

An Integrated View on Trends in Consumption and Income Inequality in Europe over the Last Two Decades

Stefan Angel^a, Benjamin Bittschi^b

^aWU Vienna University of Economics and Business, ^bIHS

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Preliminary results

Agenda

Introduction

Data

Inequality Trends

... over the life cycle

Conclusions and Outlook

Appendix

Motivation

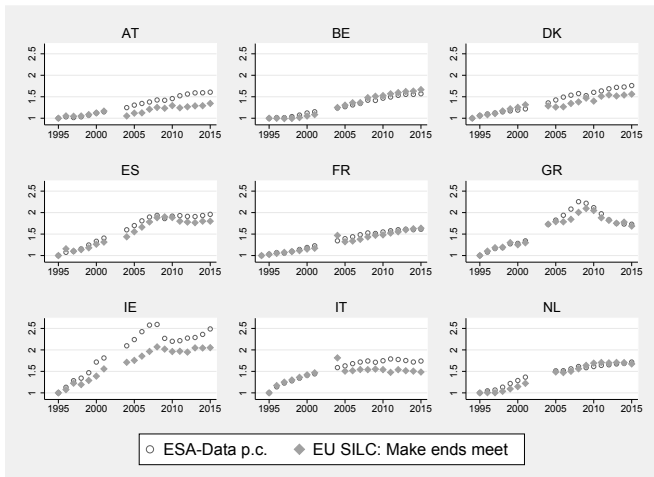
- ▶ *Income* inequality can lead astray in inferring consequences for personal/household welfare
 - ▶ Work/leisure preferences, occupational choices, income of partner, ...
 - ▶ Utility is usually more closely linked to *consumption*
 - ▶ Consumption smoothing (LC-PIH)
- ▶ Joint investigation preferred to get the full picture
- ▶ **Trends in consumption inequality**: lacking data
- ▶ We argue that SILC/ECHP can be used to jointly study income **and** (approximate) basic consumption inequality

ECHP/SILC: Proxy for basic consumption

- ▶ “In your opinion, what is the very lowest net monthly income that your household would have to have in order to make ends meet, that is to pay its usual necessary expenses?”
- ▶ * *Please answer in relation to the present circumstances of your household, and what you consider as usual necessary expenses (to make ends meet).*

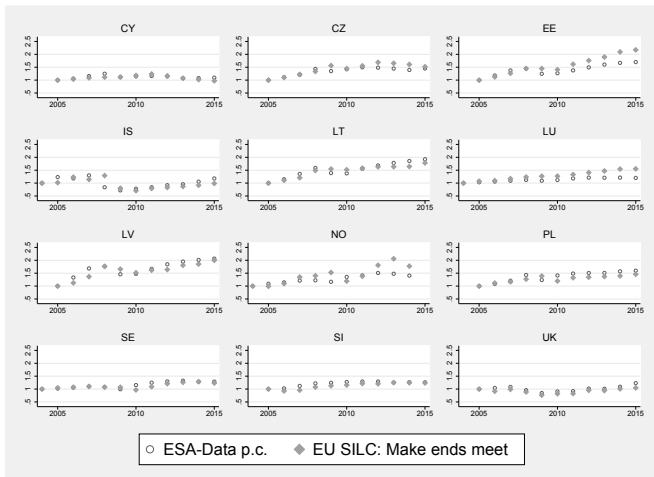
Validation with National Accounts Data (Eurostat)

basic consumption components, growth of levels (means)



Validation with National Accounts Data (Eurostat)

basic consumption components, growth of levels (means)



Research questions

- ▶ To what extent do patterns of **basic consumption** inequality resemble patterns of income inequality in Europe 1994-2015?
- ▶ How much heterogeneity between countries?
- ▶ How does basic consumption inequality evolve over the life cycle?

Related Literature

- ▶ ... mainly on US: cons ineq has grown since the mid 1980s (Attanasio et al., 2016, JEP)
- ▶ Special issue of *Review of Economic Dynamics* (Krueger et al., 2010) covering 6 European countries 1980-2005 (UK, DE, ES, IT, SE, RU) and on SK in König et al. (2016)
 - ▶ Income inequality > consumption inequality
 - ▶ Long-run changes in disposable income inequality > long-run changes in consumption inequality
 - ▶ Beyond that: heterogeneous trends between countries
- ▶ **No** comprehensive studies for Europe
- ▶ **Lacking** evidence beyond 2005

Data, sample

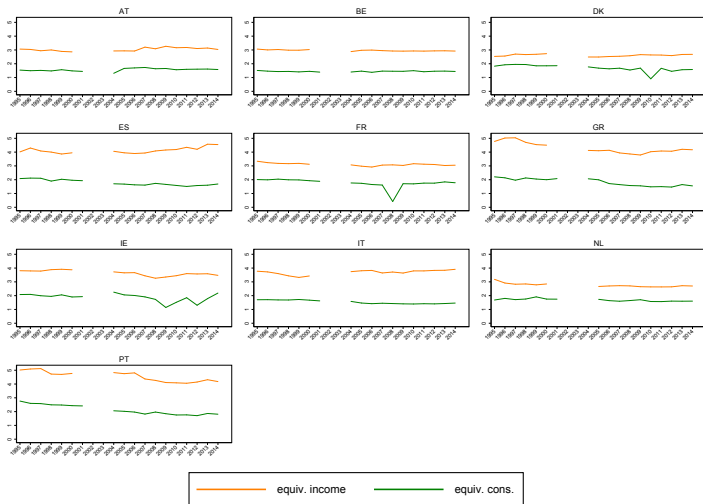
- ▶ ECHP 94-01, SILC 04-14/15
- ▶ Pooled cross-sections
- ▶ Long sample: 10 European countries 94/95 - 14/15
- ▶ Short sample: 21 European countries 04/05-14/15
- ▶ Household = unit of observation
 - ▶ Exclude if person responsible for accommodation <25

Variables

- ▶ HH disposable **income** after tax including social transfers
- ▶ Basic consumption proxy
- ▶ All variables adjusted for household size (OECD scale), €

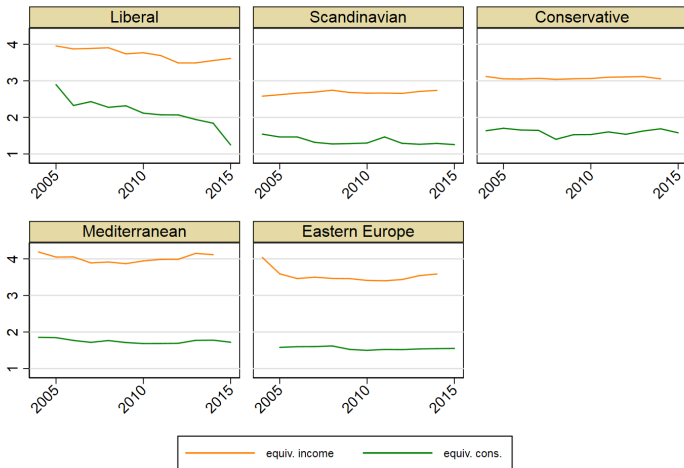
Methods

- ▶ We analyze trends in income and consumption inequality
- ▶ Percentile ratios (following Aguiar et al., 2015)
 - ▶ National percentiles based on disposable equivalized income
 - ▶ Income y : $\frac{mean(y)_{top20(y)}}{mean(y)_{bottom20(y)}}$
 - ▶ Consumption c : $\frac{mean(c)_{top20(y)}}{mean(c)_{bottom20(y)}}$, quintiles based on income
 - ▶ Bottom and top 5 % excluded from calculation

long sample, mean $[p80-p95]/\text{mean } [p5-p20]$ 

long sample, mean $[p80-p95]/\text{mean } [p5-p20]$ 

short sample, welfare regime: AT BE FR IE LU NL (cons) DK FI IS NO SE
(scand) CY ES GR IT PT (med) CZ EE HU LT LV PL SI SK (eastern) UK (liberal)



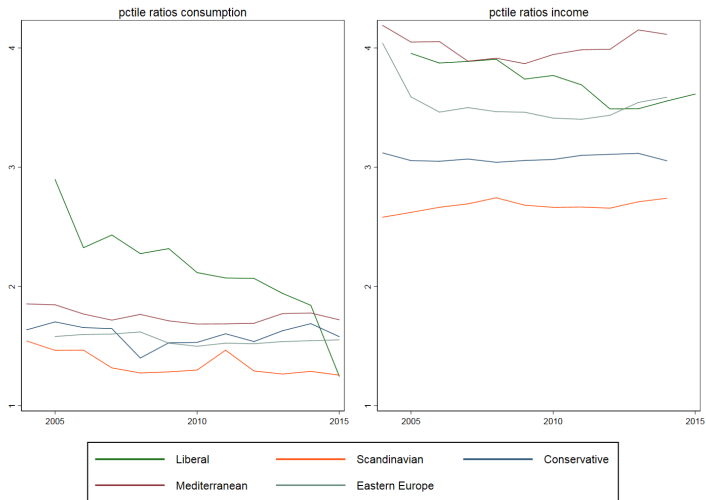
Graphs by (p 50) wfregime

Stefan Angel^a, Benjamin Bittschi^b

^aWU Vienna University of Economics and Business, ^bIHS

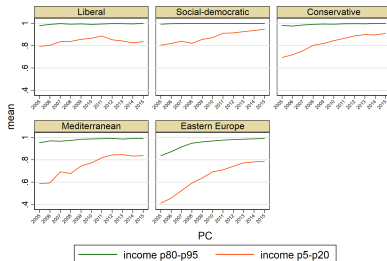
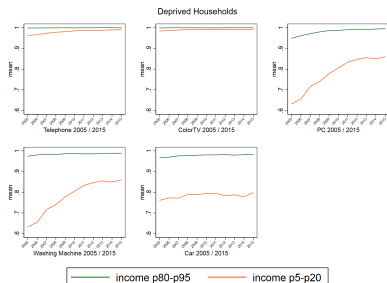
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short sample, by welfare regime



Affordability of durable consumer goods

short sample, **inequality decreased but pace slowed down**

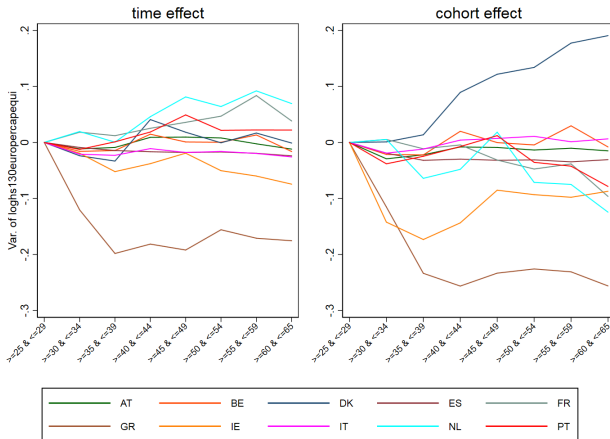


Graphs by wfregime

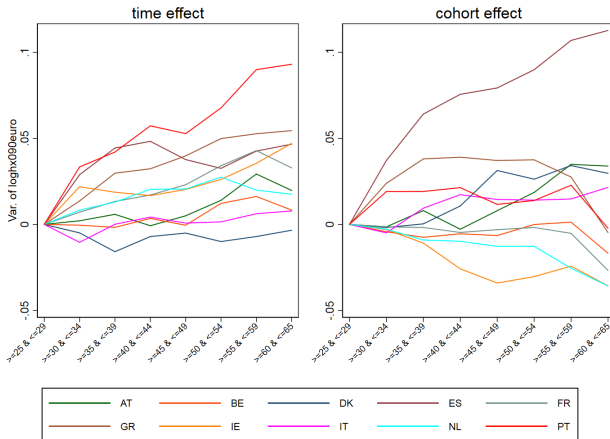
Methods

- ▶ Cross-Sectional Inequality over the Life Cycle
 - ▶ Krueger et al., 2010, Heathcote et al., 2005 (JEEA)
 - ▶ $\text{Var}(\log(y))$, $\text{Var}(\log(c))$
 - ▶ Regress cross-sectional variance of $\log(y)$, $\log(c)$ on full set of age dummies and *either* a full set of year dummies *or* a full set of year-of-birth dummies (cohorts)
 - ▶ We plot the age profile in deviation from the age 25-29 values.

Life-cycle inequality, basic **consumption**, long sample



Life-cycle inequality, **income**, long sample



Conclusions

1994-2014

- ▶ Inequality of net total household income and consumption inequality remained *relatively* stable in most European countries
- ▶ Cons ineq: countries more similar than with respect to income ineq, convergence
- ▶ Heterogeneity
 - ▶ Cons ineq: slight reduction for some southern countries (PT, ES, GR)

Conclusions

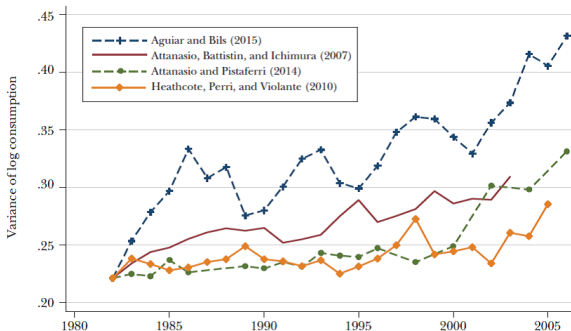
since 2005

- ▶ UK (Liberal): (parallel) decrease in consumption & inc inequality
- ▶ Southern & Eastern: stable low levels of cons ineq but also stable high levels of income ineq
- ▶ Scandinavian: stable low levels of both inc & cons ineq
- ▶ Conservative: slightly more unequal but stable
- ▶ Affordable durables - low/high income gap
 - ▶ EU22: 2005-14 substantial catch-up of low incomes, but slowed down for some items (PC, car) after the crisis
 - ▶ Low/high income gap highest in Eastern Europe

Related literature mainly on US: cons ineq has grown since the mid 1980s;

Figure 1

The Evolution of Consumption Inequality over Time as Measured by Different Papers

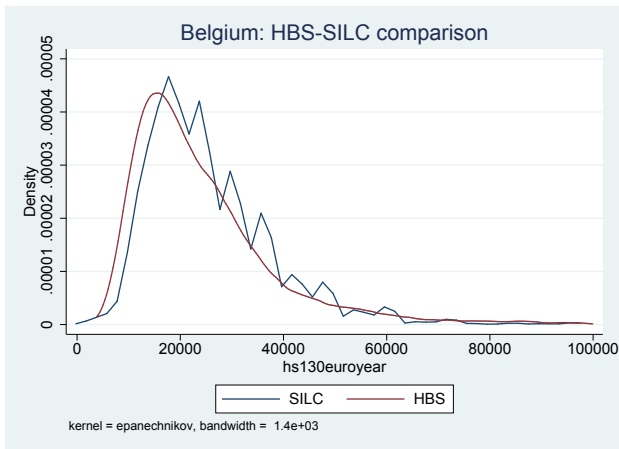


Attanasio et al., 2016, JEP

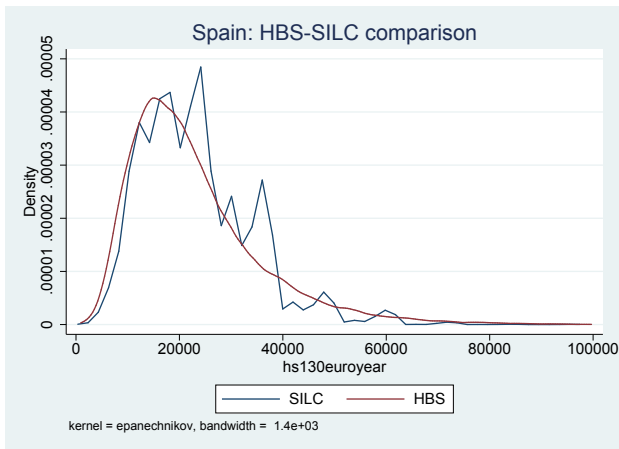
Outlook (work in progress)

- ▶ Further differentiate by region, education etc.
- ▶ Permanent and transitory income shocks affect consumption, LC-PIH
- ▶ Permanent shocks are harder to absorb and insure → more likely to be reflected in consumption (inequality)
- ▶ Insurance mechanisms in Europe? family labor supply, welfare, saving and borrowing, ..
- ▶ planned: apply method developed for repeated cross-section data in Blundell et al., 2013 QE to estimate variances for the persistent and transitory components of income and to relate these to changes in consumption variances (for different birth cohorts)

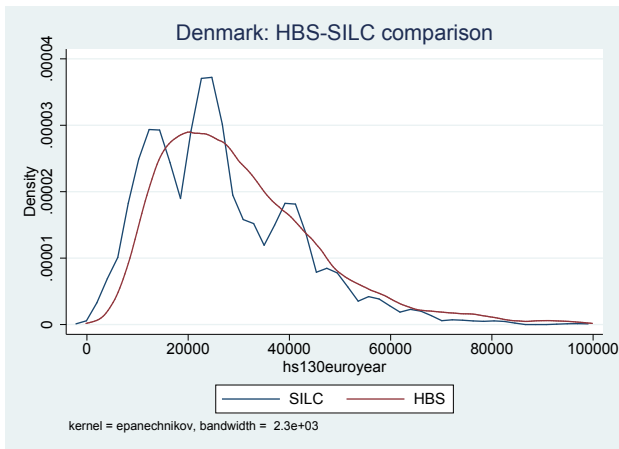
Validation with Eurostat HBS 2010



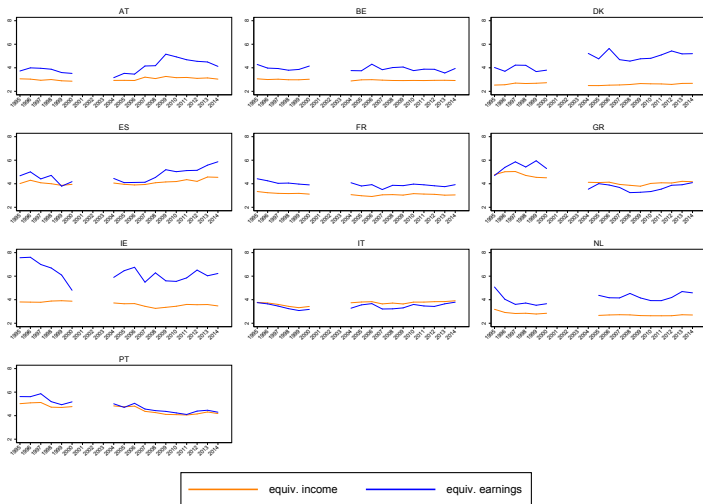
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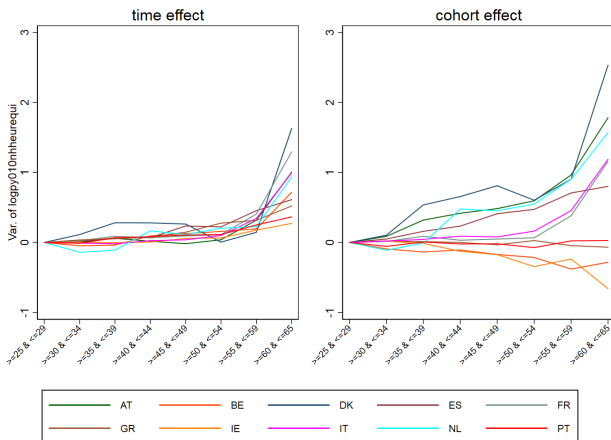


Consumption proxy in SILC

AT 2015

Was ist Ihrer Meinung nach das geringste monatliche Nettoeinkommen, das Ihr Haushalt benötigt, um gerade noch auszukommen? (Unter Berücksichtigung der aktuellen Haushaltszusammensetzung und der aktuellen notwendigen Ausgaben) (Alle Einkünfte aller Haushaltsmitglieder: [...])

Life-cycle inequality, earnings





Aguiar, M. and M. Bils (2015). "Has Consumption Inequality Mirrored Income Inequality?". In: *American Economic Review* 105.9, pp. 2725–56. DOI: 10.1257/aer.20120599.



Attanasio, O. P. and L. Pistaferri (2016). "Consumption Inequality". In: *Journal of Economic Perspectives* 30.2, pp. 3–28. DOI: 10.1257/jep.30.2.3.



Blundell, R., H. Low, and I. Preston (2013). "Decomposing changes in income risk using consumption data". In: *Quantitative Economics* 4.1, pp. 1–37. DOI: 10.3982/QE44.



Heathcote, J., K. Storesletten, and G. L. Violante (2005). "Two Views of Inequality over the Life Cycle". In: *Journal of the European Economic Association* 3.2-3, pp. 765–775. DOI: 10.1162/jeea.2005.3.2-3.765. eprint: [/oup/backfile/content_public/journal/jeea/3/2-3/10.1162_jeea.2005.3.2-3.765/1/jeea0765.pdf](http://oup/backfile/content_public/journal/jeea/3/2-3/10.1162_jeea.2005.3.2-3.765/1/jeea0765.pdf).



König, B. and G. Doval'ova (2016). "Trends in Household Consumption Inequalities in Slovakia: Empirical Evidence". In: *Ekonomicky Casopis* 64.3, pp. 238–259.



Krueger, D., F. Perri, L. Pistaferri, and G. L. Violante (2010). "Cross-sectional facts for macroeconomists". In: *Review of Economic Dynamics* 13.1, pp. 1–14. ISSN: 1094-2025. DOI: <http://dx.doi.org/10.1016/j.red.2009.12.001>.