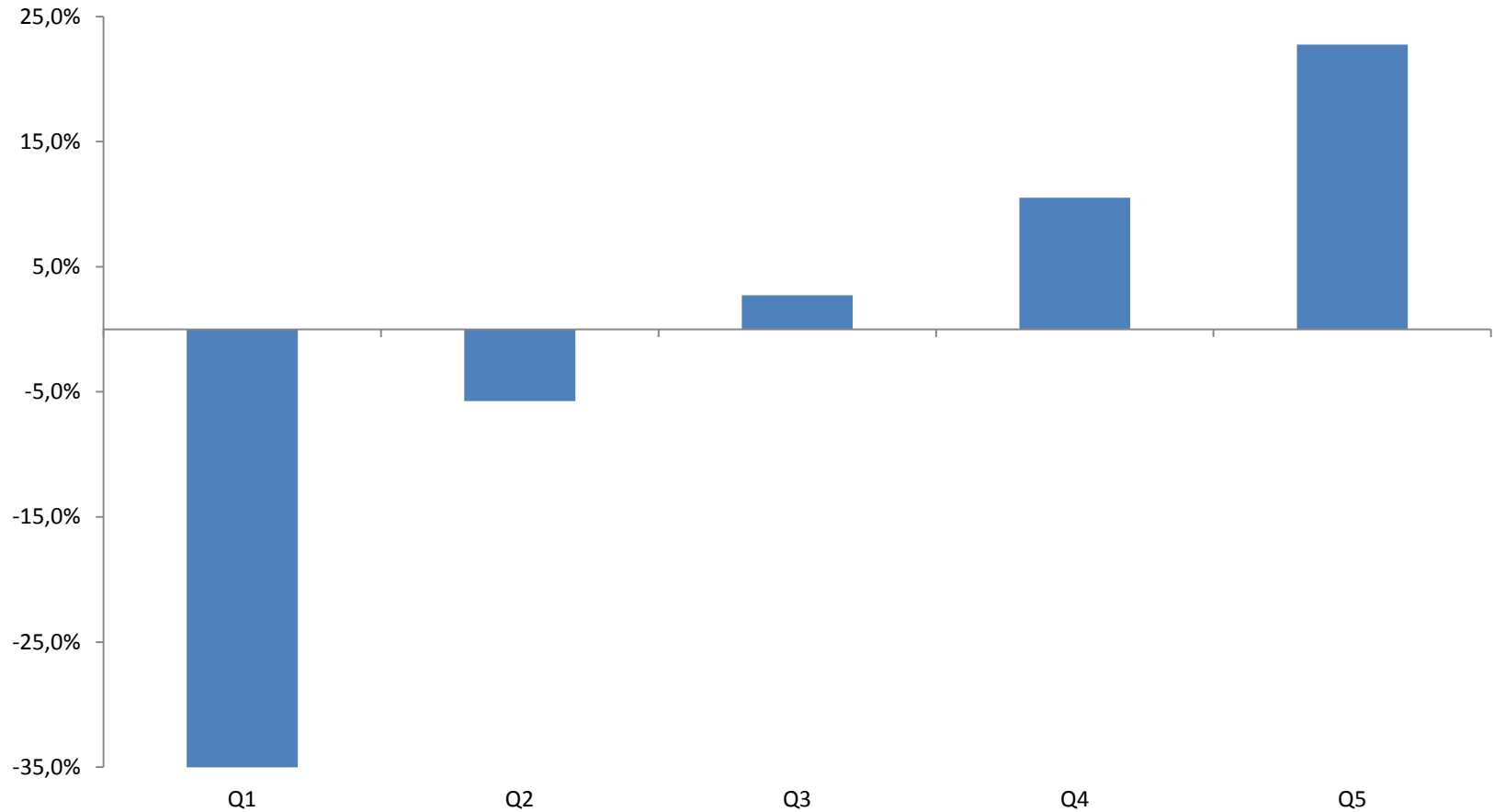
However, the paper proceeds with the simple approach of using mean income and consumption by household categories from SILC and HBS to compute survey-based saving rates for EU-28 and member states

- This does not require that income and consumption are measured in the dataset
- Tails: low saving rate indicator of vulnerability, high saving rate of wealth accumulation
- Results by income/age groups are plausible, but are likely to be affected by measurement errors in both sources (EU-SILC and HBS)
- The paper notes that the effect of (survey) measurement errors on saving rates is a priori undetermined

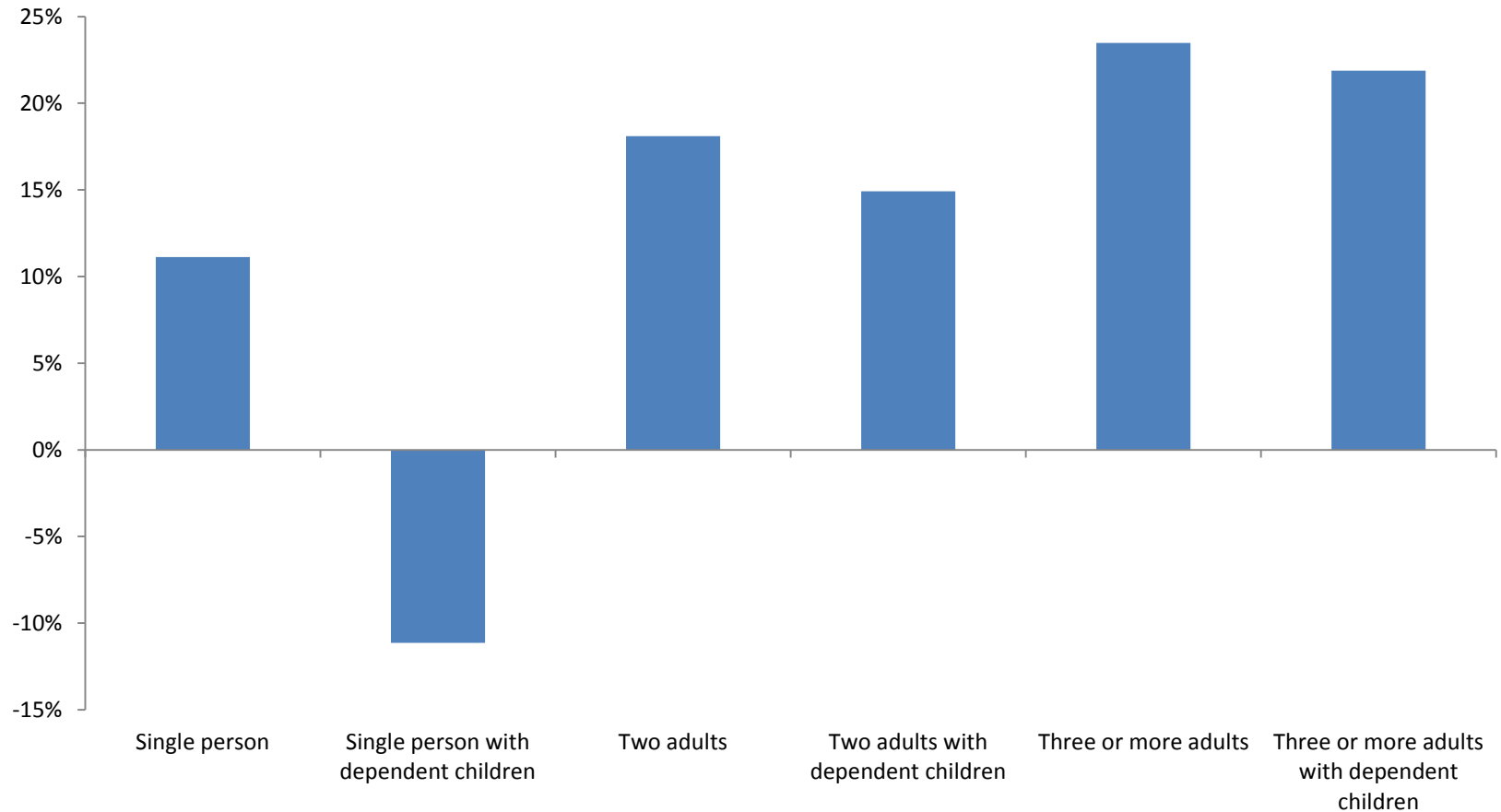
# Figure 1 - Aggregate saving rate in the EU-28 broken down by age of RP



# Figure 2 - Aggregate saving rate in the EU-28 broken down by income quintile



# Figure 3 - Aggregate saving rate in the EU-28 broken down by household type



# Comparison of survey and NA saving rates

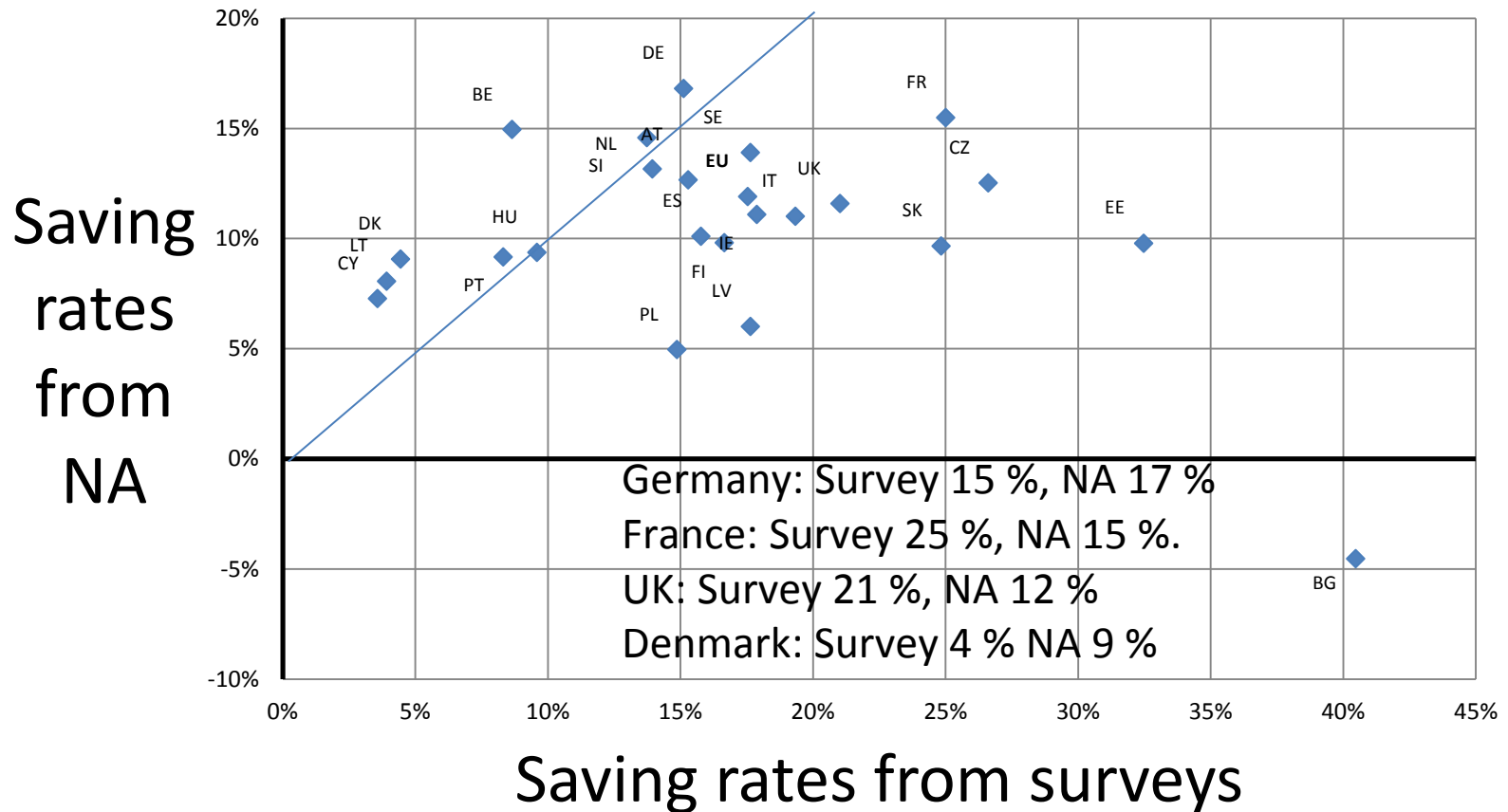
The simple micro saving rates are then compared to household saving rates (gross) from NA, at country level

→ Substantial differences, with no obvious pattern, variation across countries, no positive correlation

The survey approach gives saving rate of 18% for the EU-28 while National Accounts gives 12 %



# Figure 4 - Comparison of saving rates as given by the surveys and by the National Accounts



# Micro-macro links

The paper suggests building a framework that enables the conceptual comparison of survey and NA variables, providing *"a clear-cut answer to the question of the consistency of the different sources"*.

→ This is one of the aims of the ICW project at Eurostat

The paper explores generic differences and differences in income concepts between NA and survey (EU-SILC) income components, building on e.g. Mattonetti (2013)

This paper: first results on the comparability of income variables; consumption not discussed in the paper

# Micro-macro links

Generic differences:

- 1) people living in institutional households
- 2) NPISHs (but S14 to be transmitted separately according to ESA 2010)
- 3) Quasi-corporations
- 4) Measurement: survey vs. registers and reweighting/calibration in EU-SILC, imputations

Differences in income concept (Annex 1): strong/medium/low/no conceptual links

Paper does not provide estimates of the share of non-private HH or NPISHs, or the extent of measurement errors, but has a lengthy discussion on quasi corporations

Empirical part: unadjusted (?) coverage rates of SILC vs NA main income components 2006-2014 (Annex 2)

# Quasi-corporations

In NA, identification of quasi-corporations is challenging and there is variation across countries in whether "producer" households are recorded in S14 or S11

Note: the paper claims that "*unlimited liability partnerships are not included in the survey data at all*" (p.15)

→ not true, either in self-employment income (PY050G) or interest, dividends and profits from capital investment in an unincorporated business (HY090G)

Positive correlation with the share of mixed income and employment in quasi-incorporated units (country codes in the tables are not correct?)

Households' withdrawals from income of quasi-corporations (D422R) not discussed in the paper?

Is the argument that withdrawals and mixed income are not fully covered for households as owners of quasi-corporations in NA?

# Coverage rates for the survey and NA income components

For the period 2006-2014: coverage rates of SILC vs. NA by main income component

Standard deviation of the rates (in percentage points)

- S14 for all countries except S14+S15 for AT, UK, DE, IE (total disposable income)
- S14 and S15 to be separated (backwards until 2012) according to the ESA transmission program (derogations in 6 countries)

Comparison of income structure in NA and SILC for 2013 (% of disposable income): Employee income always the most important income source, otherwise country specific patterns, no general conclusion

# Coverage rates by main income components

	Simple average across countries 2013	Range 2013
Wages and salaries	91 %	67 % to 112 %
Social benefits other than STIK	87 %	67% to 118 %
Income taxes and social contributions	85 %	53 % to 112 %
Self-employment income	50 %	12 % to 87 %
Property income received	29 %	1 % to 102 %
Total disposable income	72 %	34 % to 103 %

# Figure 7- Coverage rate in 2013 and standard deviation 2006-2013 (pp) for total disposable income

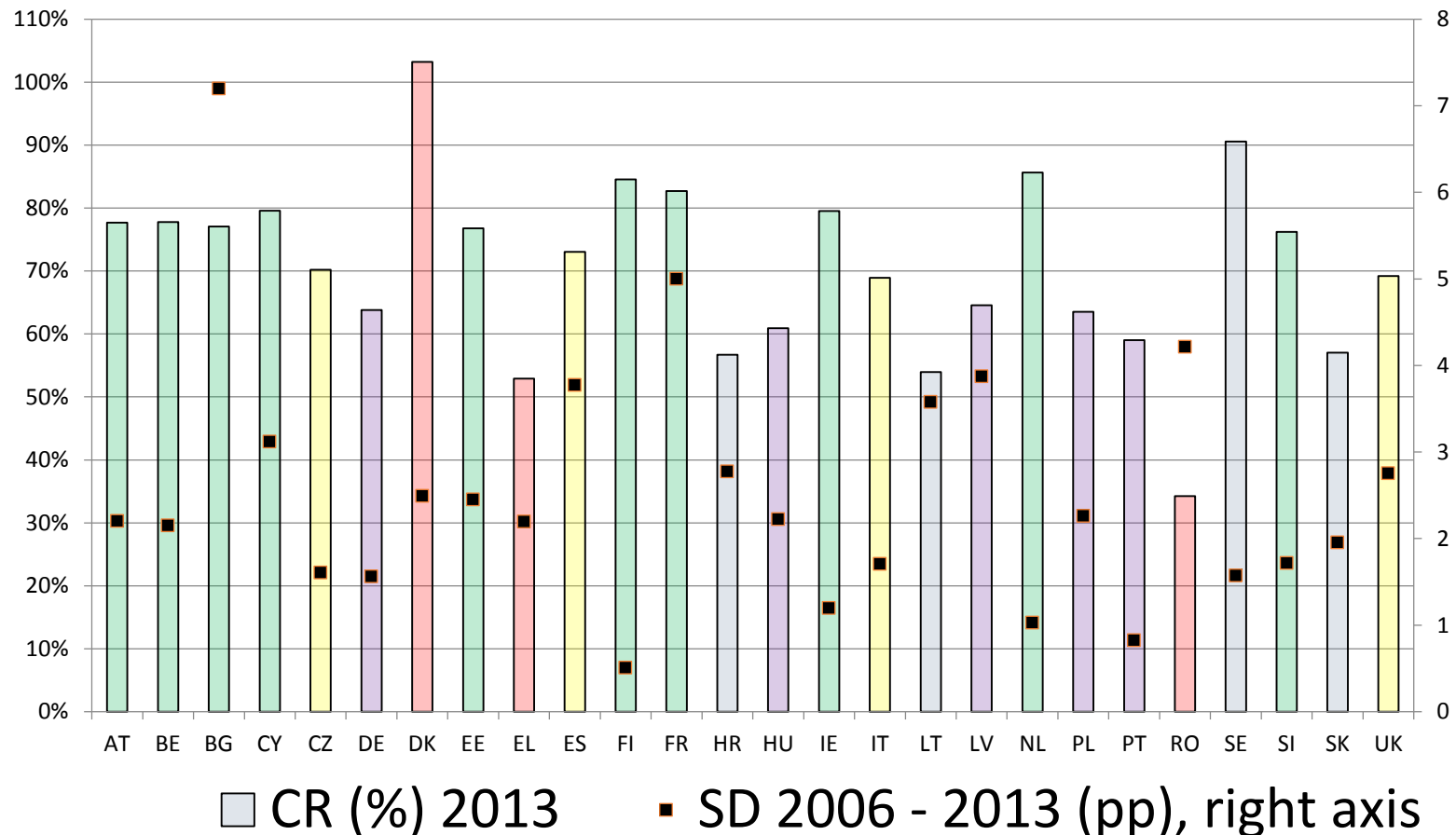
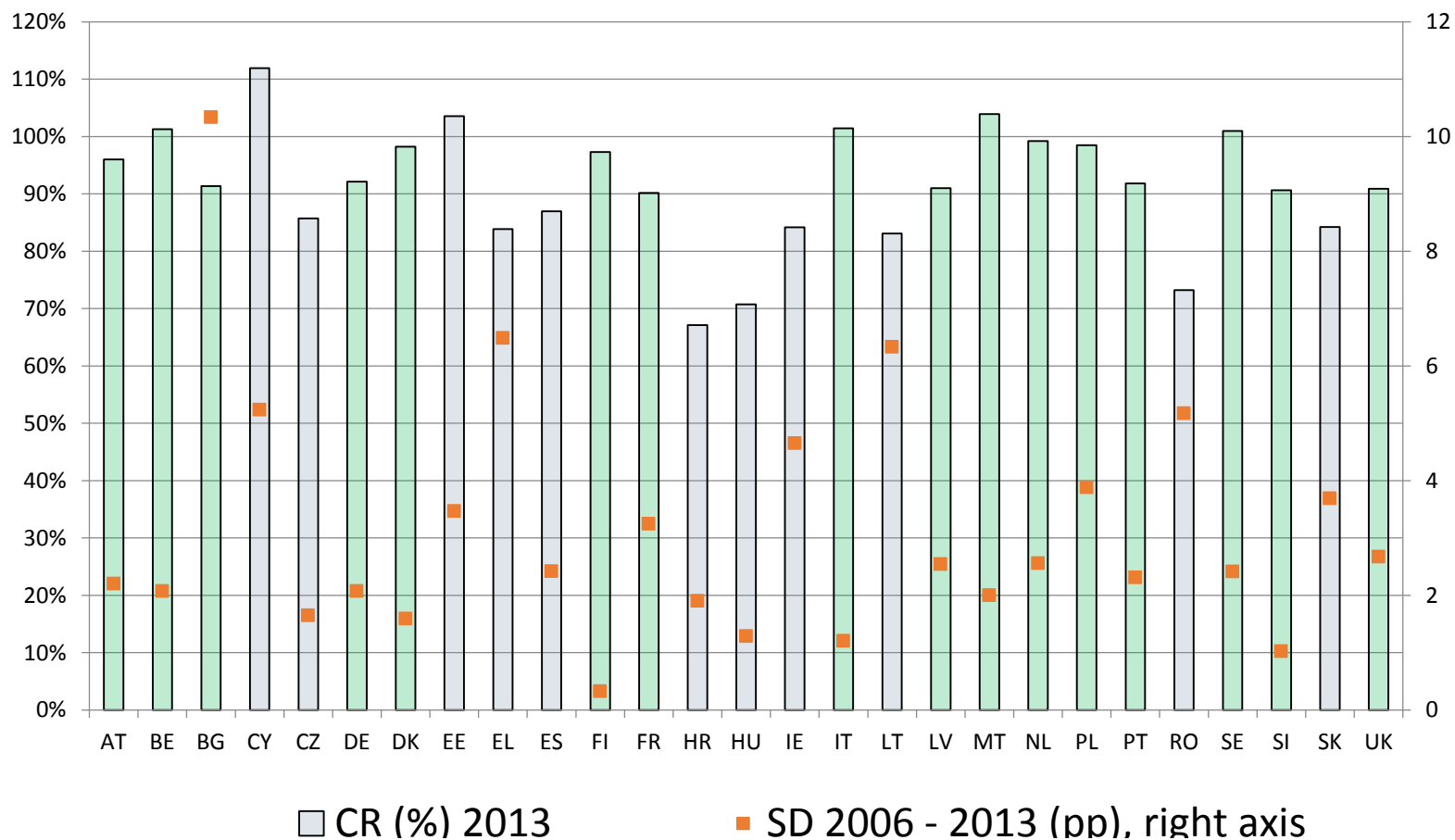
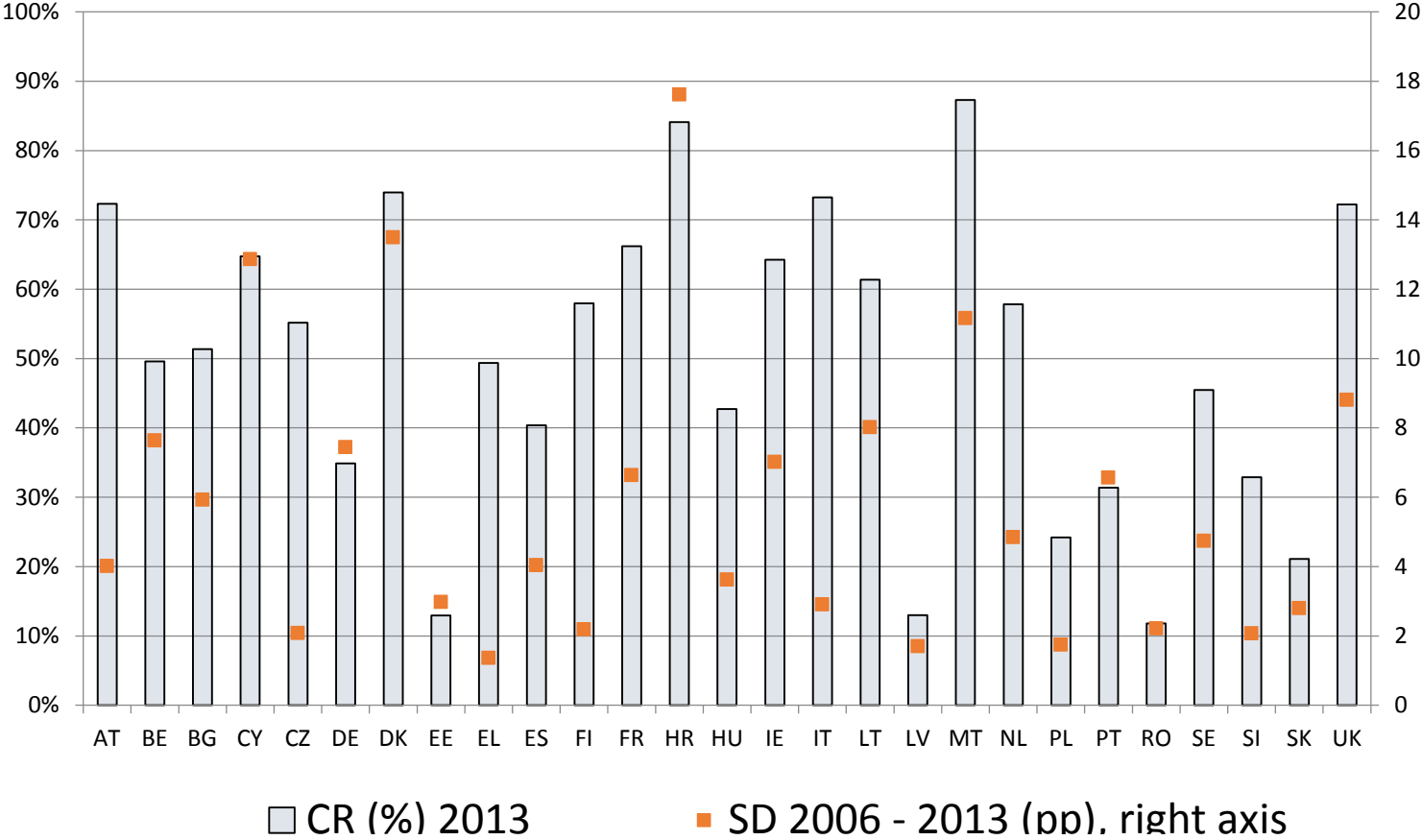


Figure 8 - CR (2013) and SD (2006-2013) for employee cash or near cash income (excluding employers' social contributions)

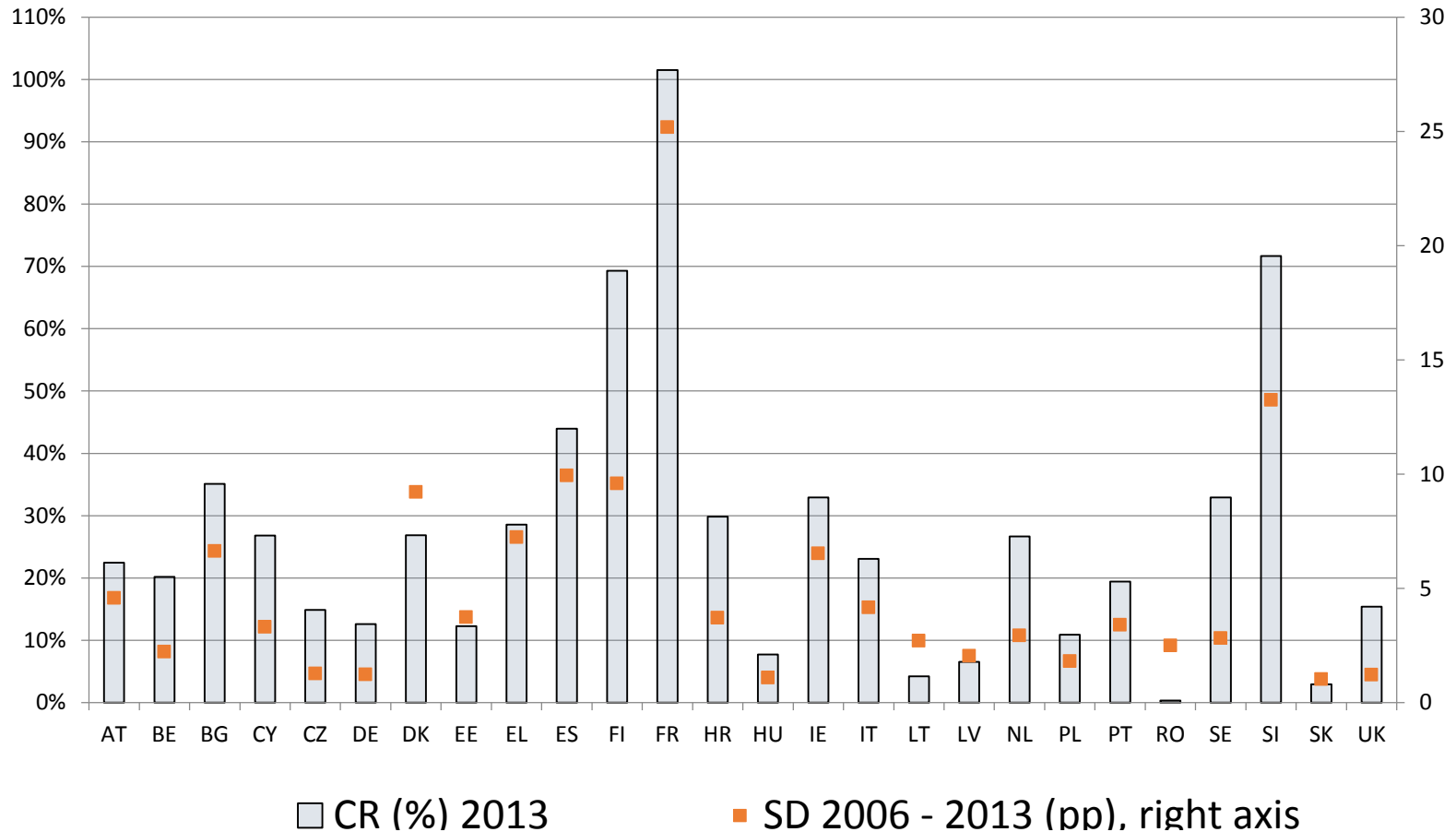




# Figure 11: CR (2013) and SD (2006-2013) for self-employment income



# Figure 12: CR (2013) and SD (2006-2013) for property income



# Conclusions of the authors

- Survey-derived saving rates by household groups behave as expected, but substantial differences compared to NA saving rates
- Need for a proper assessment of inclusion of quasi-corporations in household sector on the data gaps between micro and macro data
- Income components with high/medium conceptual links (employee income, social benefits, income taxes) have high coverage rates and stability SILC vs. NA.
- Income components with medium/low conceptual links have more variation in coverage rates across countries and over time (self-employment, property income, wealth taxes)

# Detailed remarks and comments

- The paper (Annex 1) claims no link between "Income from household production of services for own consumption"
- But EU-SILC data includes imputed rents which is the conceptual counterpart of B2G Operating surplus, gross: highly relevant for the comparison
- Other own consumption (of goods) is in mixed income in NA(?)
- Also employers' social contributions measured in EU-SILC
- Income from partnerships/quasi-corporations included in EU-SILC
- Property income paid: mortgage interest repayments measured, and part of definition of net imputed rents in EU-SILC; interest paid on business loans deducted from SE
- Property income attributed to policy holders vs. individual private pensions
- Informed reader would benefit from explicit references to EU-SILC variable names and NA transaction codes (e.g. PY010G - D11R).

→ Check the EU-SILC income concept and links to NA in Annex 1

→ Current EU-SILC income concept or the extended one?

# Suggestions

- Survey errors : Use an existing framework to add some rigour (errors in measurement/errors in estimation, sampling/non-sampling errors, two-phase model of total survey error when using administrative data...)
- Adjusted coverage rates as the next step (generic & income concept): possibly combine self-employment and property income/mixed income + property income received?
- Register countries (AT,DK,ES,FR,FI,NL,NO,SE,SI...) vs. "survey" countries? The role of administrative data in SILC could be explored
- It would be nice to have a literature review on the existing literature on discrepancies between NA and surveys (incl. SAMs, OECD, LIS)

# Questions

Could you clarify how quasi-corporations affect comparison of NA and SILC income totals (in theory and in practise)?

The gaps between NA and survey data are well recognized:

- 1) How does Eurostat plan to address these in their ICW project?
- 2) Does Eurostat aim for distributional indicators fully consistent with NA, or based on adjusted data, or survey-based ICW indicators?

What about STIK, consumption, wealth?

Thank you for your attention!