Combining Income and Consumption Data at Household Level:

An Analysis of Intra-household Transfers Based on NTA Micro Data

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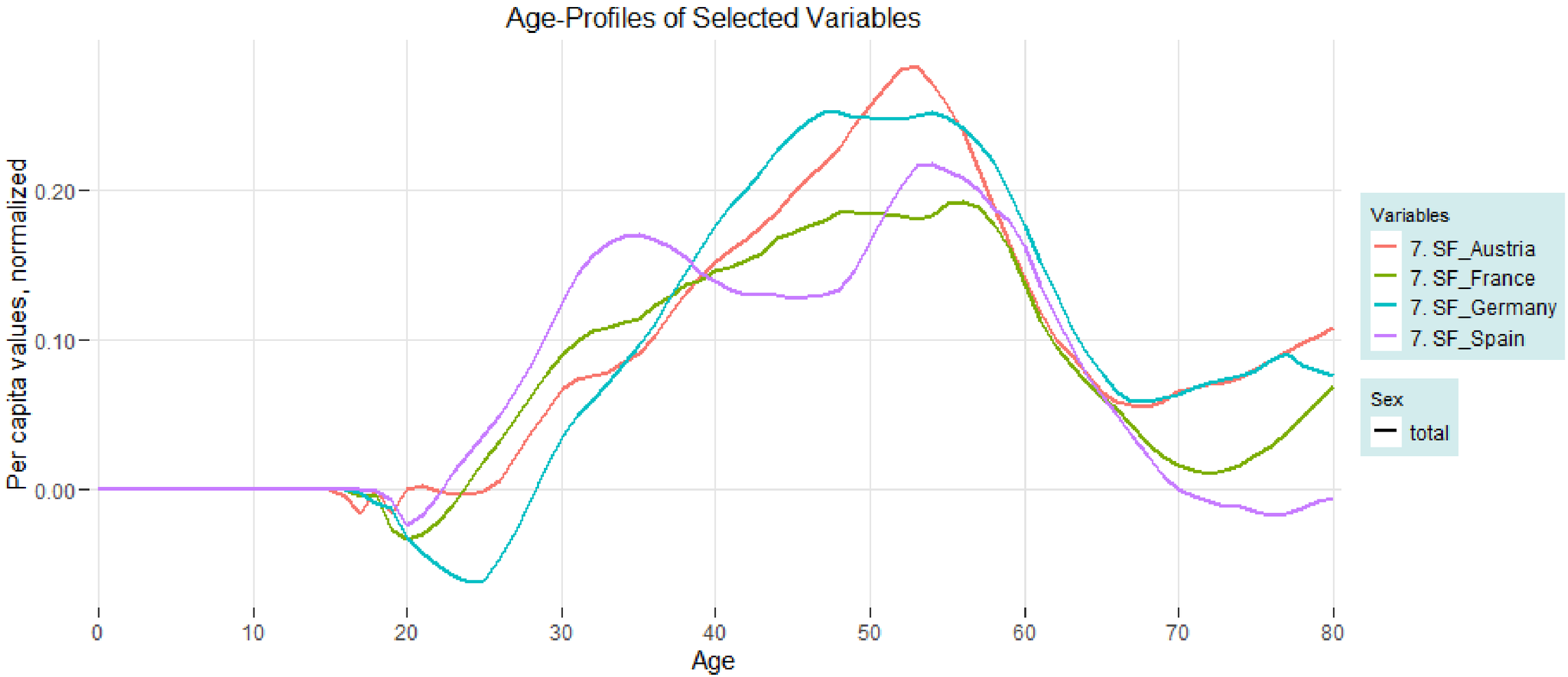
Outline

1. Building NTA micro-data that contain information on income, consumption and intra-household transfers
2. Using micro data to analyse the role of families in the generational economy

Motivation: Where does negative net saving come from?



Source: www.wittgensteincentre.org/ntadata

Motivation: Where does negative net saving come from?

Negative saving effect generated by method of combining income and consuption?

Two type of young adults with same level of consumption:

1. Living in own household with higher than average income
2. Living with parents with less than average income

=> Imputation of age-specific average income results (wrongly!) in:

- Dissaving of those living in own household
- Underestimation of intra-household transfers of those living with parents

=> We need to account for the correlation between income and consumption at household level

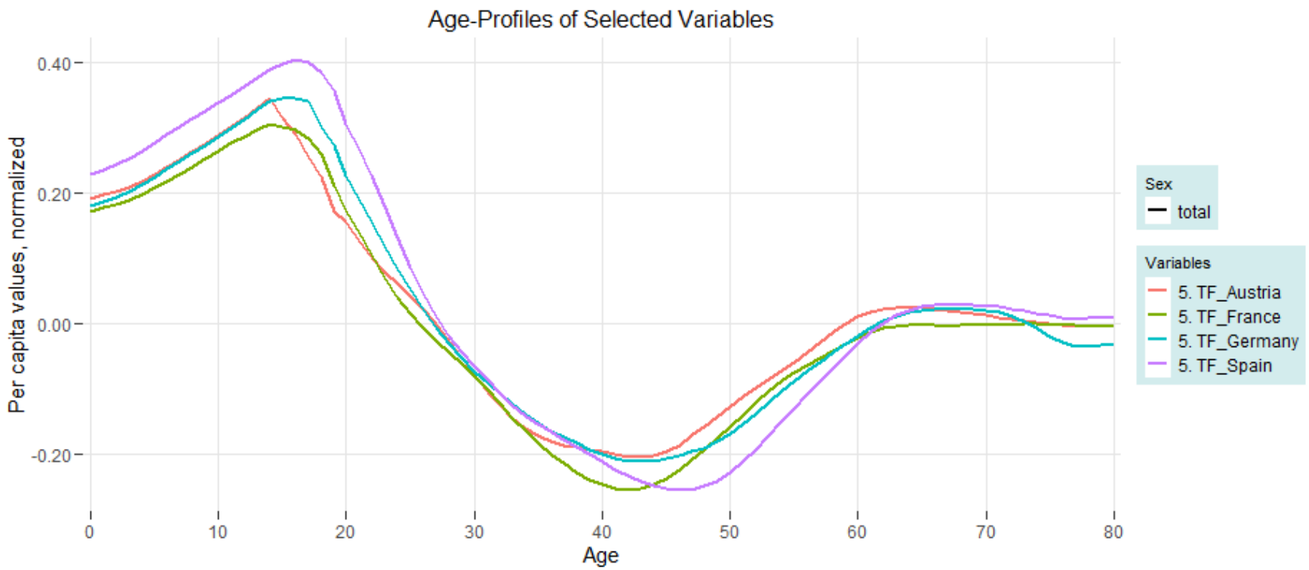
Motivation: Role of the family in the transfer system

Detailed analysis of intra-household transfers

- Estimates of intra-household inflows and outflows (we average them out by imputing average income and consumption in hh-roster)
- Intrahousehold transfers provided by parents: analyse them separately from their peers

Zannella et al. (2018): A Quantitative Assessment of the Rush Hour of Life in Austria, Italy and Slovenia

=> Rush hour of life only indirectly related to age; it is caused by having children



1. Combining income and consumption data at individual level

Micro data NTAs: data sources

Income: EU-SILC

- Includes yearly income at individual level
- Asset income not or very badly captured

Consumption: consumer expenditure survey

- Consumption and income at household level
- Observes consumption expenditure over a two-week period (accounts for large consumption items)

$\Rightarrow$ Huge variation in consumption: between individuals and between 2 week periods for the same individual

Imputing consumption in income survey

Estimation of consumption function for households based on CES:

$$c_j = \bar{c} + \beta_1 * y_j + \beta_2 * \mathrm{hhmem} + \varepsilon_j$$

c_j… consumption per member of household j

$\bar{c}$… autonomous consumption (about 10,000 Euros)

β_1… marginal propensity to consume (about 0.74)

y_j… income per household member

β_2… economies of scale (-1200€ per additional member)

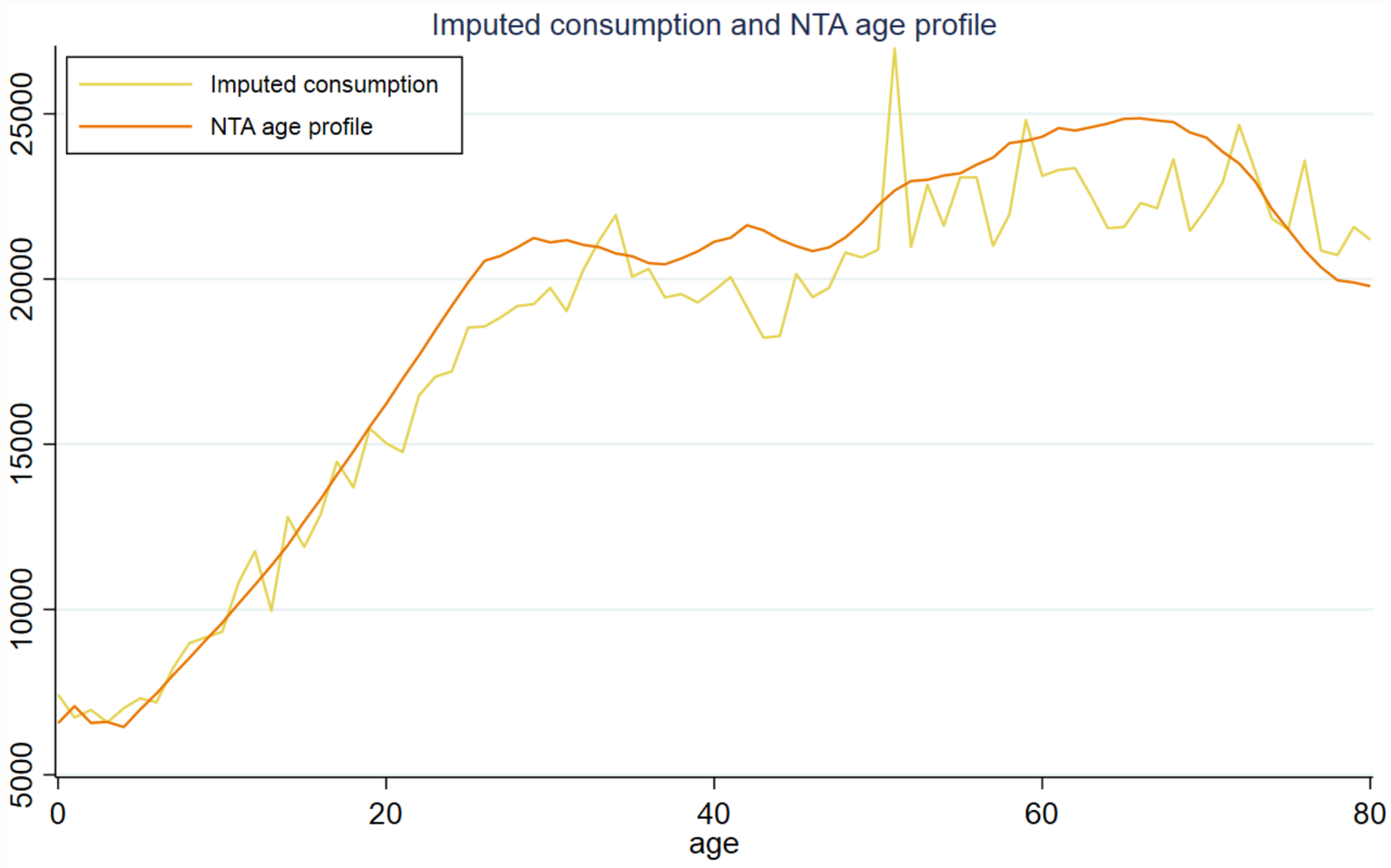
hhmem … number of equivalent consumers (NTA scale)

R2 is about 0.28

Imputed consumption

- We do make mistakes when imputing consumption in income survey

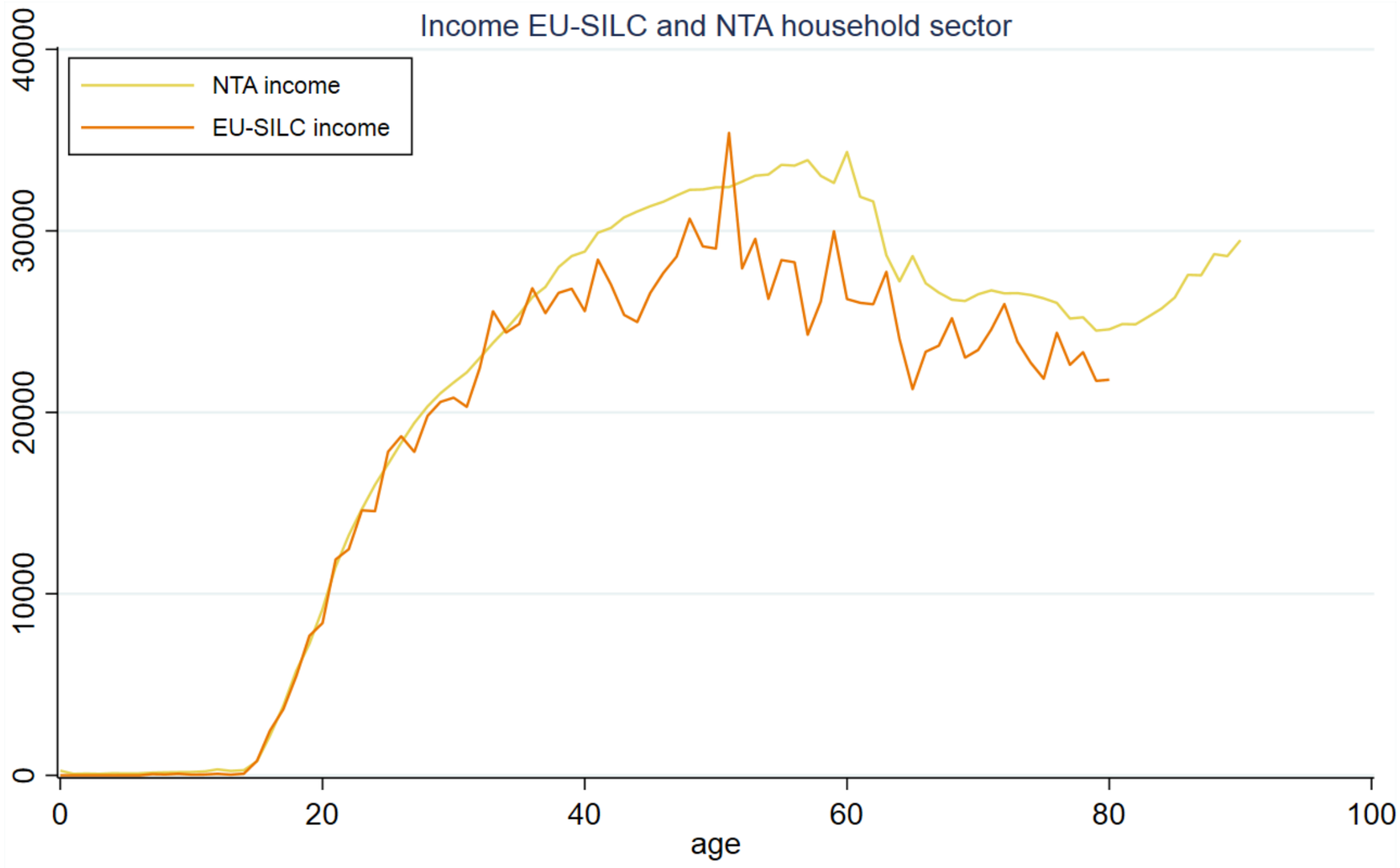
⇒ They should not affect our analysis by age.



Income: comparison NTA and survey data

Problems with income in surveys:

- Asset income underreported/not captured in EU-SILC
- Income at older ages not well captured in EU-SILC; stops at age 80



Post-imputation adjustment

⇒ **Imputed values are adjusted so, that the age-averages correspond to the NTA age profiles**

Disadvantages: distortion of the relation between income and consumption

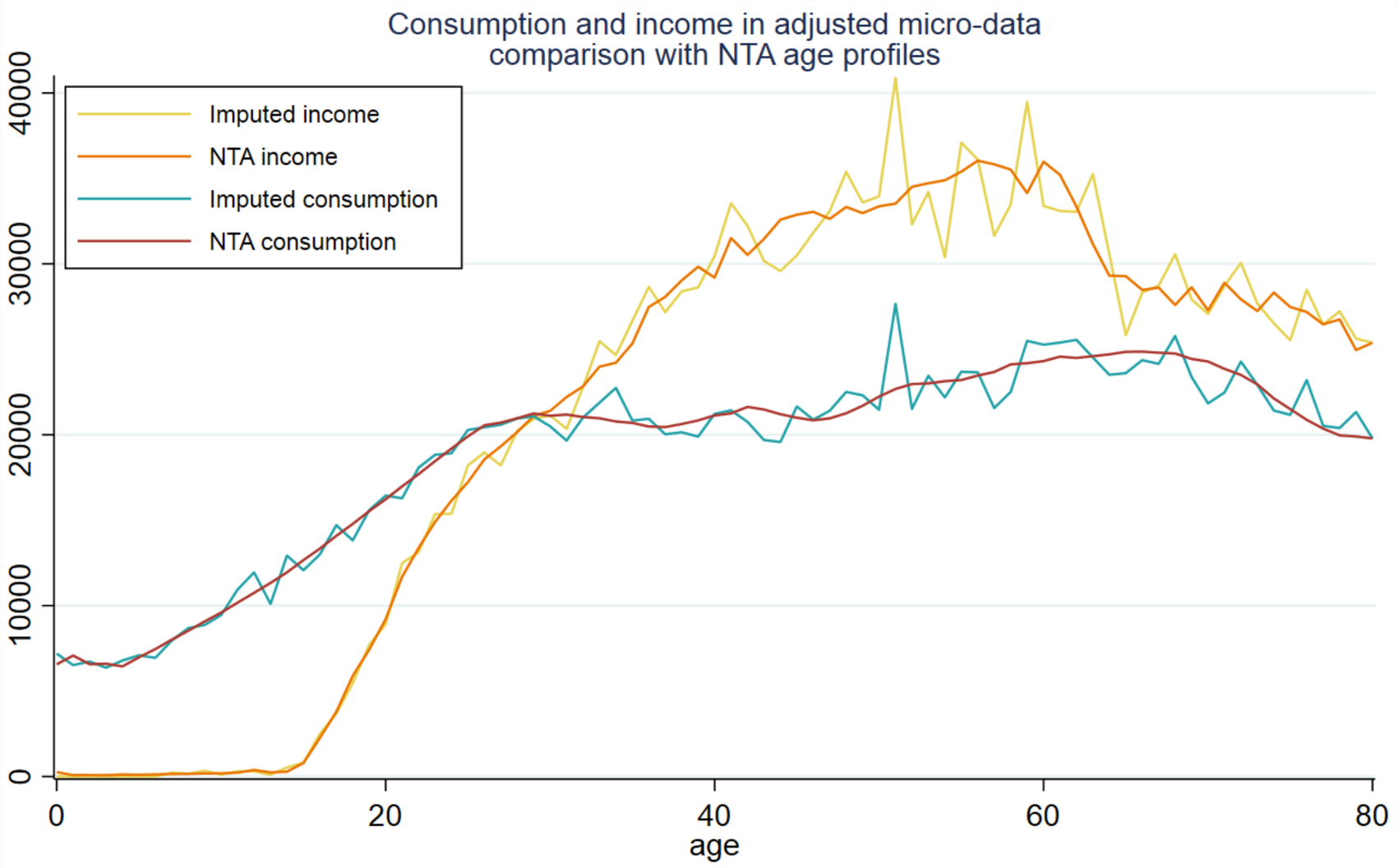
Advantages:

- Fits better to the NTA age profiles
- Reduces effect of inappropriate imputation model of consumption at old age

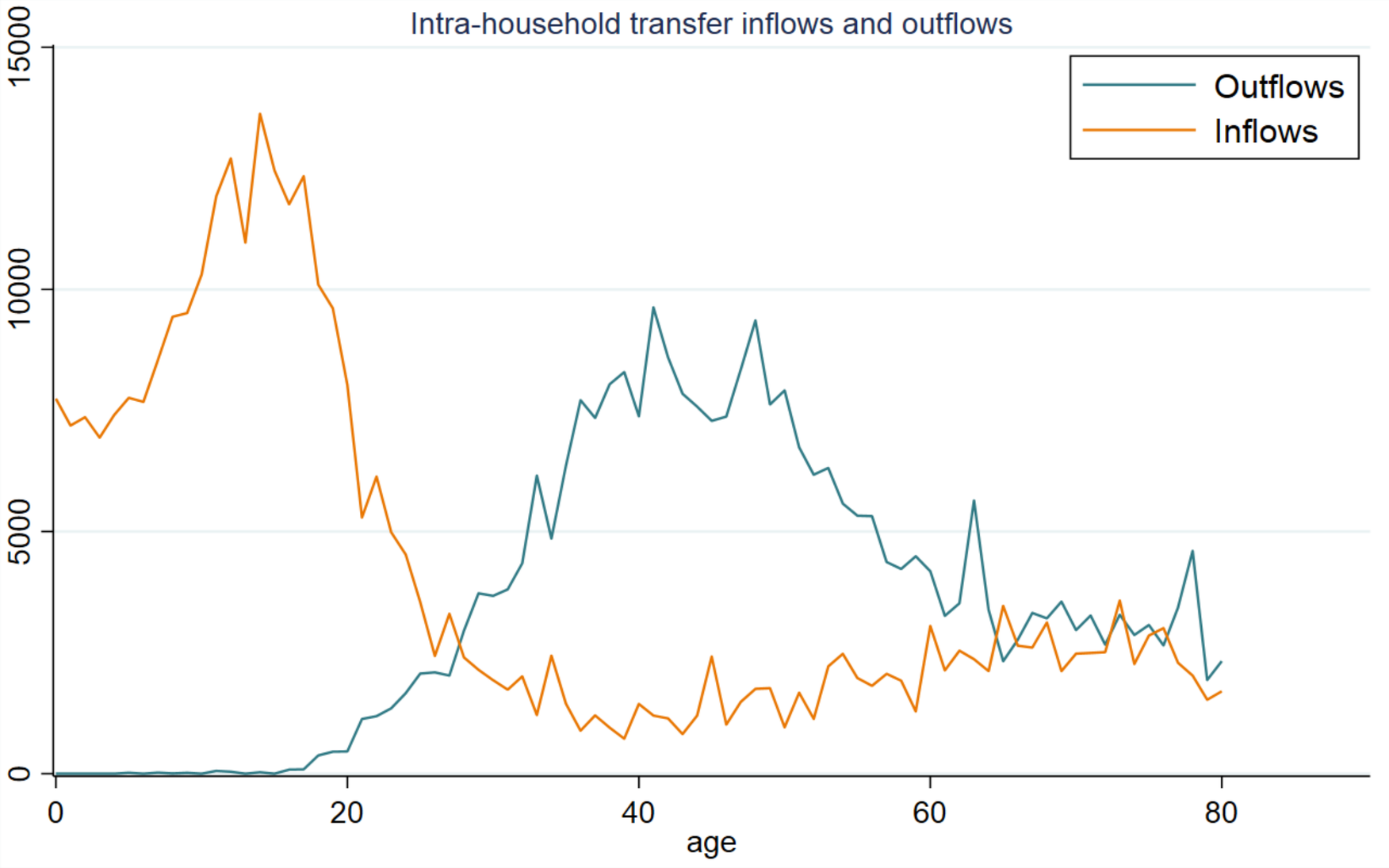
Post-imputation adjustment sub-optimal solution! Possible improvements:

- Finding better consumption function (imputed consumption fits to NTA)
- Survey that captures asset income better (e.g. HFCS)
- Imputation of asset income in the income survey

Intra-household transfers (unsmoothed)



Intra-household inflows and outflows



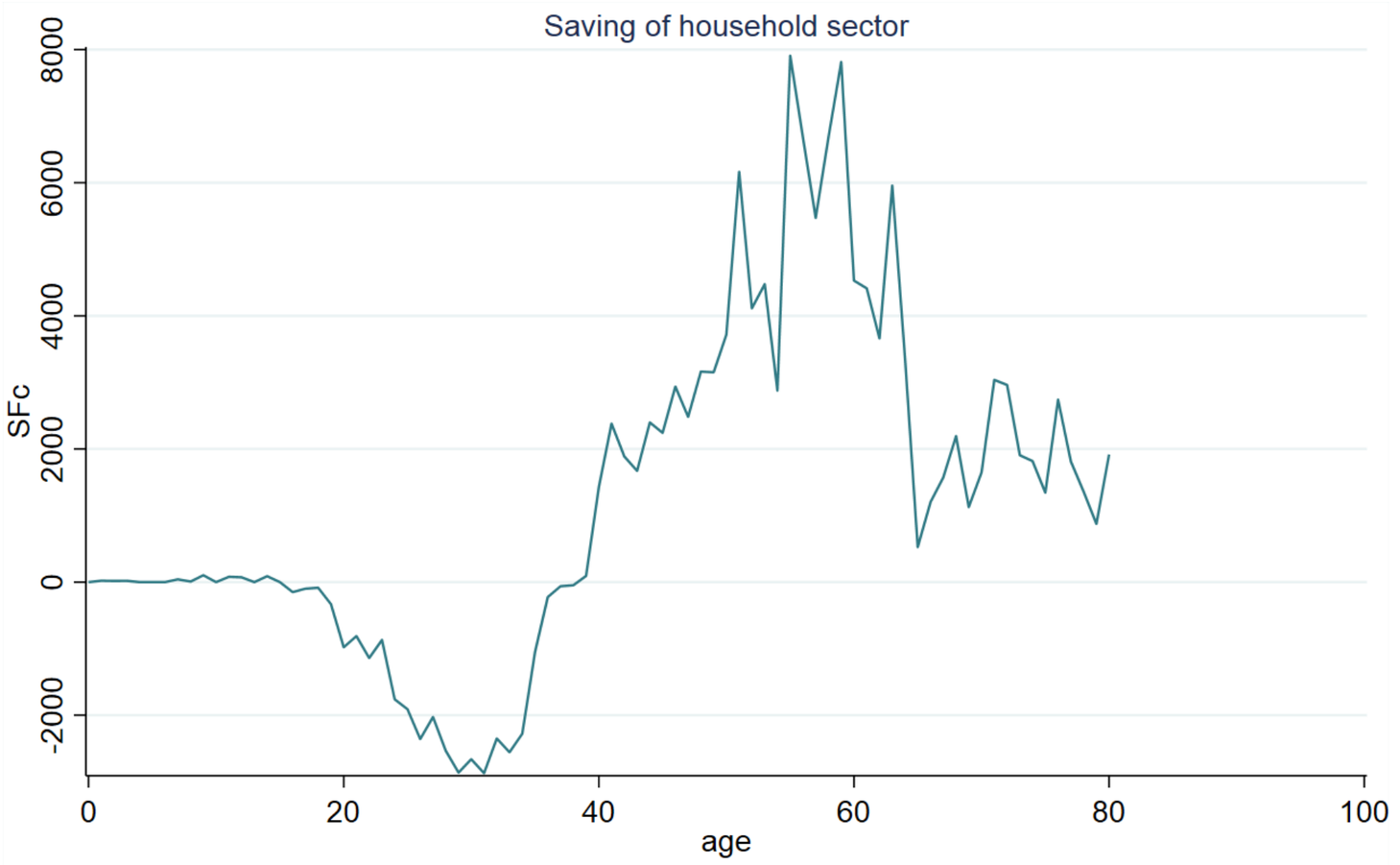
Net saving

Young adults have higher consumption than disposable income (neg. saving)

⇒ **Regular interhousehold transfers** not captured (bad data)

⇒ **Assets transfers:** young persons finance part of their consumption by asset transfers: bequests, gifts

! Taking a loan for financing assets (house, flat) is not directly captured in NTA – does not change net wealth



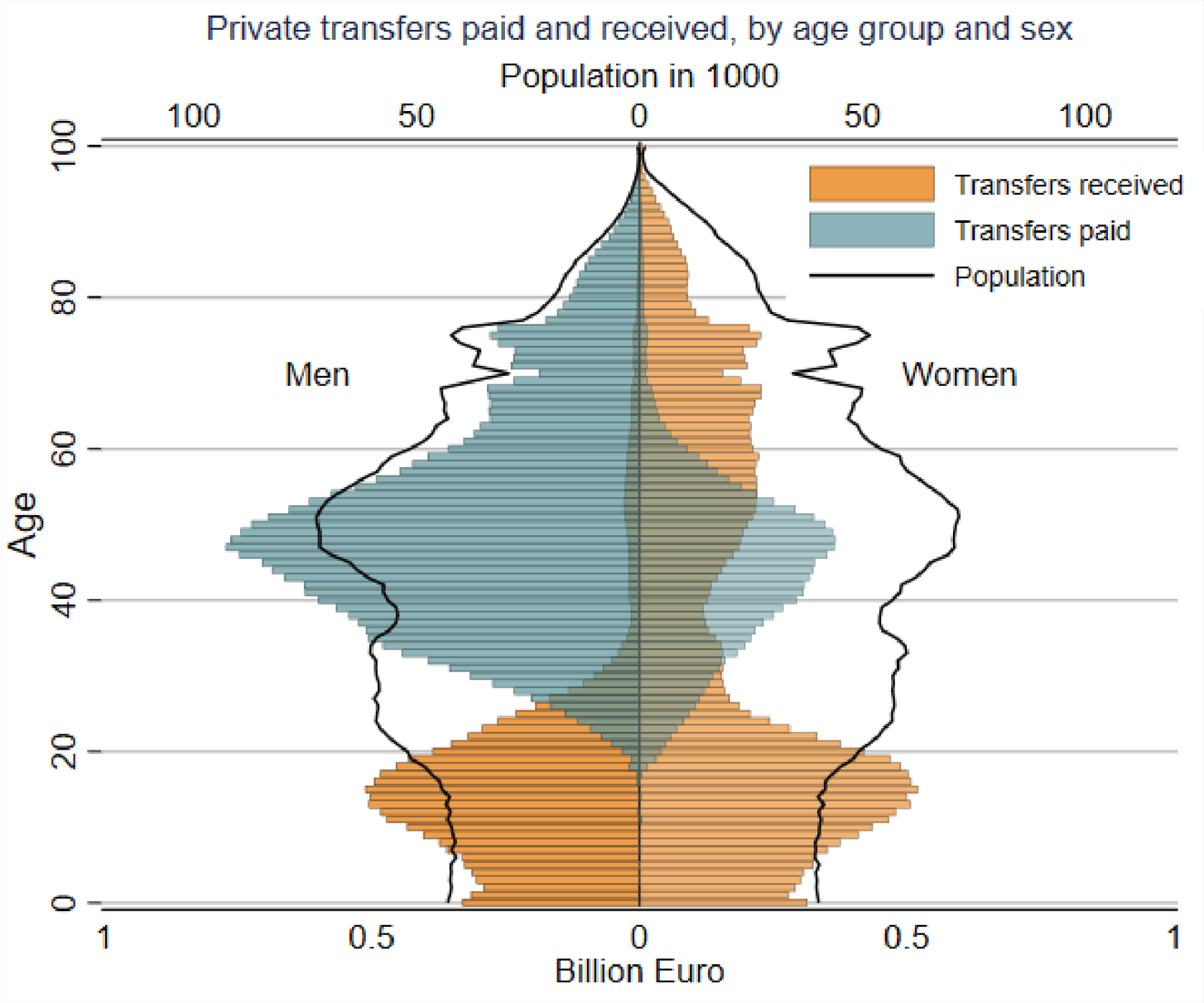
2. Analysing the role of the family in the transfer system

Private Transfers received and paid

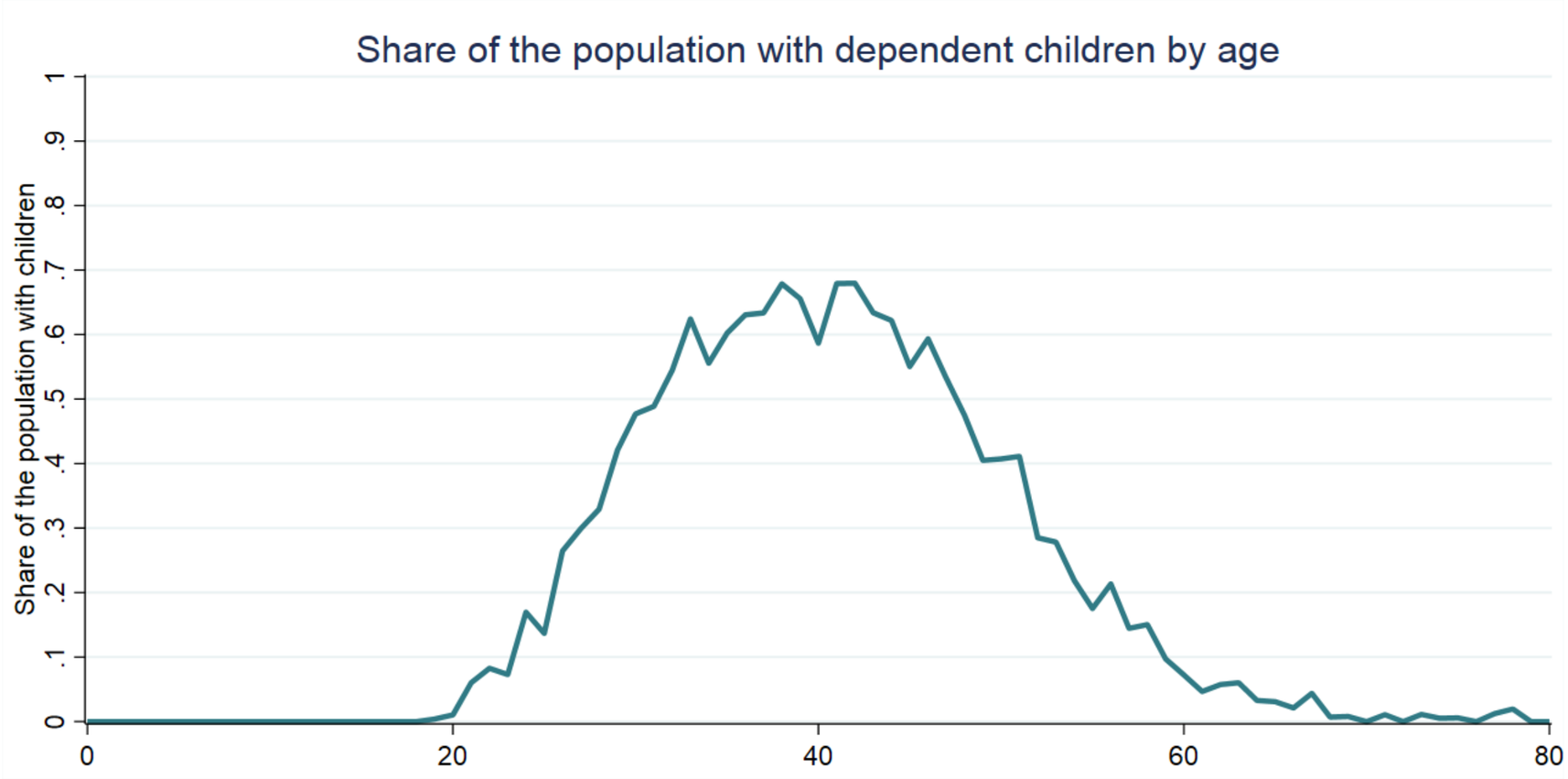
Total private transfers: 33 billion Euros

Transfers to dependent children: 21 billion Euros

Pensions: about 48 billion Euros



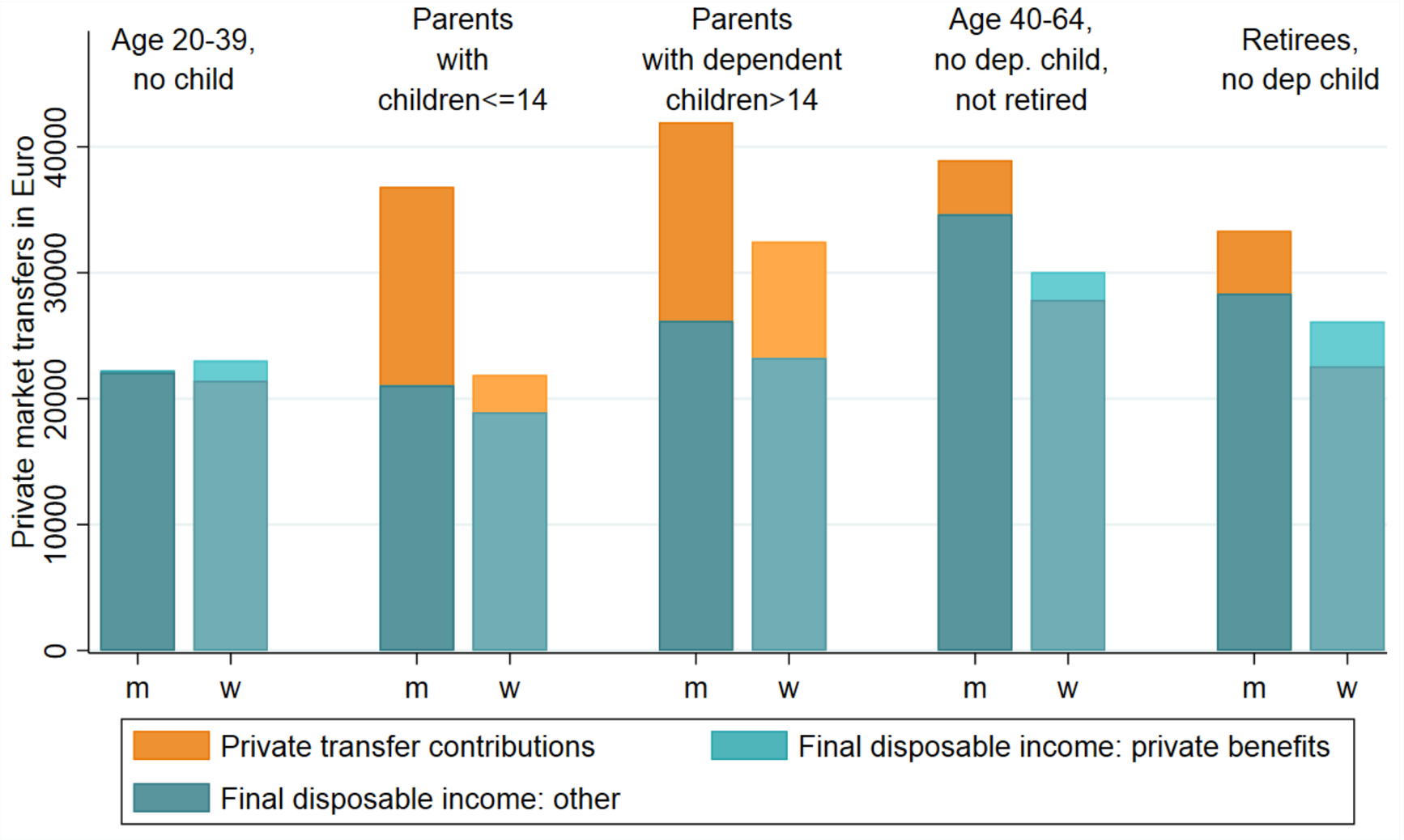
Intra-household transfer by parental status



Parents with dependent children

Family households provide a large share of their income to children.

=> Final disposable income is considerably lower in households with children



Outlook

Further step:

- Including public transfers in the micro-data

- Public cash benefits included
- Public contributions (TGO) can be estimated using micro-simulation models (EUROMOD)
- Public education based on education status
- Public health could be based on risk-based approach: what would be the insurance for addressing age-specific health risks

Are families, the group with highest risk of poverty, net contributors to the public transfer system or net recipients?