### Public redistribution in Europe: How does it affect the income of families? Bernhard Hammer, Michael Christl, Silvia de Poli

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### Outline

Based on :

B. Hammer, M. Christl and S. De Poli, Public redistribution in Europe: Between generations or income groups?. The Journal of the Economics of Ageing (2022), doi: https://doi.org/10.1016/j.jeoa.2022.100426.

- Intro •
- Measuring public redistribution: Net benefit ratios  $\bullet$
- Between generations?  $\bullet$
- Between income groups?  $\bullet$
- Public redistribution and families

# Motivation: public transfers in NTA

Our motivation: analyse differences within age groups:

Who are the individuals that receive and pay public transfers?

Where in the income distribution are they are they located?



Source: Hammer 2015: National Transfer Accounts for Austria 2015

### Measuring public redistribution: benefit ratios

# Data: EU-SILC and EUROMOD

#### Data

- EU-SILC: microdata on income and living conditions for European countries. Contains market ulletincome, social contributions/benefits at individual and household level
- EUROMOD is a (static) tax-benefit microsimulation model based on EU-SILC, used for the ulletevaluation of changes in the tax-benefit system
- $\Rightarrow$  EUROMOD produces micro-data with information on market income, direct taxes and cash benefits at individual and household level.
- Model updated for each year: we use EU-SILC from 2018, EUROMOD policies from 2018.  $\bullet$

**Limitations:** Ignores indirect taxes and in-kind benefits

### **Data:** net benefits / net contributions

- Our focus is on net benefits / net contributions defined as benefits received less taxes paid at  $\bullet$ household level over a given year:
- **Net benefits**: social benefits received less taxes paid (at household level if benefits > taxes) ullet
- **Net contributions**: taxes paid less social benefits received at household level if taxes > ۲ social benefits

 $\Rightarrow$  Net benefits/contributions measure net redistribution between households

### Data: net benefits (example)

Pers- ID	Market inc	Benefits	Taxes	Net ben(+)/con(-)	Disposable income	HH net benefits
1	200	+8,100	-2,800	5,300	5,500	3,525
2	100	+2,100	-350	1,750	1,850	3,525
Avg.	150	+5,100	-1,575	3,525	3,675	3,525

=> Our focus is on net benefits at household level

# Measuring redistribution: benefit ratios

### **Net benefit ratio (NBR):**

Net benefits targeted to a particular group (J) of households, relative to total disposable ulletincome in the economy.

$$J-NBR = \frac{\sum_{i=1}^{n} net \ benefits \ of \ individual}{Total \ disposable \ income}$$

n... number of individuals in selected group of households

# <u>₁l i</u>, i∈J

### **Benefit ratios**

**Total-NBR**: net benefits of all households relative to total disposable income (DI) ullet

#### <u>Generational perspective:</u>

- **Pension-NBRs** net benefits directed to person living in pensioner households ۲
- **Non-pension NBRs:** net benefits directed to person living in non-pensioner (working-age) lacksquarehouseholds

#### **Income perspective**

- **QI-NBR**: net benefits of income-poorest quarter relative to DI lacksquare
- **Q4-NBR**: net benefits of income-richest quarter relative to DI lacksquare

#### Socioeconomic characteristics

Family-NBR  $\bullet$ 

# **Between generations?**

# **Total-net benefit ratio**

- Ranges between 12% and 29%
- Pronounced geographical pattern:
- High redistribution in Southern and Western Europe (+ Finland)
- Low total redistribution in Eastern and Northern European countries



### Pension and non-pension benefit ratio



### Non-pension-net benefit ratio



# **Income perspective**

# Q4-net benefit ratio

Net benefits directed to the quarter of the population with highest income

- Range: 0% -11%
- High values in Southern European countries
- Low values in Northern Europe

#### Determinants:

- $\Rightarrow$  Generosity of public pensions
- $\Rightarrow$  Share of pensioner in Q4



# QI-net benefit ratio

(Net benefits directed to the quarter of the population with lowest income)

- Range: 3% 11% of DI
- Low values in Southern European countries
- High values in Northern Europe

**Determinants:** 

- $\Rightarrow$  Share of pensioners in QI
- $\Rightarrow$  Non-pension benefits



### Income componets of QI-non-pensioners

Income components of the QI-non-pensioner population: Averages relative to mean disposable income

Net Net Market contribene-Country butions fits inc. 3 37 8 IT 44 9 13 AT FI 37 5 22 5 37 19 DK CZ 62 15 5

Disp.
inc.
32
48
54
51
52

# Families and public transfers?

Our idea:

- If public transfers are so important for low-income households in working age, it must be ۲ best visible in income of familes
- Low EHI due to dependent children  $\bullet$
- Receive family benefits
- Pay contributions through labour income ۲

=> In countries with low benefits and high contributions families are expected to have lower income.



# Families in the income distribution

# Share of families in the half of the population with the highest income (EHI)

In most countries families equally distibuted over income distirbution (despite children which reduce EHI)

- In general, families are net contributors in all countries
- Net benefits (cash) directed to families are small in all countries



### Interaction of private and public transfers

=> Public net benfits are not directly visible in lower income of families compared to others

#### Reasons

- Selection of those with higher income into partnership and parenthood
- Young adults do not have children if they do not have sufficent income ۲
- Live with grandparents ۲
- Work more than childless persons

#### We have to extend our analysis:

=> How do public transfer systems affect income of families, family formation and family organisation (private transfers to children)?

# Summary

### **Figure: Redistribution to rich** retirees and low income workingage population in Europe

Huge differences in public redistribution in Europe:

Protection of low-income households in Northern Europe.

Protection of income in retirement in Southern Europe, large share of benefits directed to those with highest income.



