
Imputed Rents in EU-SILC

Results from Net-SILC2 work package on imputed rents

Meeting of providers of OECD income distribution data
Paris 21-22 February 2013

Veli-Matti Törmälehto, Statistics Finland

22/02/2013

Veli-Matti Törmälehto

1

Overview

For the European countries, imputed rents **included in EU-SILC data** since 2007

Imputed rents still **excluded from the definition of disposable income** used for EU indicators (and probably from most national definitions as well)

Imputed rents estimated for **owner-occupiers** (primary income) and **tenants not paying full rent** (social & inter-household transfers in kind)

Values are imputed to around **80 percent of European households**

22/02/2013

Veli-Matti Törmälehto

2

Imputed rents in EU-SILC

Two **output harmonised variables** observed in the data:

1. imputed rents net of relevant costs (HY030G), where $HY030G \geq 0$
2. mortgage interest paid (HY100)

In our study (Törmälehto & Sauli 2012), **net imputed rent** computed as $HY030G - HY100$, can be negative for owners with mortgage

Note: Eurostat definition explicitly **excludes depreciation**/consumption of fixed capital (and capital gains)

Regression **rental equivalence recommended** in the Eurostat guidelines (doc 65), but **estimation methods differ**

Many countries use stratification (mean imputation) instead of regression, some correct for selection bias (Heckman) or apply user cost (capital market approach), subjective methods or data are not common

22/02/2013

Veli-Matti Törmälehto

3

Estimation methods and size of the non-subsidized rental markets (%) in EU-SILC 2009

	2009	Method		2009	Method		2009	Method
RO	1.1	Stratification	IS	7.9	User cost	GR	18.0	Stratif./subjective
MT	1.4	Stratification	ES	8.2	Stratif./subjective	BE	18.5	Heckman
LT	1.1	Stratification	SK	8.8	User cost	FR	19.8	Regression
BG	2.2	Stratification	CY	10.3	Heckman	LU	22.3	Heckman
PL	2.4	Regression	NO	10.4	Stratification	AT	27.7	Regression
HU	2.4	Regr./subjective	FI	10.4	Stratification	SE	29.8	User cost
EE	2.6	User cost	PT	10.9	Regression (2008-)	NL	31.1	Regression
SI	5.0	Stratification	IE	11.3	Stratification	DK	33.7	Stratification
CZ	5.0	User cost / subj.	UK	12.4	Heckman	DE	38.9	Stratification
LV	6.7	Log-lin regression	IT	13.3	Heckman	(2010)		

22/02/2013

Veli-Matti Törmälehto

4

Data problems:

IR missing 2010	BG
IR missing 2010	CY
IR missing 2010	IE
HY100 missing 2007-09	DE
2007-2008 data missing	MT
Comparability problems	DK
Comparability problems	NL
Unstable data	UK
IR recipients 100 %	LT
(Documented method change 2008	PT)

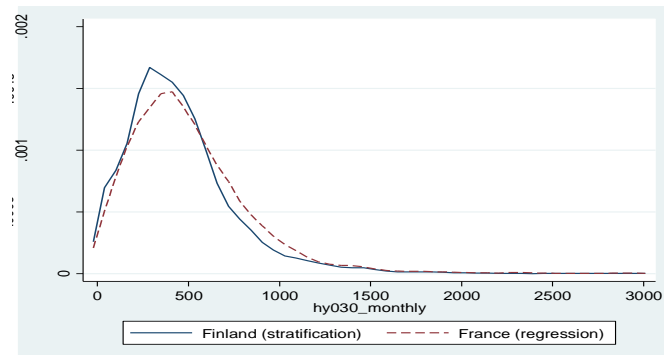
22/02/2013

Veli-Matti Törmälehto

5

Comparability issues

(...different methods, different underlying data,
similar distributions, similar average levels of estimates)



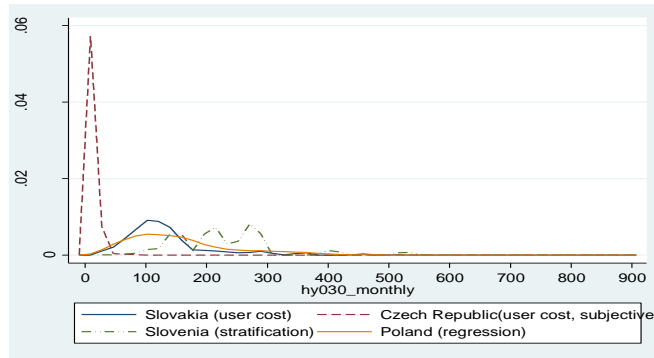
22/02/2013

Veli-Matti Törmälehto

6

Comparability issues

(...different methods, different underlying data, different distributions, different average levels of estimates)



22/02/2013

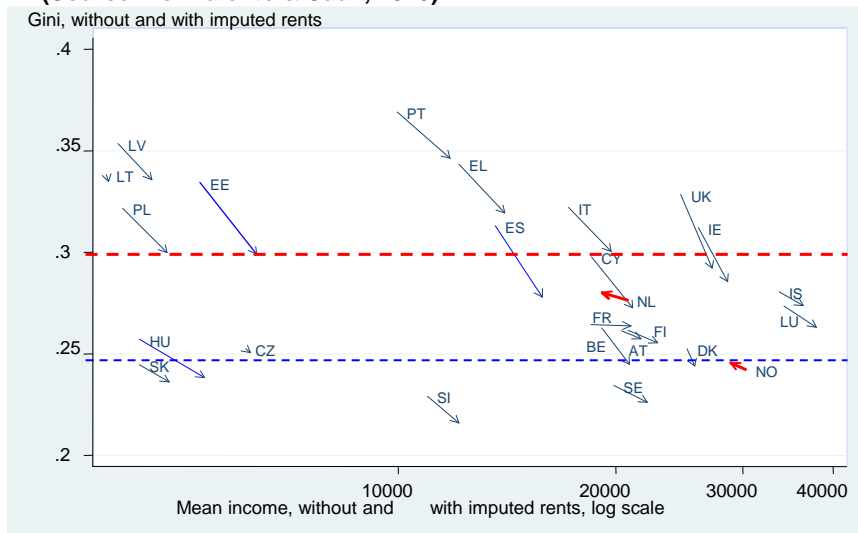
Veli-Matti Törmälehto

7

12.3.2010

The effects on average income and inequality, EU-SILC 2007

(Source: Törmälehto & Sauli, 2010)



22/02/2013 22.2.2013

WPA6: imputed rent

8

Impact of imputed rents on mean equivalent income per person, pp-change, 2009

Countries sorted according to impact in 2009

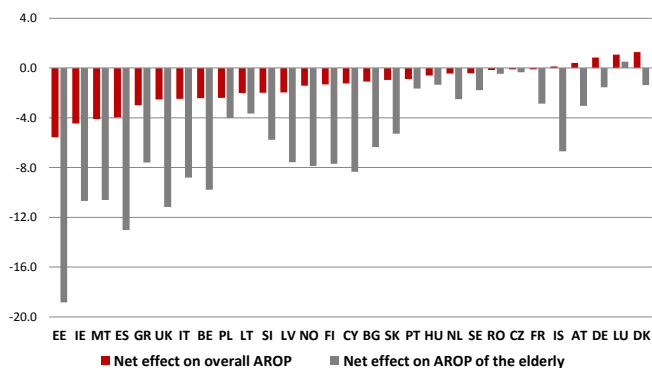
	2007	2008	2009	2010		2007	2008	2009	2010		2007	2008	2009	2010
NL	-7.7	-7.7	-8.1	-8.2	SE	11.2	8.9	8.6	7.7	BG	22.9	13.1	14.3	
CZ	1.6	1.9	0.9	1.1	MT			9.4	9.5	ES	16.2	15.1	14.5	16.3
PT	18.4	3.5	1.7	1.7	SI	10.8	10.0	10.0	10.3	GR	15.8	15.3	14.6	14.0
RO	2.3	2.5	2.3	2.2	FR	12.9	11.7	10.0	9.6	EE	19.9	20.0	14.8	11.1
LV	11.4	6.1	4.7	4.9	BE	9.3	9.1	10.5	8.7	IT	15.3	16.7	15.1	16.8
IS	7.8	7.5	5.0	4.6	SK	9.9	9.6	11.1	10.6	PL	15.5	26.7	15.2	16.3
NO	9.7	6.3	5.0	9.0	LU	10.8	10.0	11.2	10.0	CY	14.2	15.8	18.4	
AT	6.1	6.3	7.9	8.2	LT	15.6	13.1	12.7	13.6	HU	23.2	22.7	19.7	19.6
UK	12.2	-5.7	8.2	3.3	IE	9.7	10.3	13.4		DE				
FI	10.1	8.8	8.2	10.1	DK	9.4	9.2	13.9	14.0					

22/02/2013

Veli-Matti Törmälehto

9

Change of at risk of poverty (60 % of median), overall and the elderly, by country, pp-change, 2009



22/02/2013

Veli-Matti Törmälehto

11

Main conclusions

Comparability cannot really be assessed with the EU-SILC data, but the imputations are known to be sensitive to estimation methods, models, underlying data - all may differ among the countries

Adding net imputed rents changes average income levels very differently:

- among the countries (from -8.1 % in NL to + 19.7 % in HU in 2009)
- between countries within household subgroups (elderly)
- within countries between different household subgroups (outright owners, owners with mortgage)

In nearly all countries: reduces inequality and monetary poverty (incidence, intensity, inequality), significant changes in certain subgroups (elderly, outright owners)

Significant re-reranking, changes in the composition of the poor, somewhat better consistency with income poverty and non-monetary deprivation

The distributional impacts depend on: homeownership rate, extent of social housing, mortgage indebtedness, distribution of imputed rents, correlation of imputed rents with the initial distribution of cash income...

22/02/2013

Veli-Matti Törmälehto

13

Main conclusions

Keep collecting data on imputed rents, but improve data quality

Rethink methods: further work on methods e.g. along the lines of the AIM-AP project on non-cash incomes

- is the current method (rental equivalence) best option in a cross-national context (transparency, quality of underlying data)

Country-specific in-depth analyses by Eurostat on data quality and comparability:

- identification of beneficiaries (social housing)
- completeness of the data
- unexplained instability of levels/distributions over time in some countries, unexplained differences in levels between some countries

DPI including imputed rents as a supplementary income definition; cash disposable income as the primary definition (time-series, also cross-national comparability)

22/02/2013

Veli-Matti Törmälehto

14

Thank you for your attention!