The economic demography of Europe:
An overview with National Transfer Accounts

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National Transfer Accounts

- **National Transfer Accounts:** global network of researchers working on the relationship between demography and economics: www.ntaccounts.org
- Data are the central component of NTA: The NTA network develops accounting system and indicators that integrate age and sex into National Accounts.
- **NTA data** provide age and sex specific information on
  - Income
  - Government transfers (taxes, pensions, health series, education)
  - Private transfers (+ transfers within households)
  - Consumption and saving

European National Transfer Accounts, SUSTAINWELL

- SUSTAINWELL aims to contribute to a resilient Europe and sustainable welfare by analysing -both theoretically and empirically- how the family, the market and the government can interact in facing an ageing population

- SUSTAINWELL (ww.ub.edu/sustainwell-eu-project) is financed the European Union's research and innovation programme under Grant agreement no 101095175.

Part of the project: **European National Transfer Accounts**

- NTA for European countries based on Eurostat data
- Aggregate data: European System of Accounts (ESA) and related sources
- Microdata and administrative data for age and sex-specific estimates: EU-SILC, Household finance and consumption survey, EUROMOD and others

Structure of European National Transfer Accounts

ENTA organisation

1. Primary income (labour and assets)
2. - Taxes
3. + Social beneftis from government
4. + Funded pensions (rec less paid)
5. + Private transfers (rec less paid)
6. **= Disposable income**
7. +/- Government consumption
8. - Private consumption
9. = Saving

NTA organisation

Life cycle deficit (Consumption – labour income)

=

- Government transfers
- + Private transfers
- + Asset based reallocation (asset income less saving)

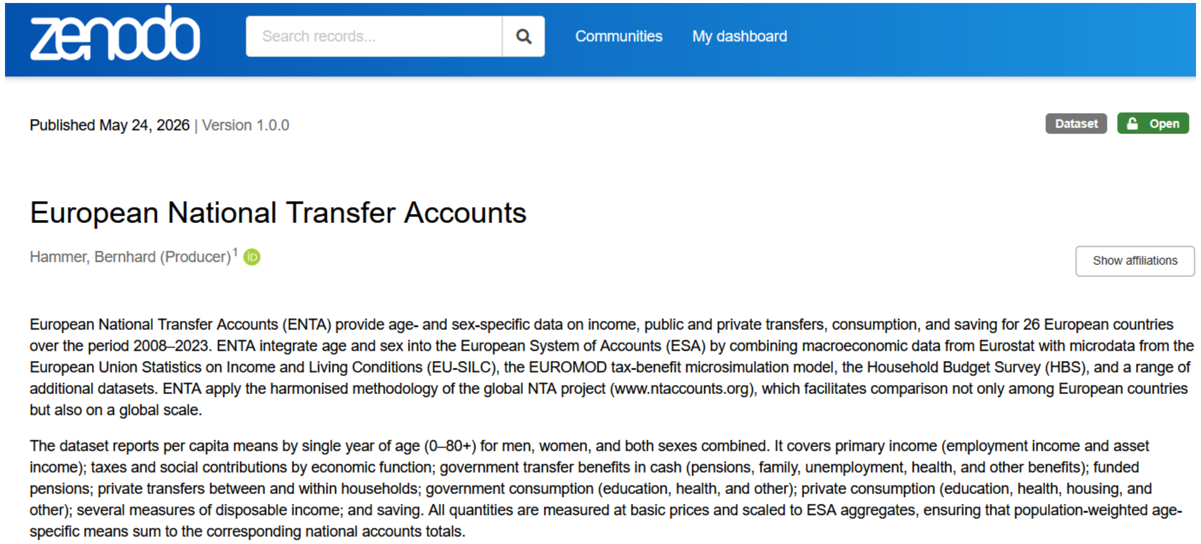
Motivation: National Accounts and extensions

Advantages of National Accounts:

- Consistent framework: income + (net transfers) = consumption + saving
- Huge efforts to collect high quality data in all countries
- Clear definitions and concepts
- High standardisation: https://unstats.un.org/unsd/nationalaccount/sna2025.asp
- High importance and popularity of quantities: Gross National Income, government budget deficit, debt to GDP ratio, tax ratio

Access to European National Transfer Accounts

https://doi.org/10.5281/zenodo.20360413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Dataset Open

European National Transfer Accounts

Hammer, Bernhard (Producer)[1]

Show affiliations

European National Transfer Accounts (ENTA) provide age- and sex-specific data on income, public and private transfers, consumption, and saving for 26 European countries over the period 2008–2023. ENTA integrate age and sex into the European System of Accounts (ESA) by combining macroeconomic data from Eurostat with microdata from the European Union Statistics on Income and Living Conditions (EU-SILC), the EUROMOD tax-benefit microsimulation model, the Household Budget Survey (HBS), and a range of additional datasets. ENTA apply the harmonised methodology of the global NTA project (www.ntaccounts.org), which facilitates comparison not only among European countries but also on a global scale.

The dataset reports per capita means by single year of age (0–80+) for men, women, and both sexes combined. It covers primary income (employment income and asset income); taxes and social contributions by economic function; government transfer benefits in cash (pensions, family, unemployment, health, and other benefits); funded pensions; private transfers between and within households; government consumption (education, health, and other); private consumption (education, health, housing, and other); several measures of disposable income; and saving. All quantities are measured at basic prices and scaled to ESA aggregates, ensuring that population-weighted age-specific means sum to the corresponding national accounts totals.

www.ntaeurope.eu/dataexplorer

Why National Transfer Accounts

Understanding macro-economic changes

- Demographic dividend (and its end)
- Changes in government revenues and expenditure

Inequalities between and within age-groups, men and women

- Changes in the age structure enforce changes in the distribution and redistribution of income between age groups
- Heterogeneities beyond age and sex: income, education, parental status

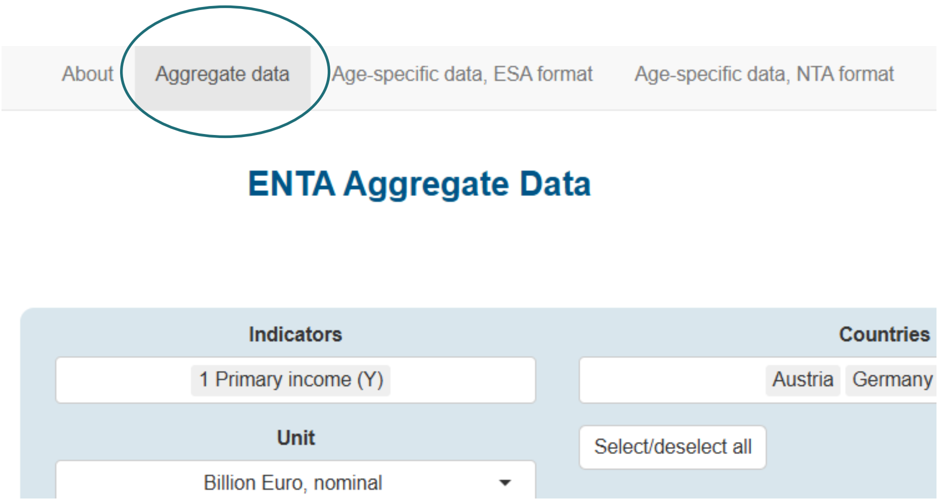
Outlook

1. The generational economy in aggregate data
2. Employment income by age
3. Social benefits
4. Disposable income by age

1. The generational economy in aggregate data

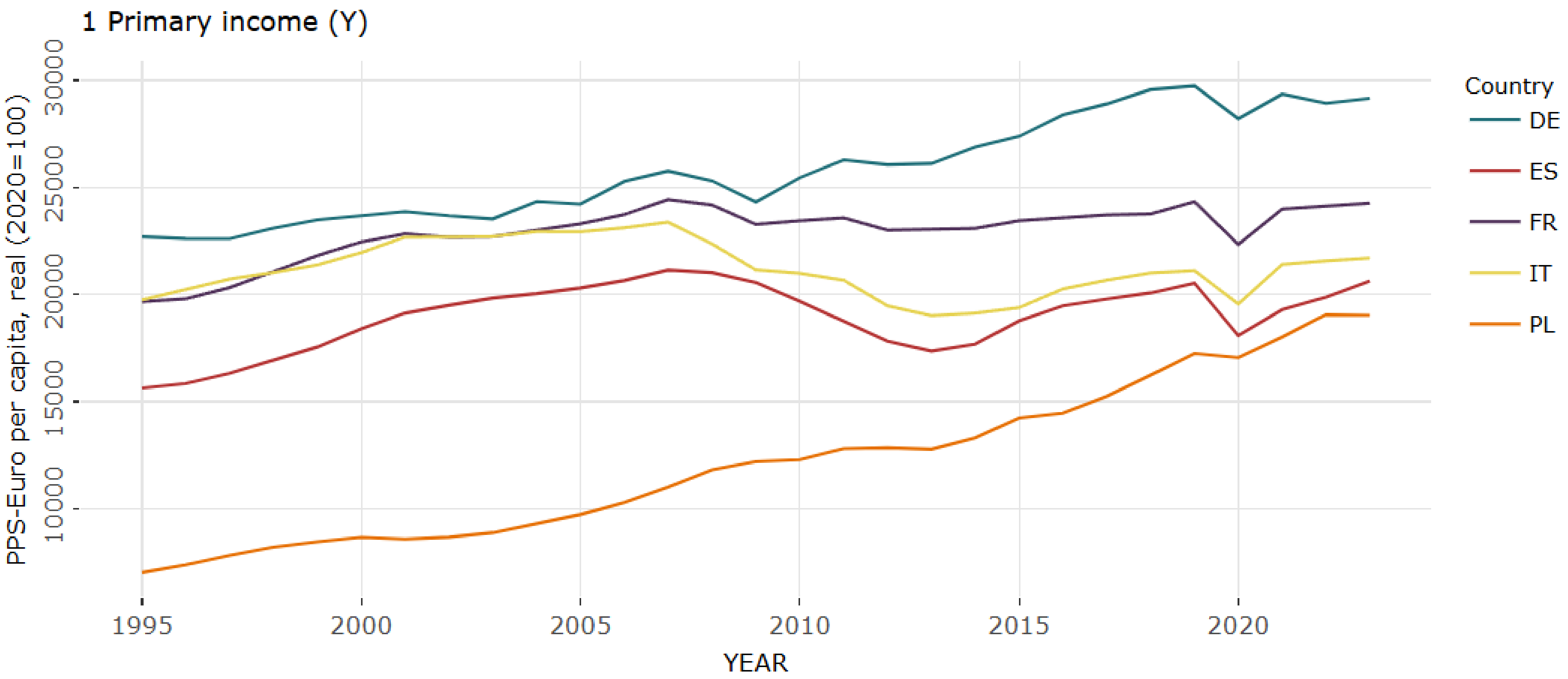
ENTA aggregate data

ENTA aggregate data combines ESA and related data to provide total economy values on:

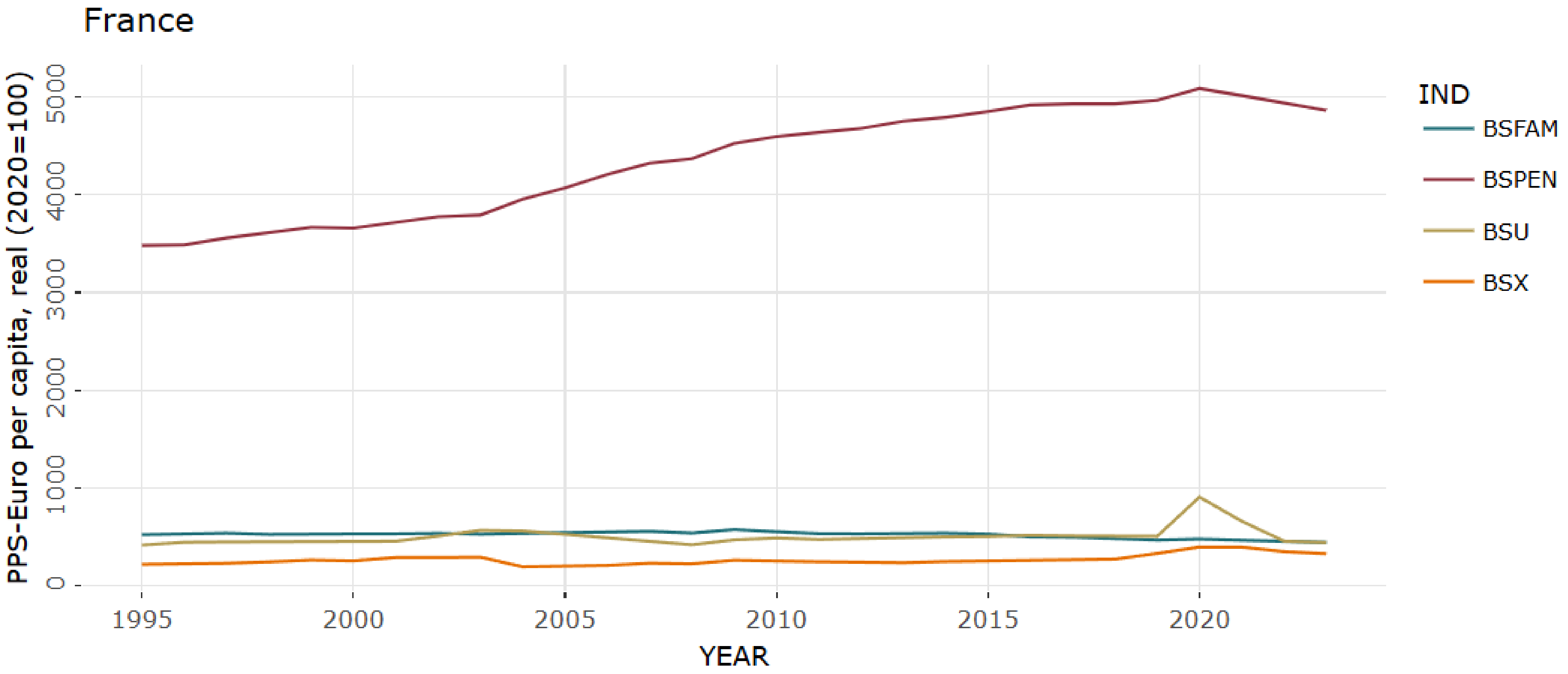


1. Income
2. Taxes
3. Social beneftis
4. Funded pensions
5. Private transfers
6. Disposable income
7. Government consumption
8. Consumption
9. Saving

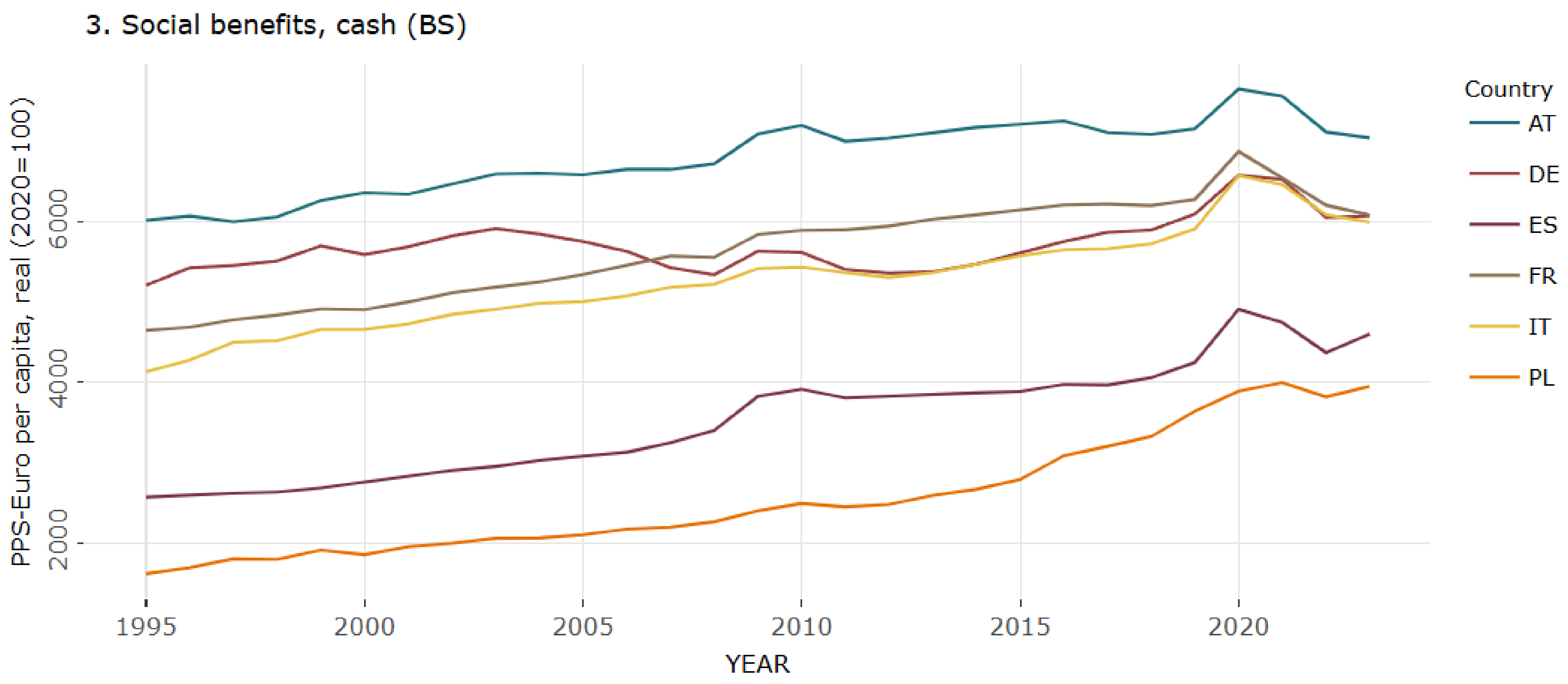
ENTA aggregate data: primary income



ENTA aggregate data: social beneftis by type



ENTA aggregate data: social beneftis



Some insigths from ENTA aggregate data

ENTA aggregate data show total economy values in a nice, structured way!

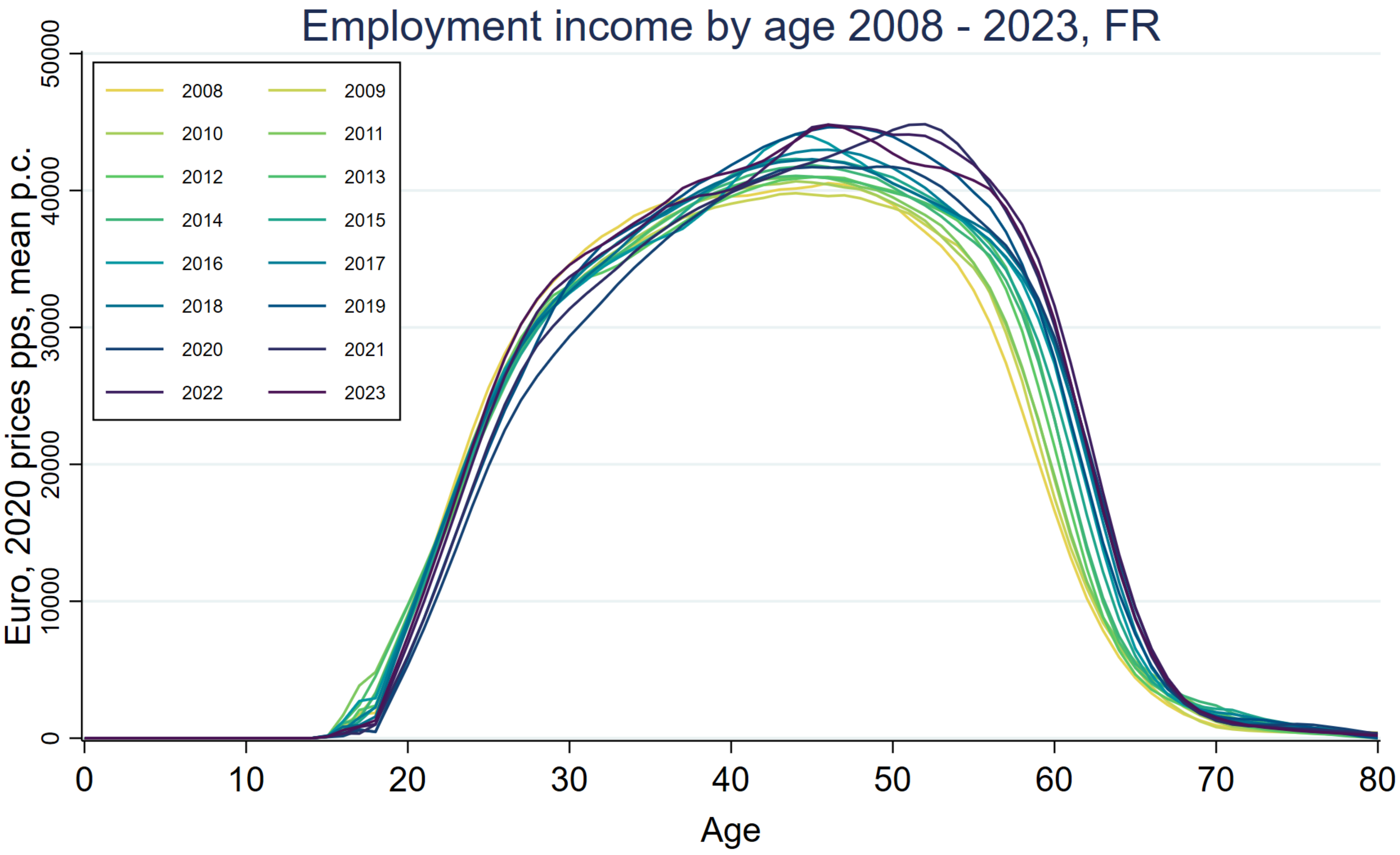
- Income growth in many European economies is stagnating already for 15 years
- Expenditure for the older population is increasing relative to income

2. Employment income by age

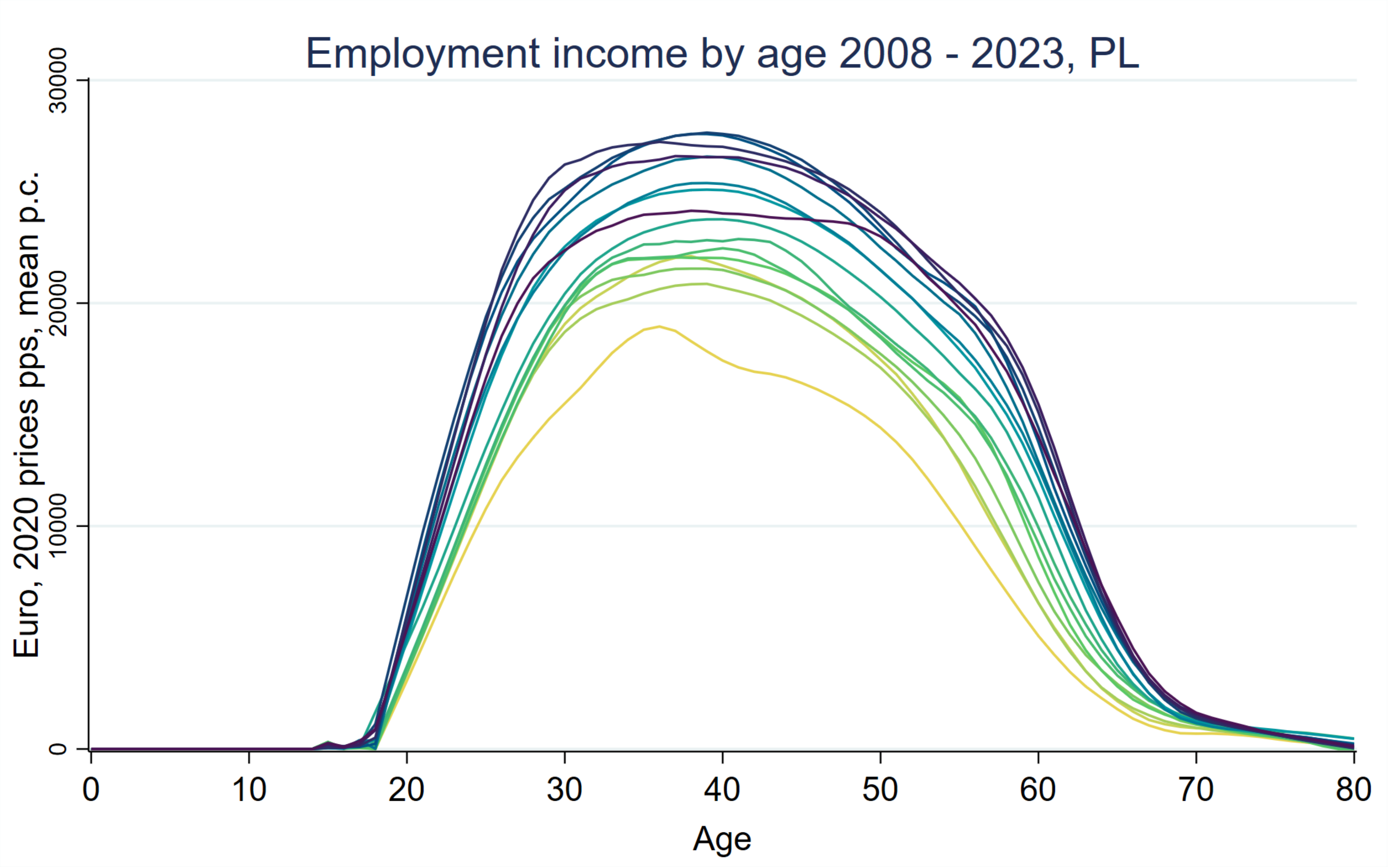
Employment income

- Gross income from employment and self-employment + employers‘ social contributions
- In ESA: income of employees and mixed income
- In EU-SILC: income from employment

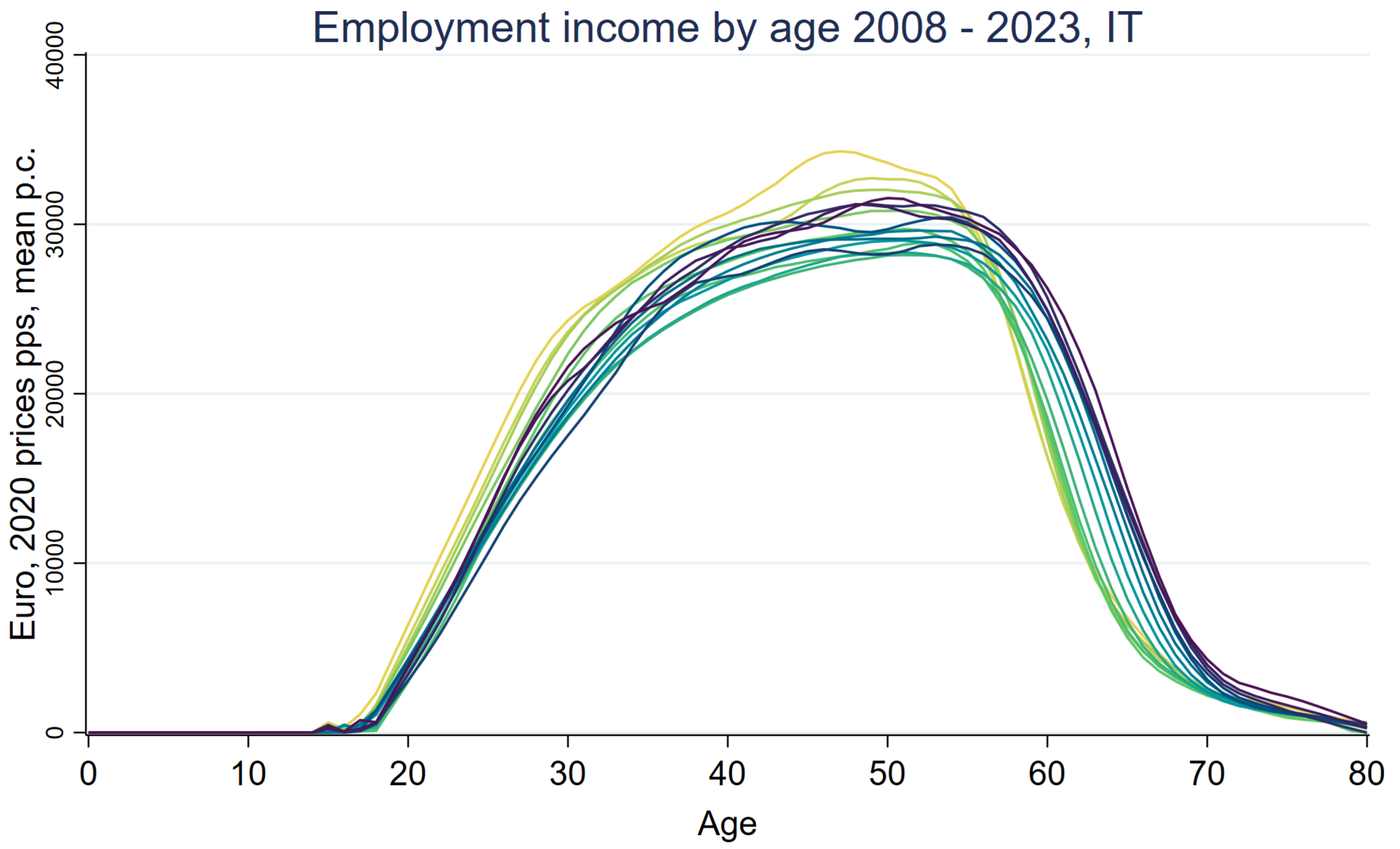
Employment income, France



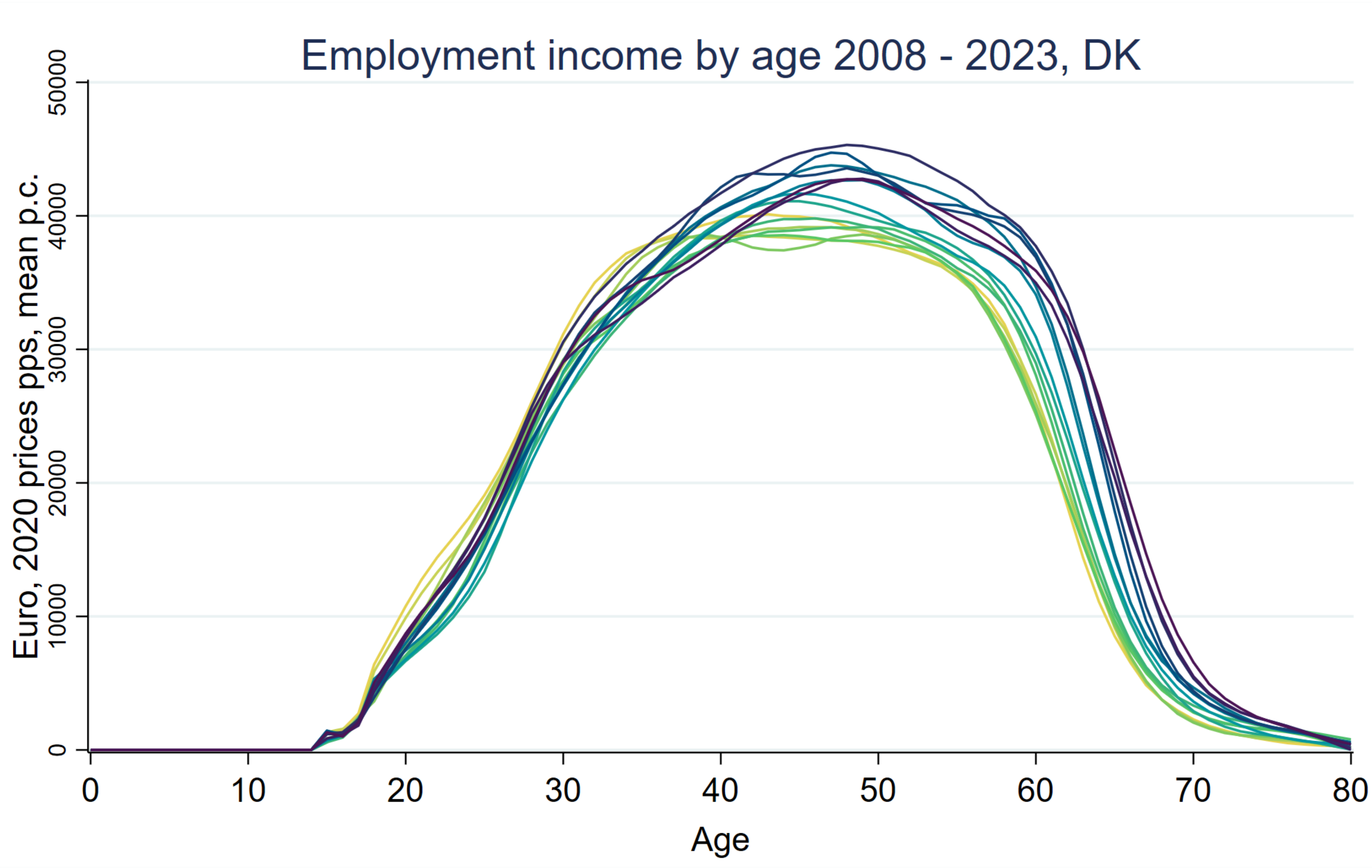
Employment income, Poland



Employment income, Italy



Employment income, Denmark



Income change 2008 – 2023 by age (%)

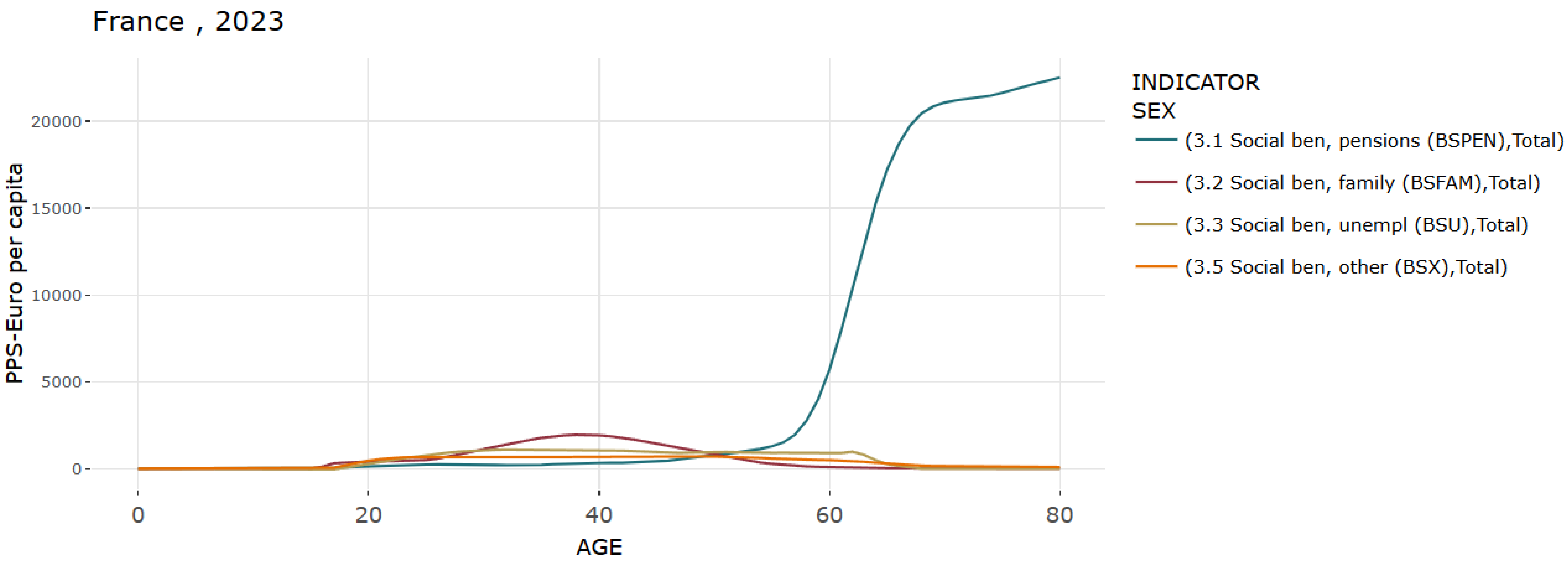
Country	Age 25-39	Age 40-59
AT	-1	5
FR	0	16
IT	-16	-8
ES	-9	-3
DK	-5	13
SE	11	19
PL	39	63
LT	59	43

Summary

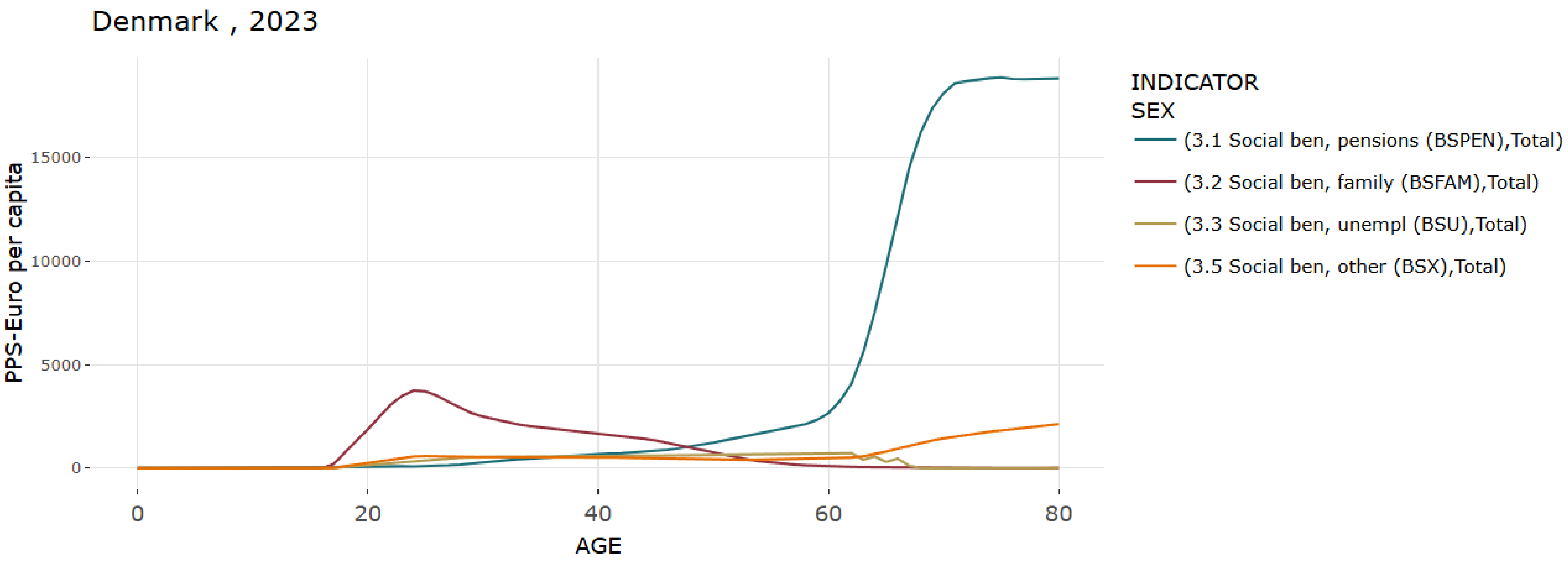
- European Economies are adapting to demographic change: employment and income at age 60+ incrasing in all countries
- Income change differ between age groups: increase for the young working age population lower in almost all countries

3. Social benefits

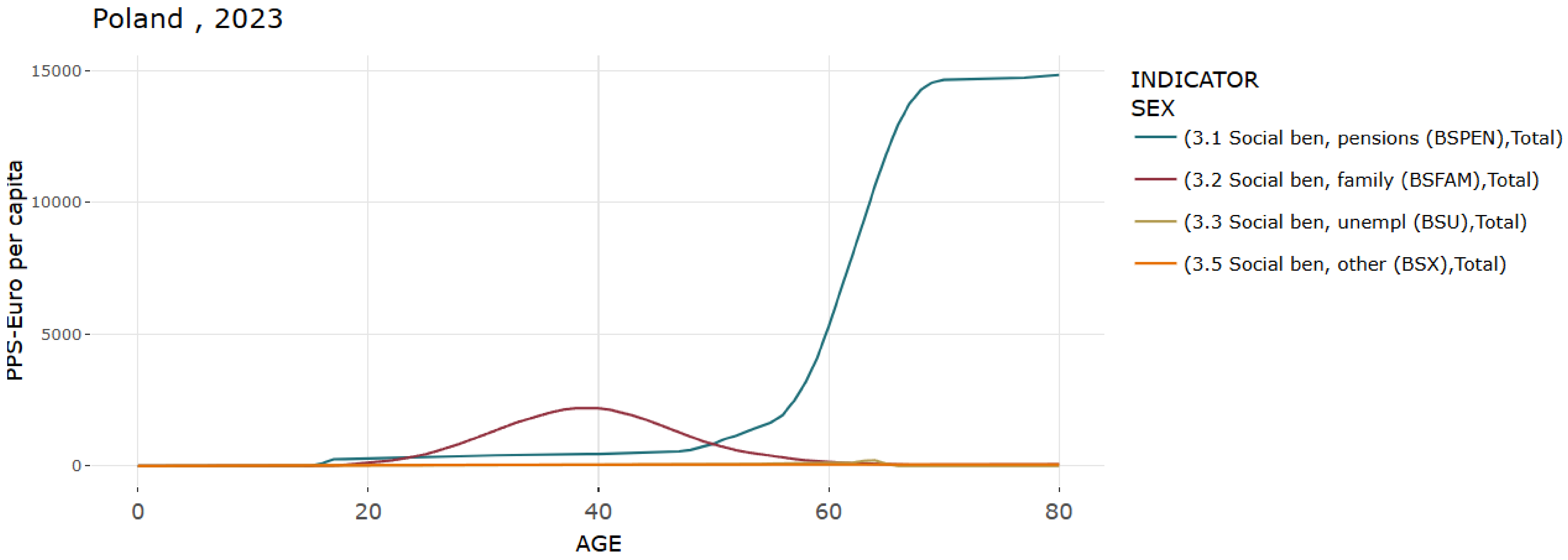
Social benefits by age, France



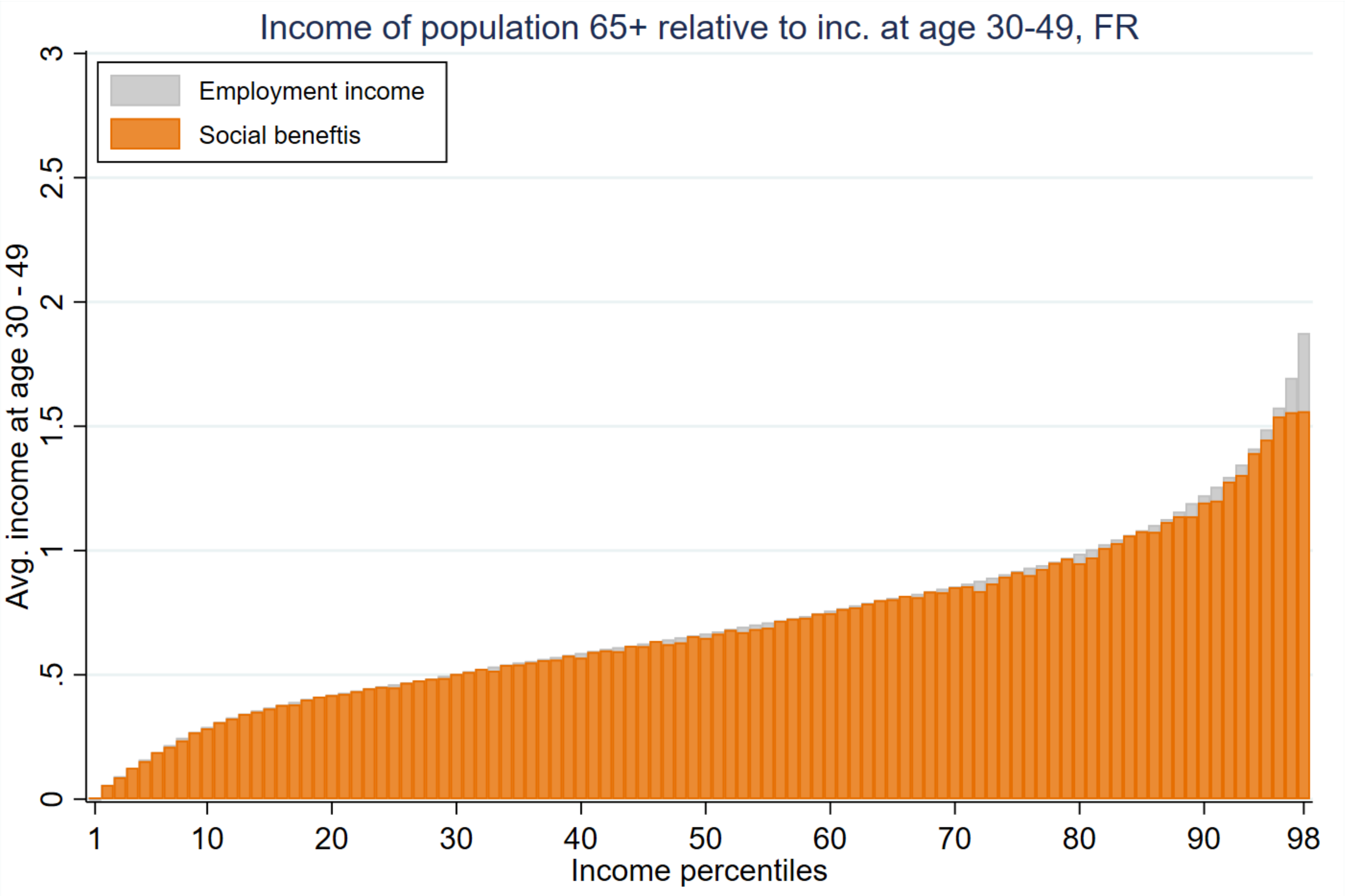
Social benefits by age, Denmark



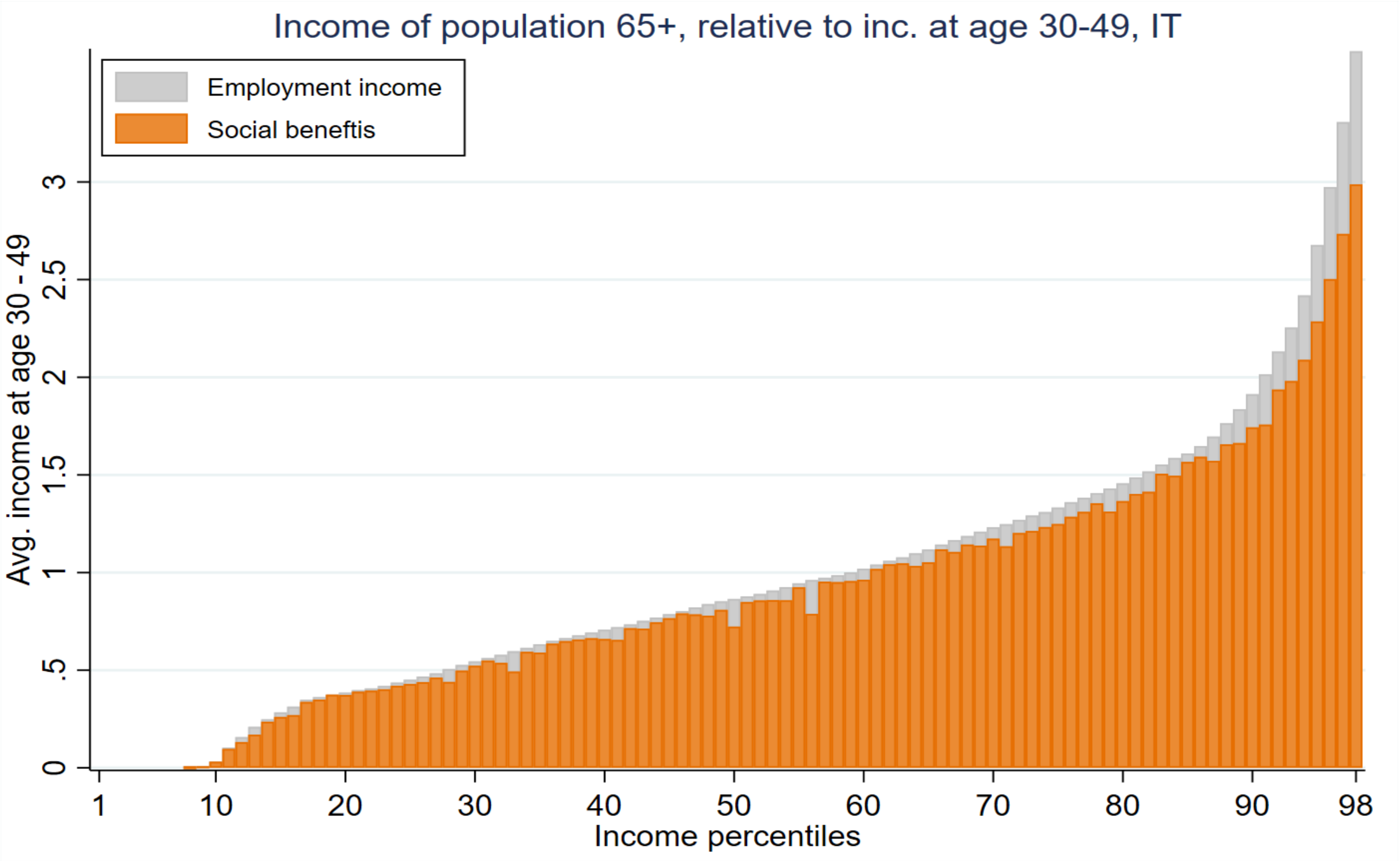
Social benefits by age, Poland



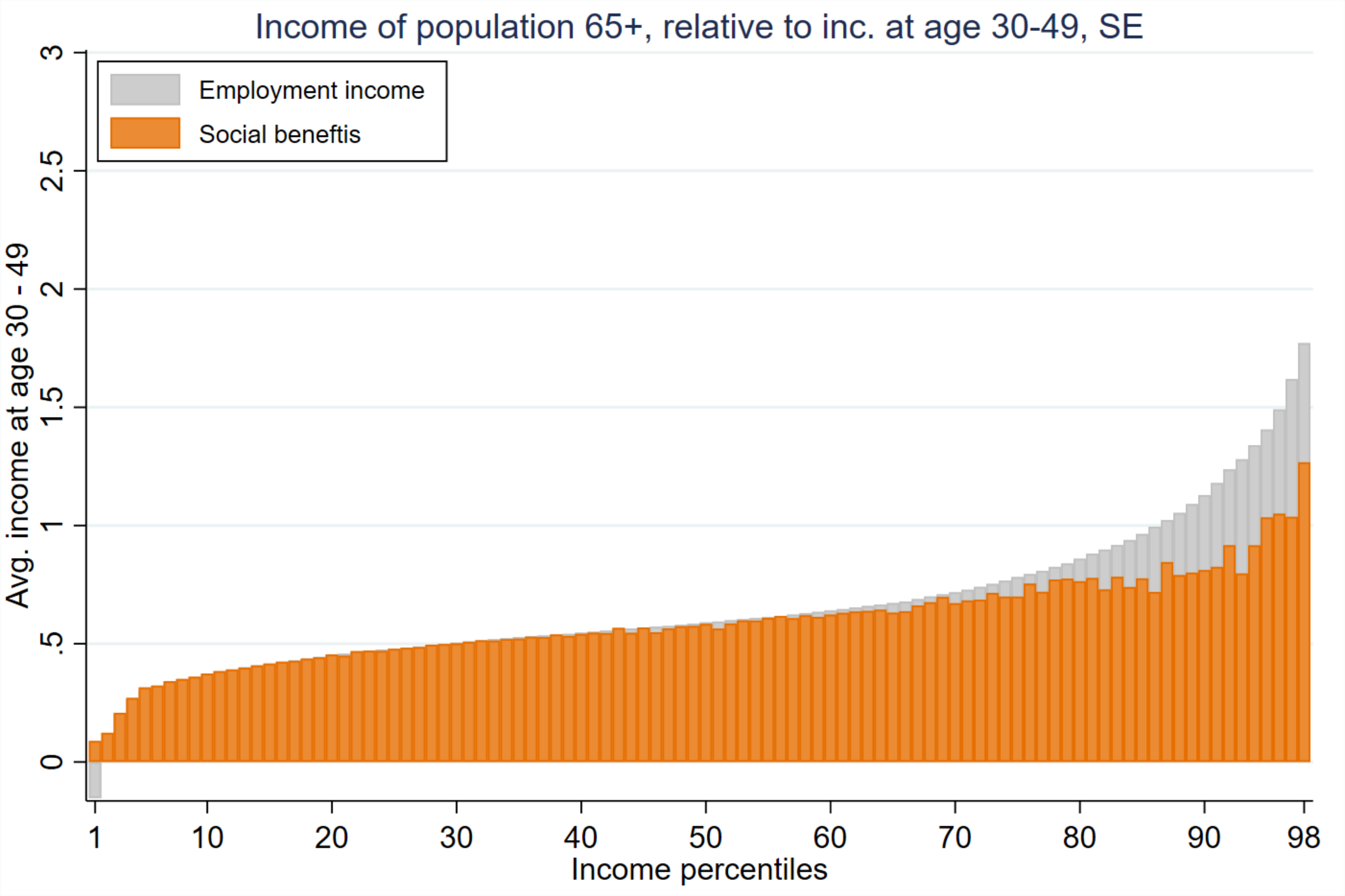
Income at age 65+ relative to workers, FR



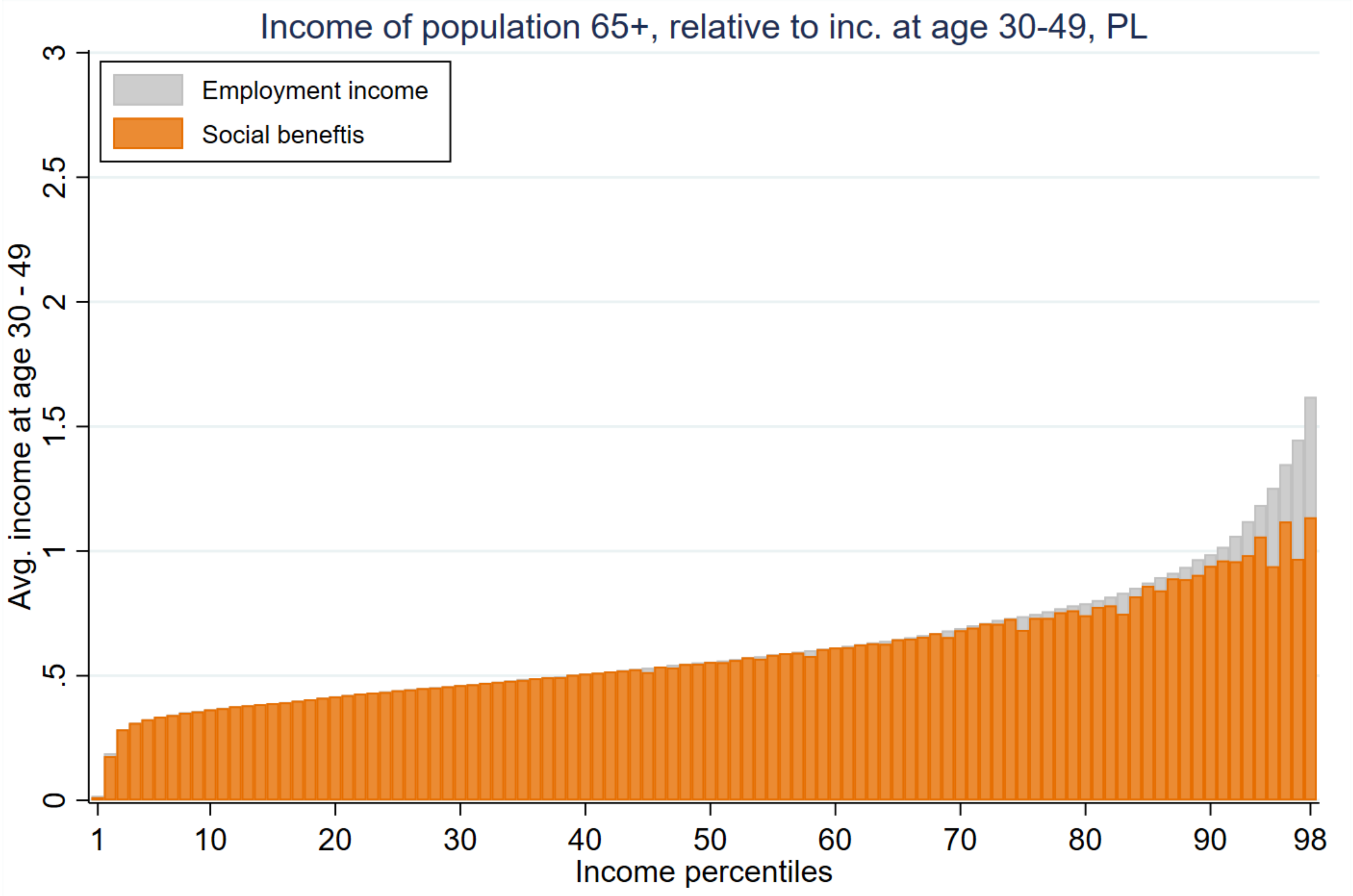
Income at age 65+ relative to workers, IT



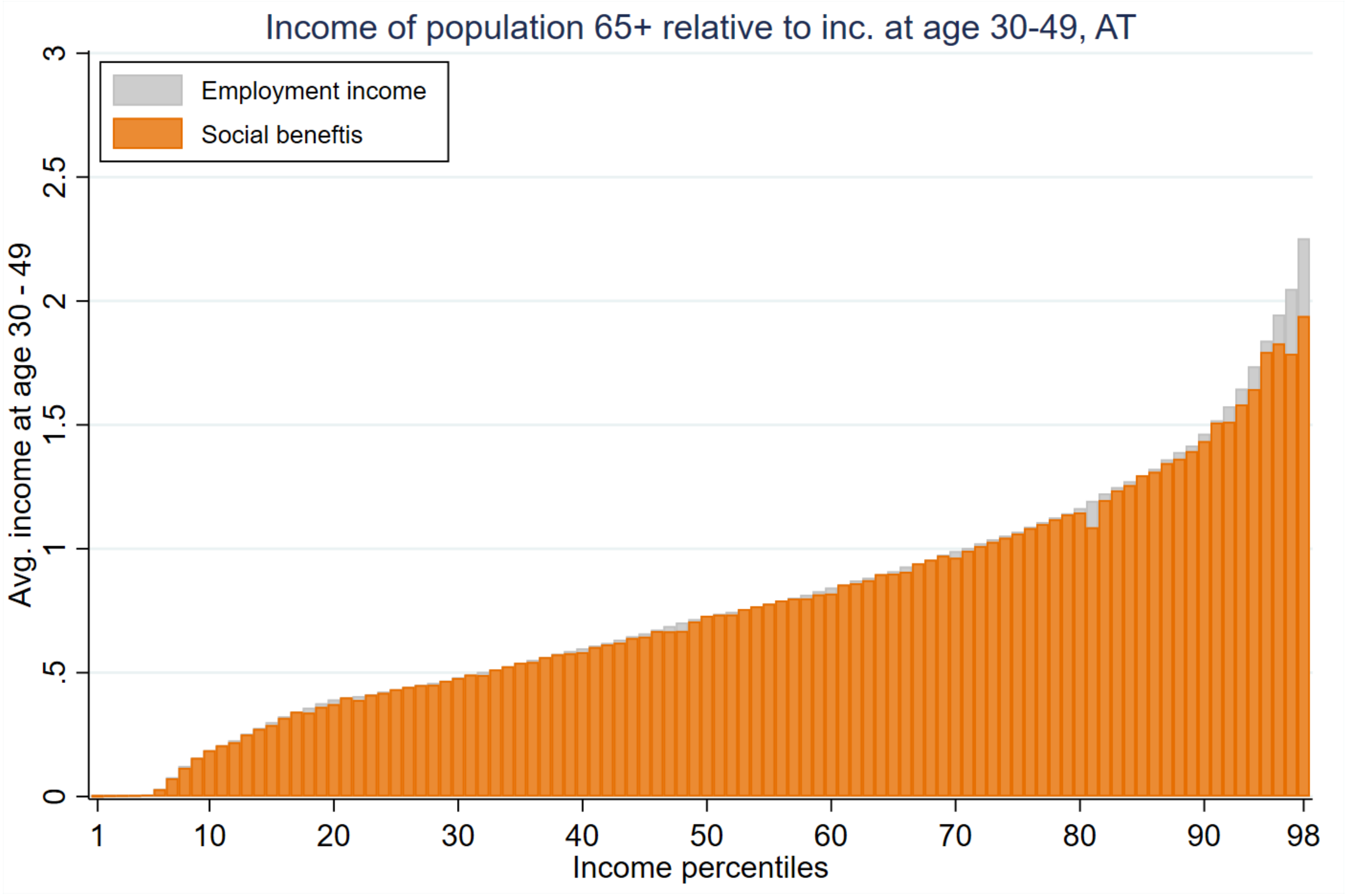
Income at age 65+ relative to workers, SE



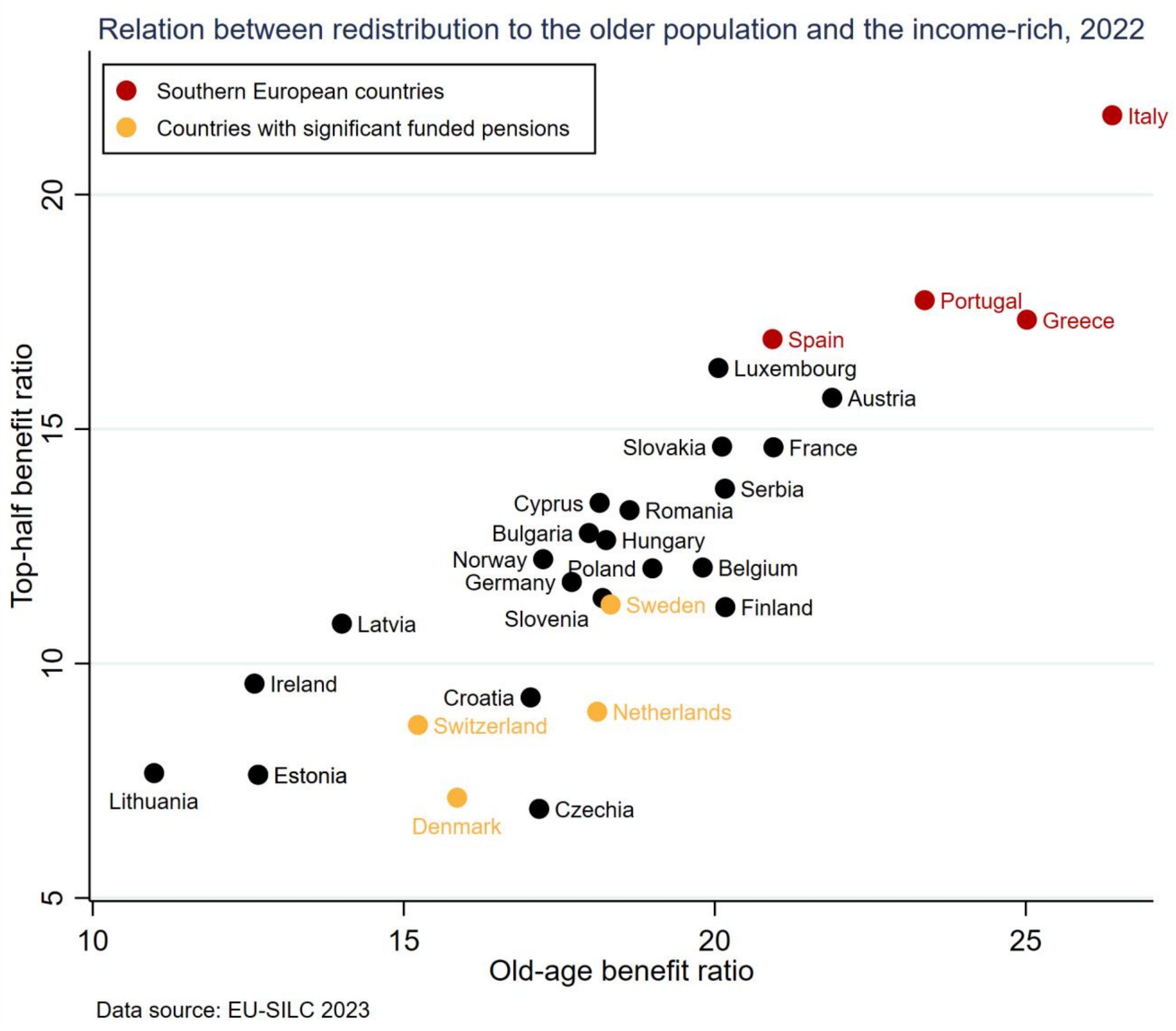
Income at age 65+ relative to workers, PL



Income at age 65+ relative to workers, AT



Social benefits by age, Denmark



https://eds2026.populationeurope.org/en/

Public cash transfers by income quintile

Italy

Denmark

Summary

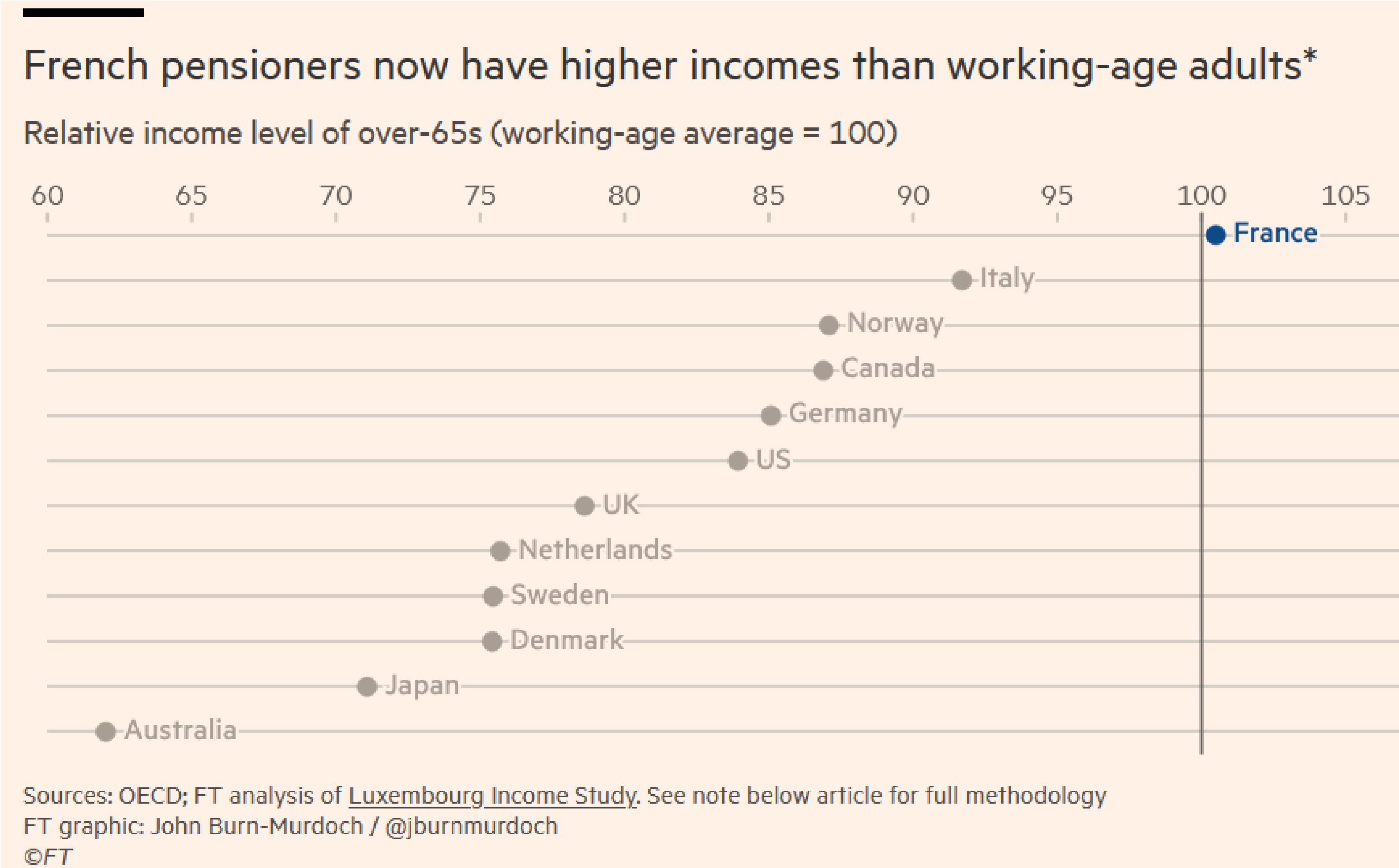
- Europen welfare states differ in howm much they redistribute to income-rich pensioners
- Total size of social beneftis strognly relates with luxury pensions for a large share of the population
- Countries with low redistribution to the rich pensioners characterized by higher support for working age population, in particular families

Literature:

Hammer, B., Christl, M. & De Poli, S. (2023). Public redistribution in Europe: Between generations or income groups? *The Journal of the Economics of Ageing*. https://doi.org/10.1016/j.jeoa.2022.100426

4. Disposable income

Disposable income by age



Euivalised income by age

Equivalised income

- Compares standard of living between different households

- First adult (age>=14) is a consumer with weight 1
- Second adult consumer with weight 0.5
- Children (Age<14) gets weight 0.3

Example:

A: Household with 2 adults and 2 children: 2.1 „effective consumers“

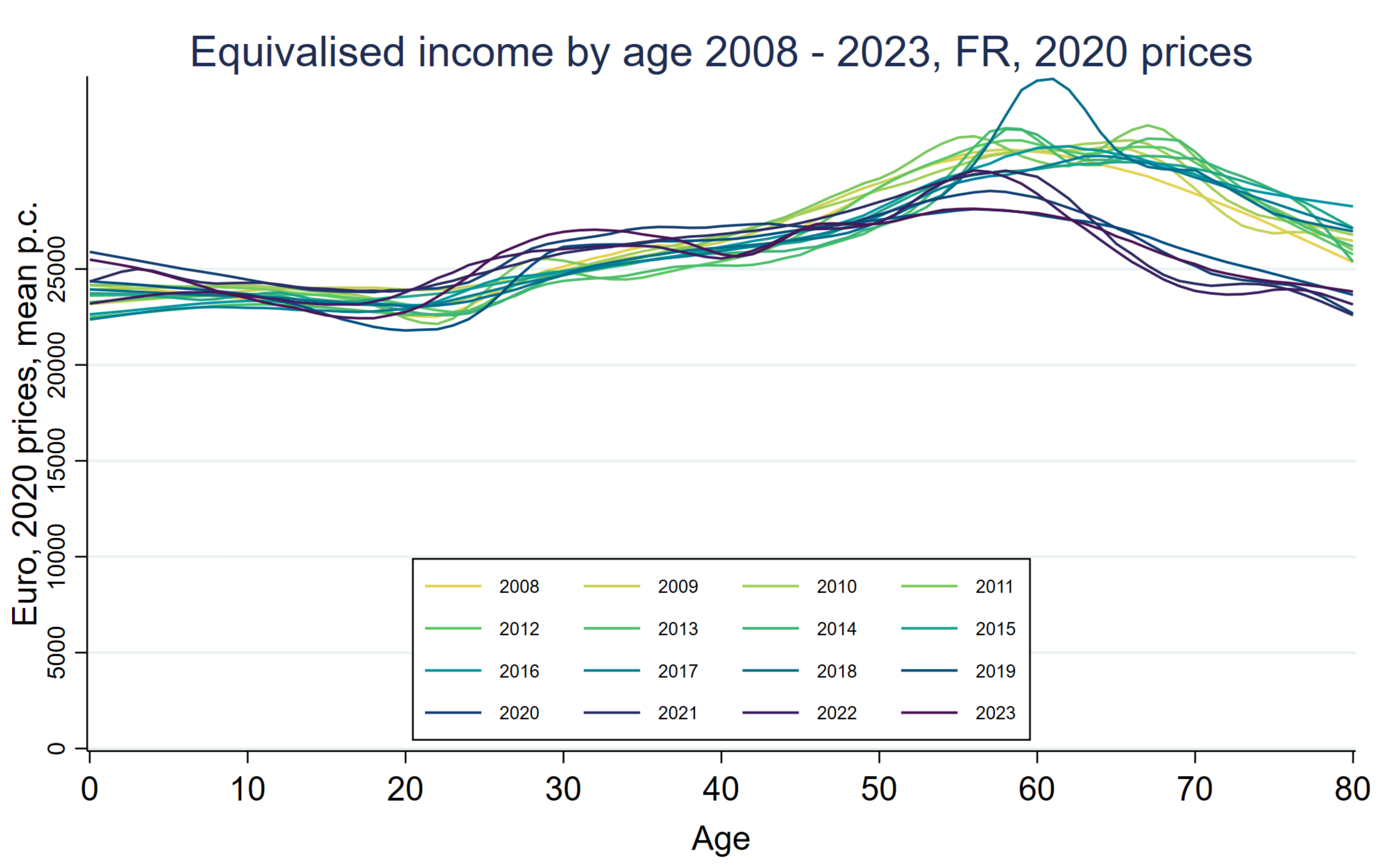
B: Household with 2 adults: 1.5 „effective consumers“

=> With income of 4200€ Household A is equally well of As B with 3000€

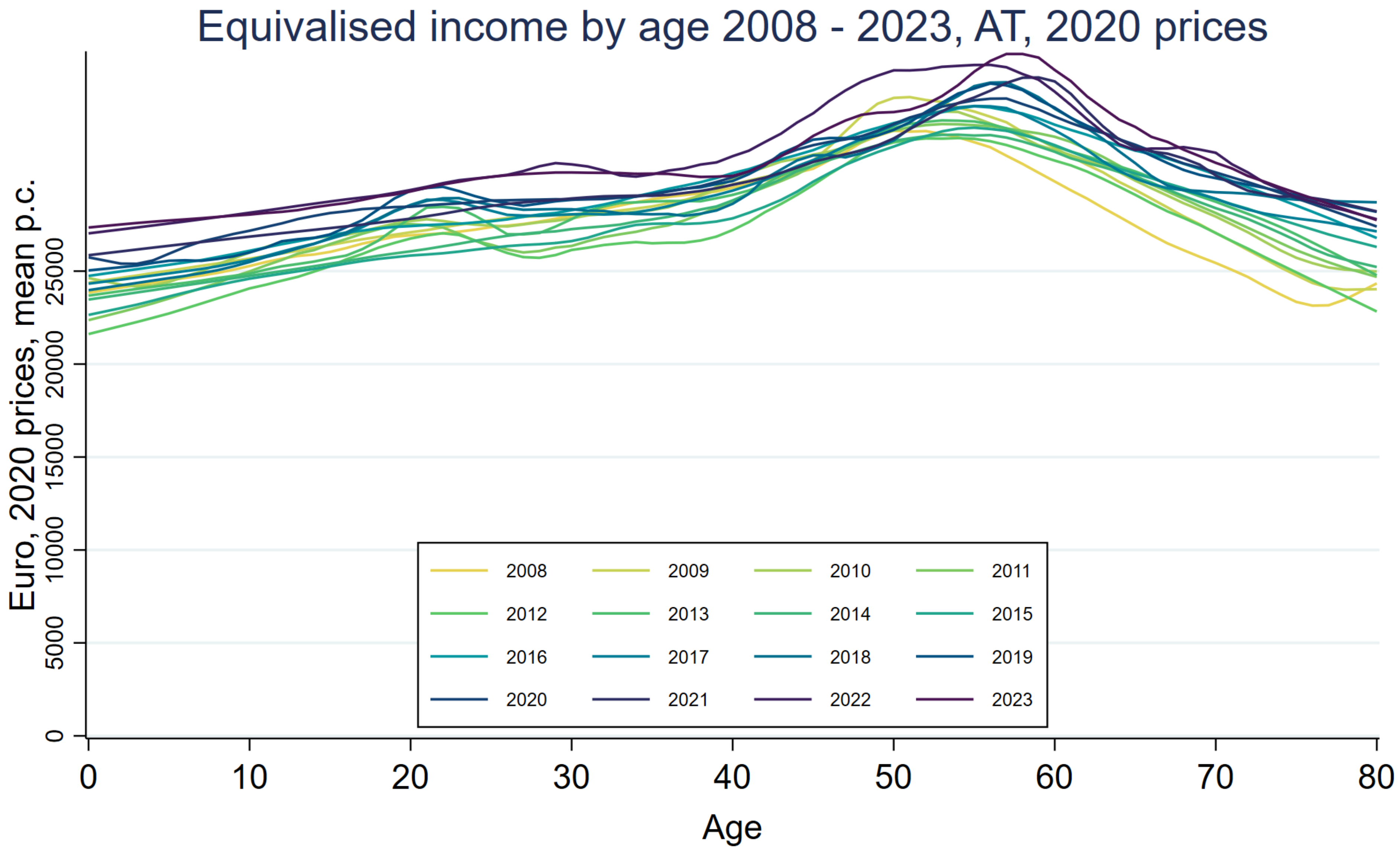
Disadvantages:

- Based on household income => distorted results for 20–34 year old (share of living with parents)
- Shaped by household structure effects (decreasing household size in old age)
- Decomposition not straigthforward

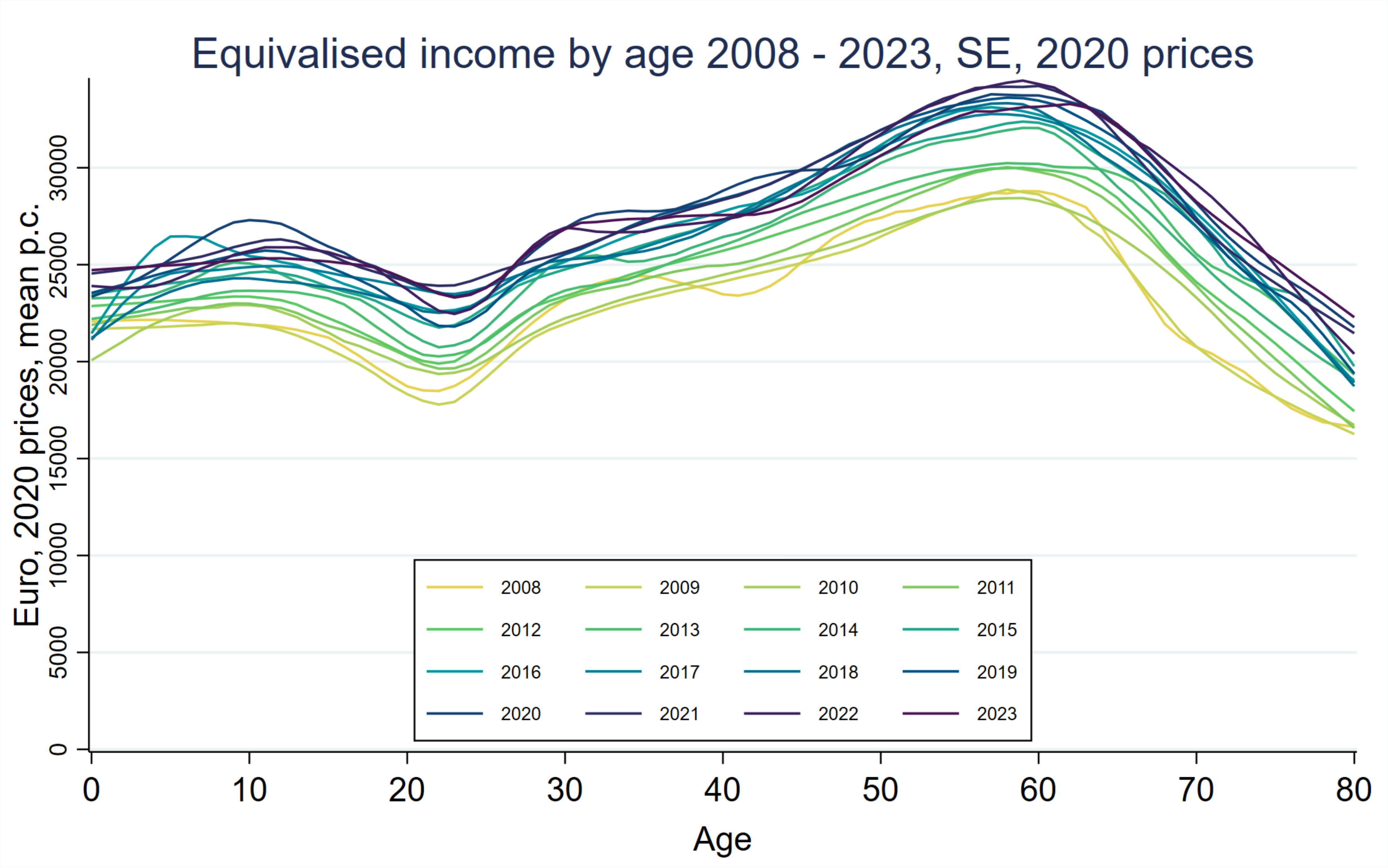
Euivalised income by age, France



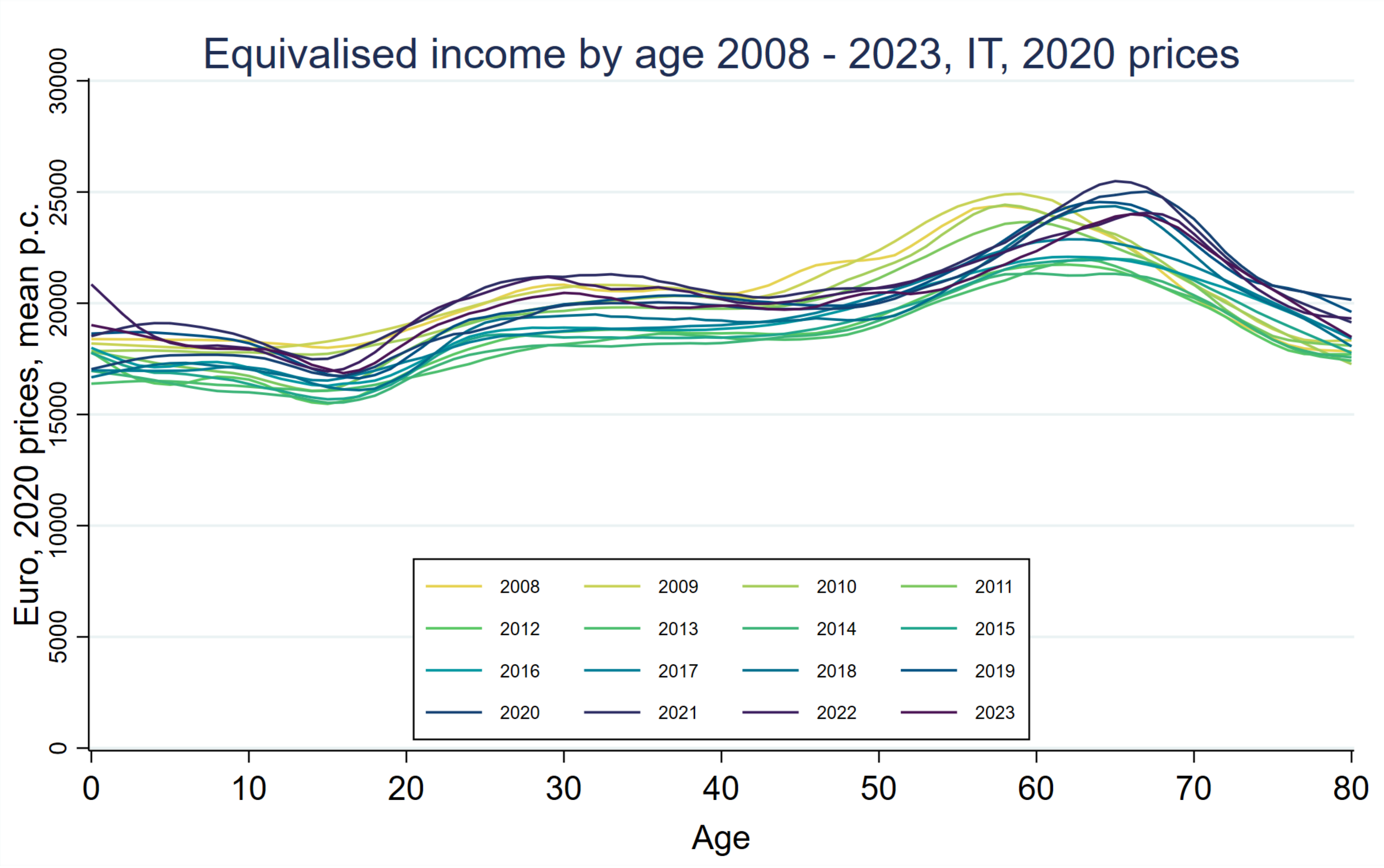
Euivalised income by age, Austria



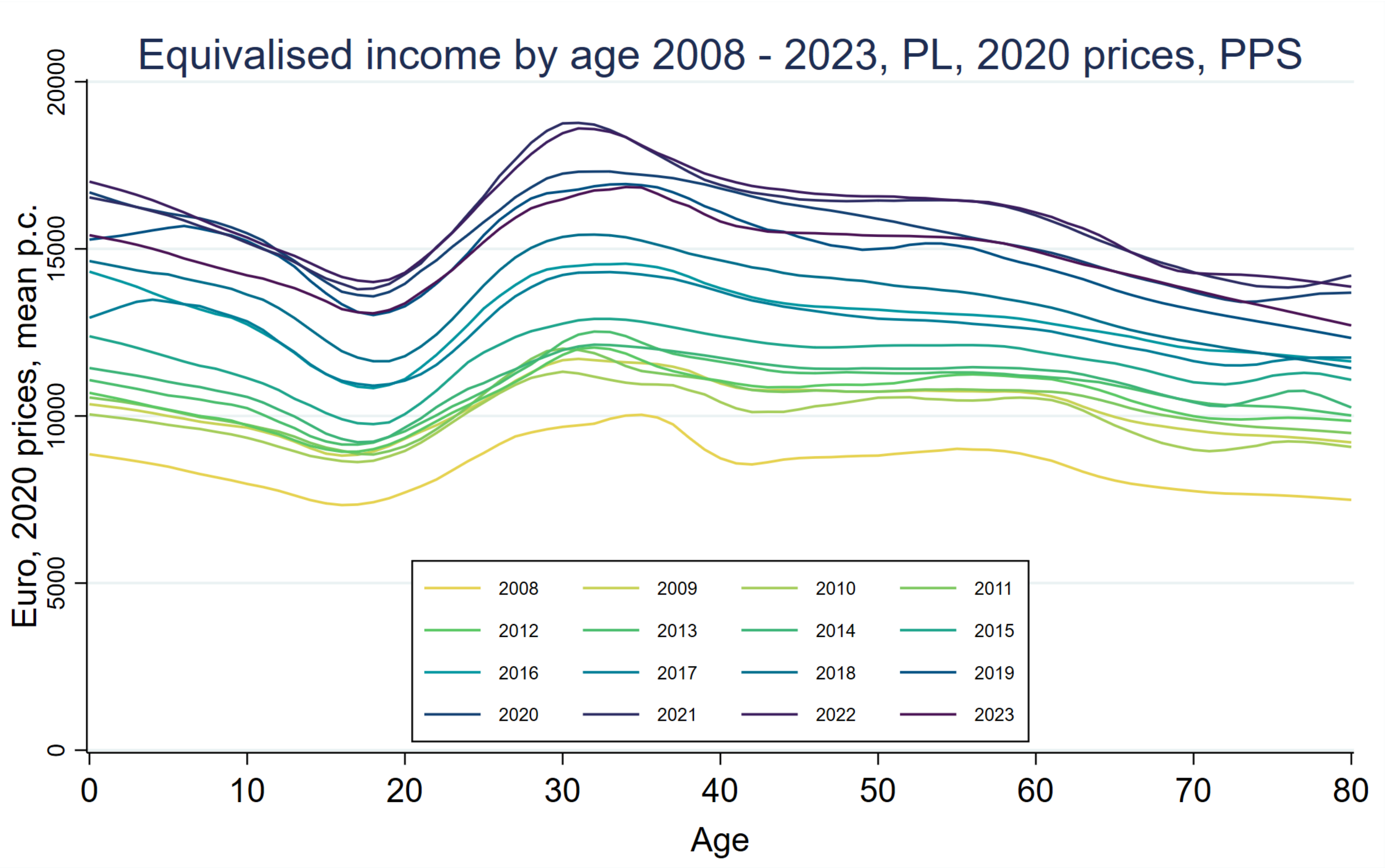
Euivalised income by age, Sweden



Euivalised income by age, Italy



Euivalised income by age, Poland



Disposable income by age in ENTA

ENTA does include components of disposable income at individual level!

Primary income

- Taxes

+ Social beneftis

+ Funded pensions (received less paid)

+ Net private transfers (rec less paid)

= Disposable income

Challenges

- Asset income distorts age specific results
- Estimates of private transfers with high uncertainty

Private Transfers to children

⇒**NTA intra-household transfers estimated using indirect method**

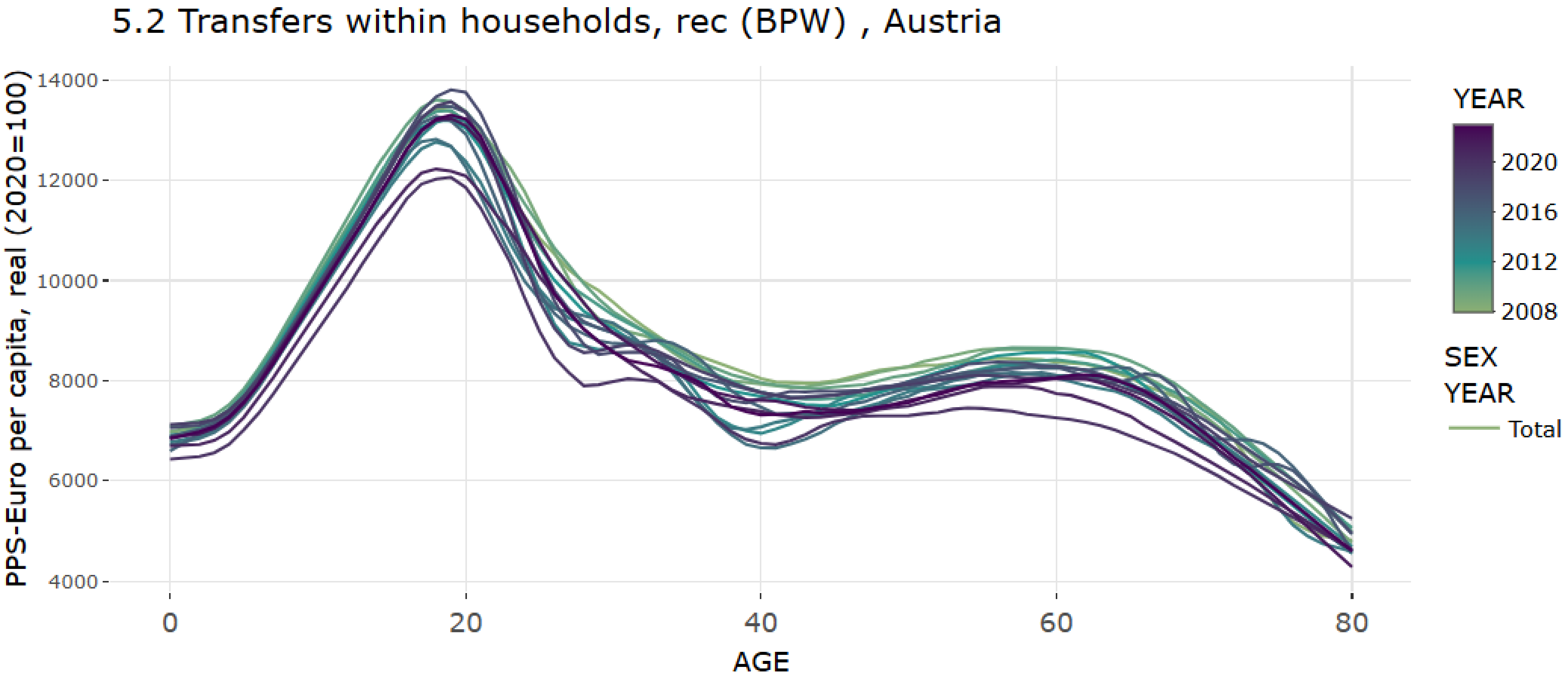
•Use of micro data with information on income of individuals and consumption of households

•Consumption allocated to individuals using consumption equivalence scale

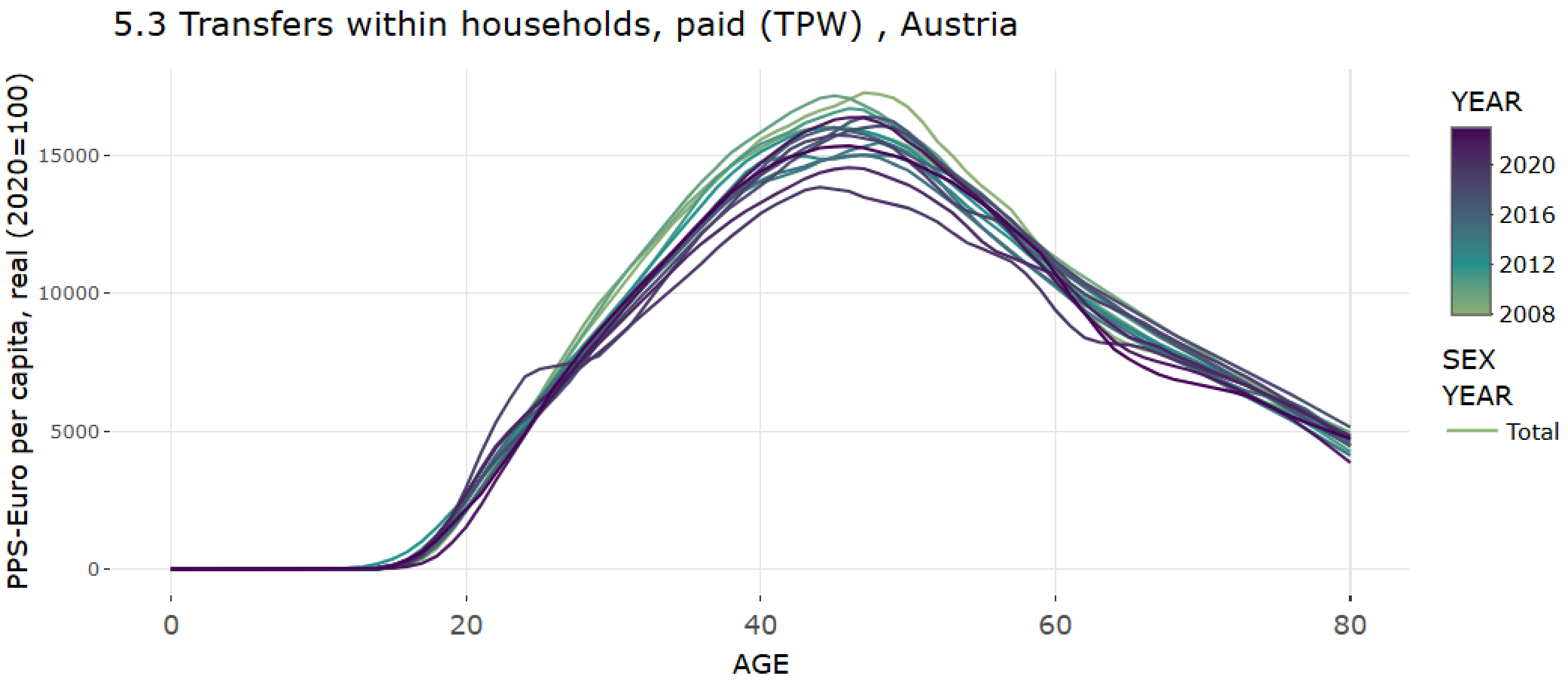
➢**Intra-household transfers estimated as difference between consumption and income**

➢**Consumption of household members with consumption exceeding income is financed by other members**

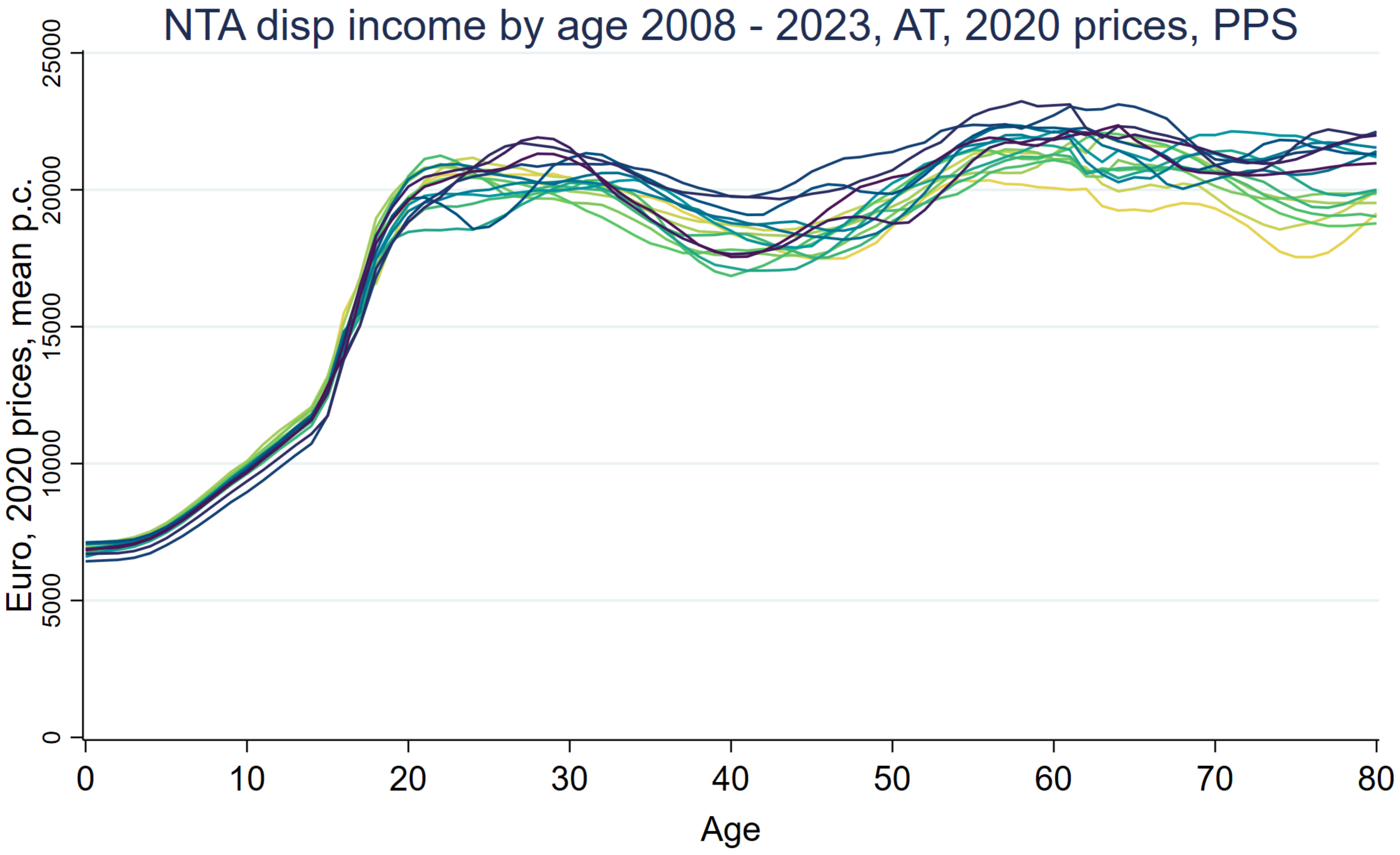
Disposable income by age in ENTA



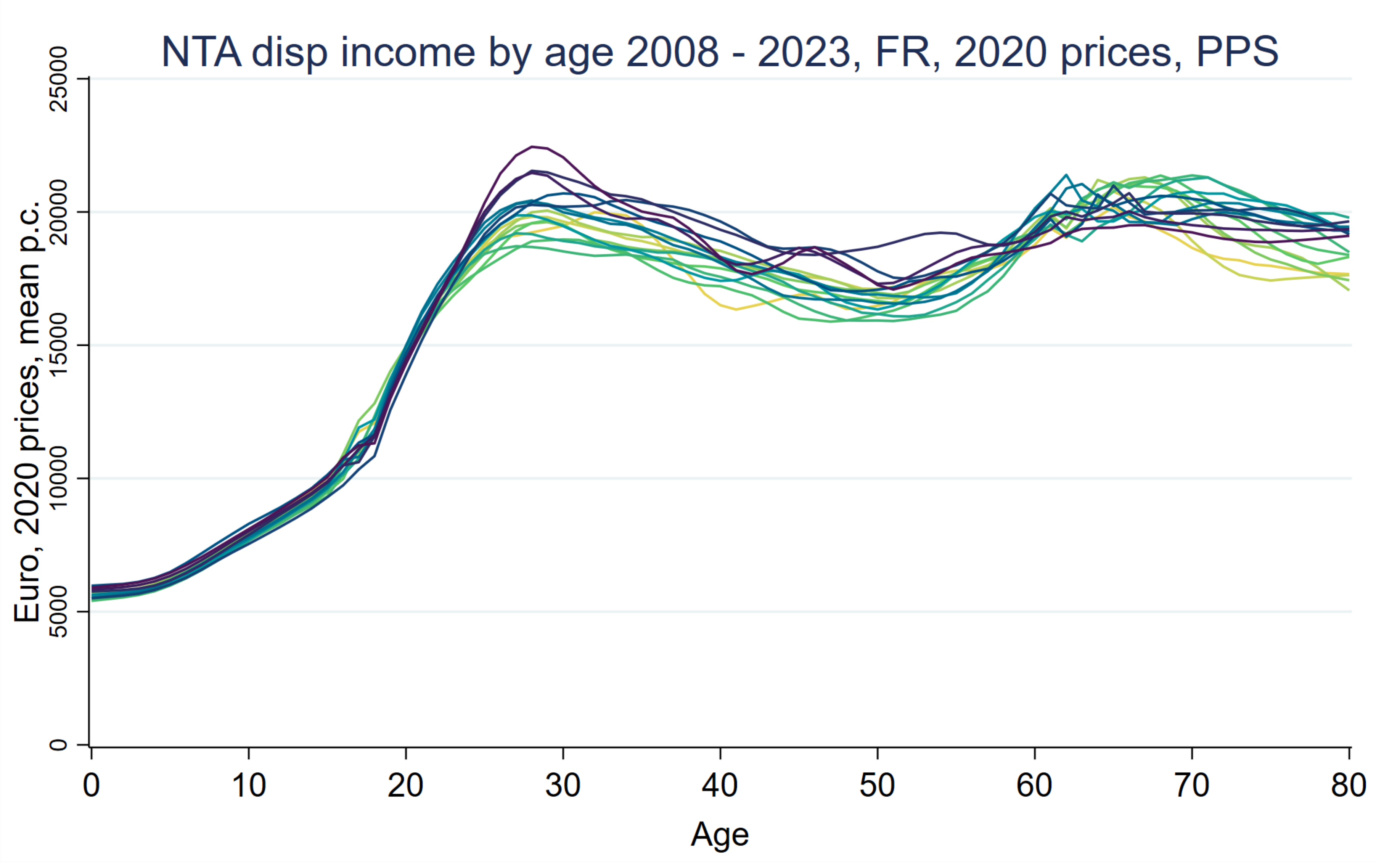
Disposable income by age in ENTA



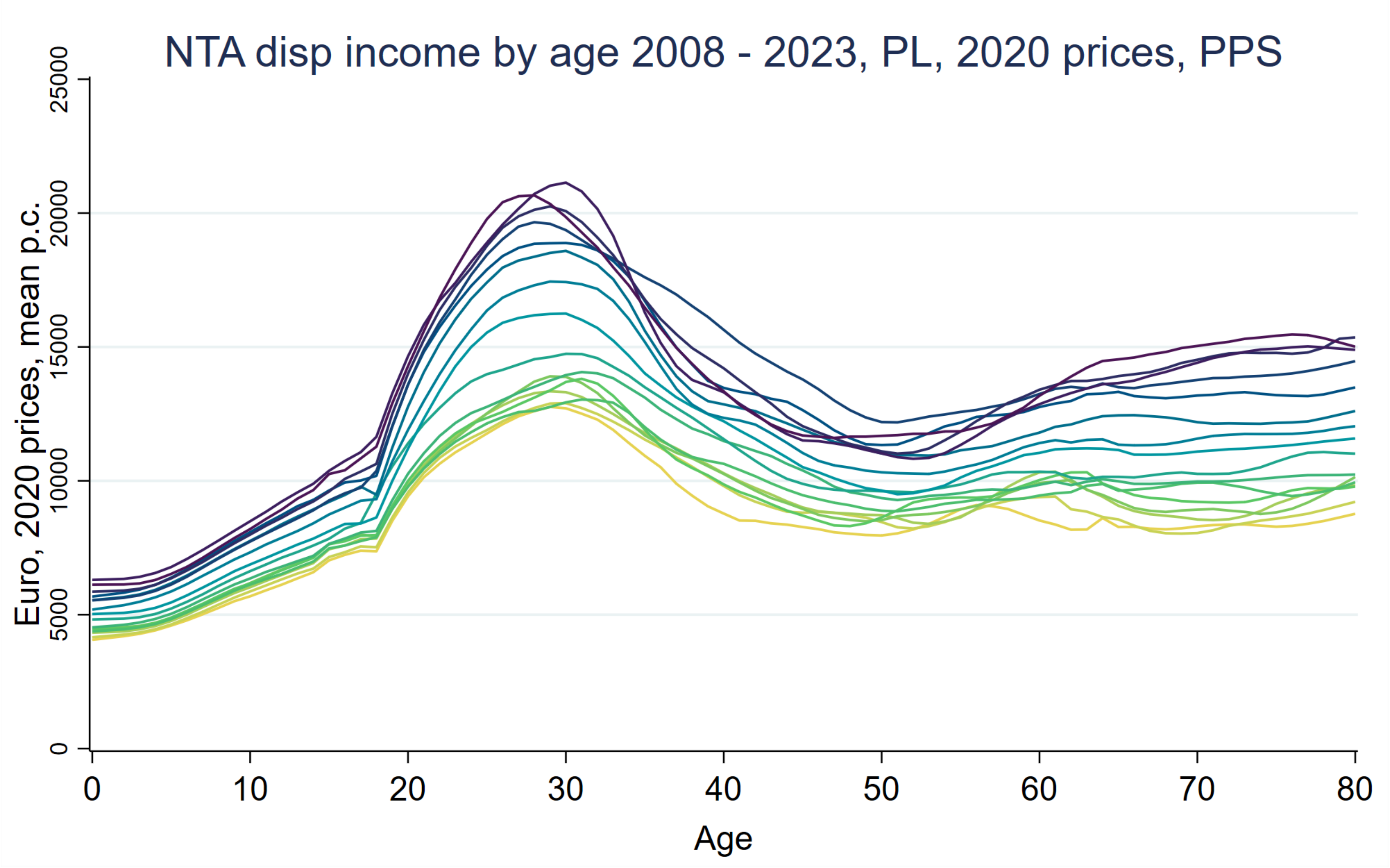
Disposable income by age in ENTA



Disposable income by age in ENTA



Disposable income by age in ENTA



Disposable income by age in ENTA

Disposable income of workers (25-64) vs old (65+)	
AT	84
FR	91
IT	69
ES	89
DK	89
SE	90
PL	77
LT	79

Disposable income by age in ENTA

- NTA disposable incoem and equivalised income low for households with children, reflecting the expenditure for them (EHI) or transfers to them (NTA)

- Central is the distinction between families and non-famiies

- Both measures increase with declining number of children => important to enable flexibility to adjust income measures to your question

=> NTA focus on individuals and allow this flexibility

Summary

- Changes in employment income differ strongly between age groups
- Social benefits across countries are shaped by the size of pensions to pensioners in the top of the income distribution
- Ist parental status, not age: families have the lowest equivalised income and disposable income
- Ageing Europe faces the challenge of a reversal of the demographic dividend: stagnating income for the young and increasing redistribution to the elderly leaves lower resources for for the young population
- NTA fill the data gap to understand this relation between demography and economics

www.ntaeurope.eu/dataexplorer