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A NTA AGEING MEASURE

Ageing Europe – An Application of National Transfer Accounts for Explaining and Projecting Trends in Public Finances

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The Economic Interpretation of Ageing Measures

Ageing indicators

Usually they have a economic interpretation (*dependency ratios*):

=> Old population has to be supported by the non-old population

- Population 65+ vs. population aged 20-64
- Elderly, economically inactive population vs. active population
- Elderly, non-employed vs. employed population
- Consumption of elderly vs. labour income
- Elderly with health problems vs. healthy adult population

The Economic Interpretation of Ageing Measures

Idea:

Measuring the age of population by the amount of resources redistributed to the elderly

Original motivation:

FRFG and IF call for papers on the following topic: “Measuring Intergenerational Justice”.

Intergenerational justice indicator based on NTA?

- Given the current age pattern of transfers, do societies invest too little in children and are too generous to the elderly population?
- Paper with Tanja Istenič and Lili Vargha

Ageing Measure: Main Idea

Data:

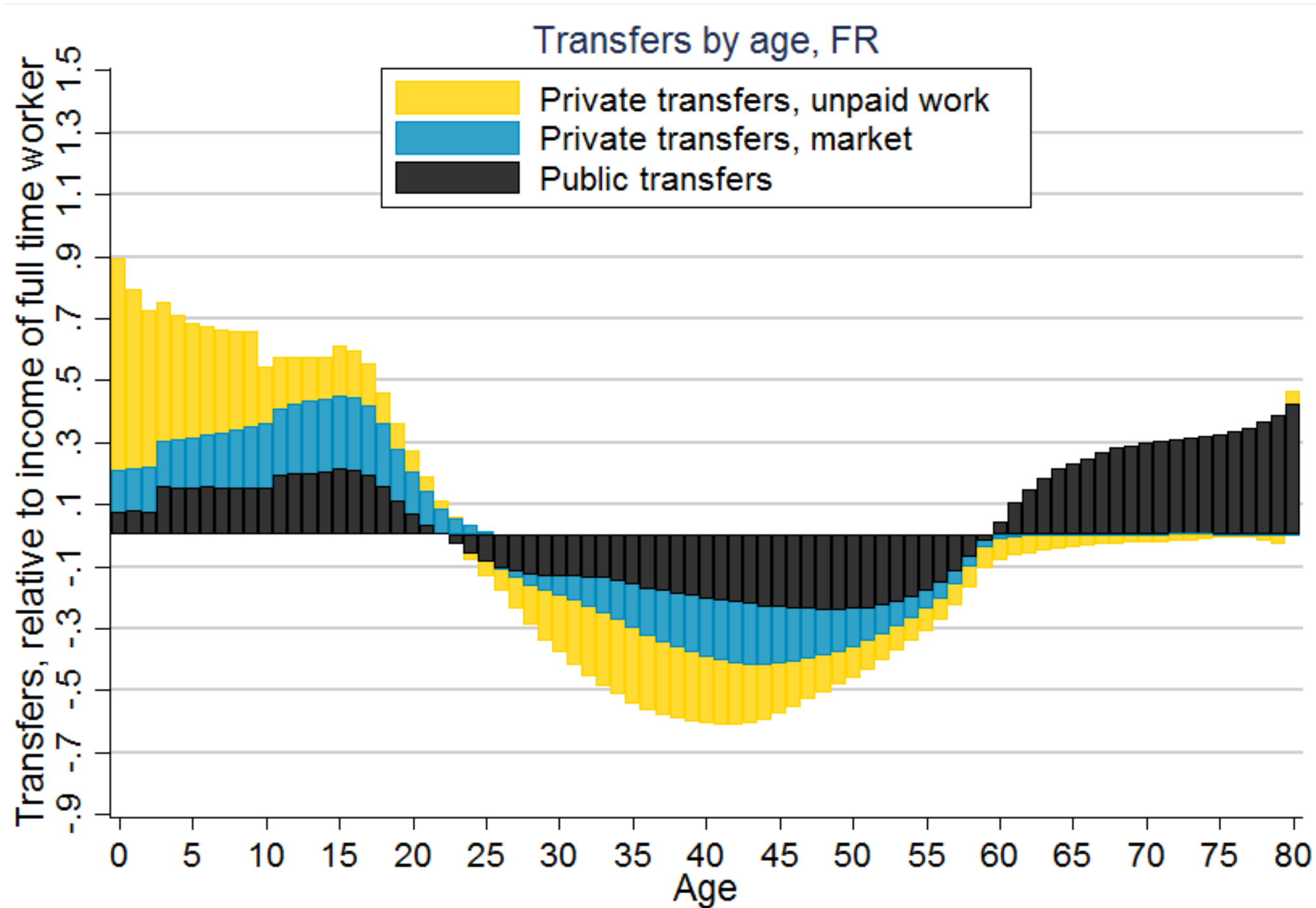
- NTA age profiles of transfers for 2010
- Age-specific mortality from 2010

Thought experiment:

If the cross-section pattern of transfers in 2010 would correspond to the life-course pattern of an individual with age-specific mortality observed in 2010, how much

- net transfers received in childhood
- net transfers paid in working age
- net transfers received in old age

Age Specific Transfers



Source: Authors' own calculations based on Vargha (2016) and Istenic (2016).

Transfers by Life Stage

Net transfers by life stage in yearly labour incomes of a full-time worker, France 2010

	Young	Work	Old
Total	13.2	-14.7	6.3
Public	3.2	-5.9	6.6
Priv. market	4.1	-3.7	0.0
Priv. non-market	5.8	-5.1	-0.2
Age borders	23		61

Ageing Indicators

	Young	Work to young	Work to old	Old
Total	12.9	-11.1	-3.7	6.6
Public	3.2	-2.3	-3.7	6.6
Priv. market	4.1	-3.7	0	0
Priv. non-market	5.6	-5.1	0	0

- **Number of supported children:** transfers paid to children / transfers received by children:
 $11.1/12.9 = 0.86$
- **Required number of contributors** to finance transfers to the elderly: $6.6/3.7 = 1.8$
- **Balance indicator:** difference between supported children and required number of contributors: $1.8 - 0.86 = 0.94$

Interpretation: Required number of additional children a person needs to have to finance the transfer in old age

Ageing Indicators

Country	No. of supported children per contributor in working age	Required contributors per elderly beneficiary	Balance indicator
AT	0.67	1.37	0.70
BE	0.82	1.31	0.49
BG	0.49	1.11	0.63
DE	0.66	1.16	0.50
DK	0.86	1.35	0.48
EE	0.63	1.24	0.61
ES	0.61	2.53	1.93
FI	0.78	1.77	0.98
FR	0.86	1.80	0.94
IT	0.64	1.21	0.57
LT	0.55	1.89	1.34
LV	0.50	1.86	1.36
NL	0.81	1.98	1.17
PL	0.66	1.78	1.12
SE	0.88	1.25	0.37
SI	0.60	1.60	1.00
UK	0.82	1.92	1.10
	0.70	1.60	

Summary

Ageing measure:

- *Difference between fertility and the required number of children needed to finance transfers to elderly*
- ⇒ Characterization of the age-profile of net transfers
- ⇒ Identifies unsustainable imbalances in the transfer system