# Lifetime and annual tax progressivity in Sweden

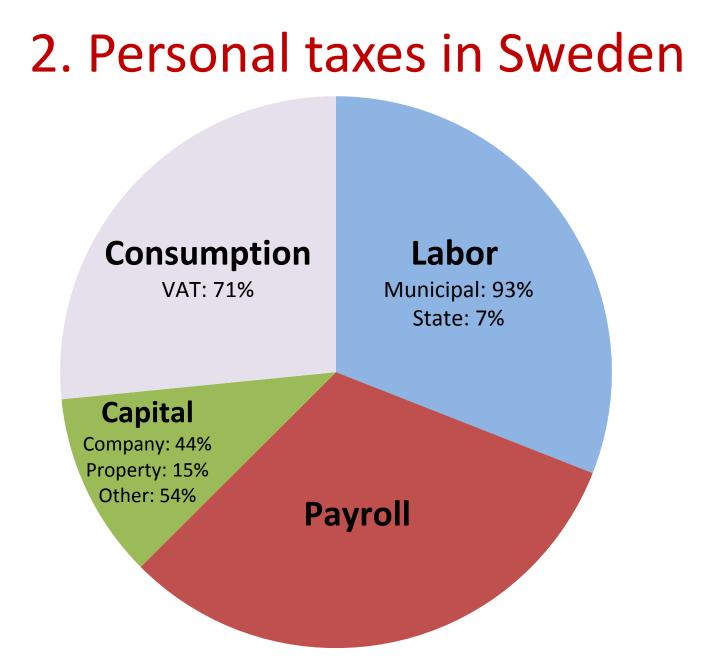
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February 11, 2011, Ministry of Finance

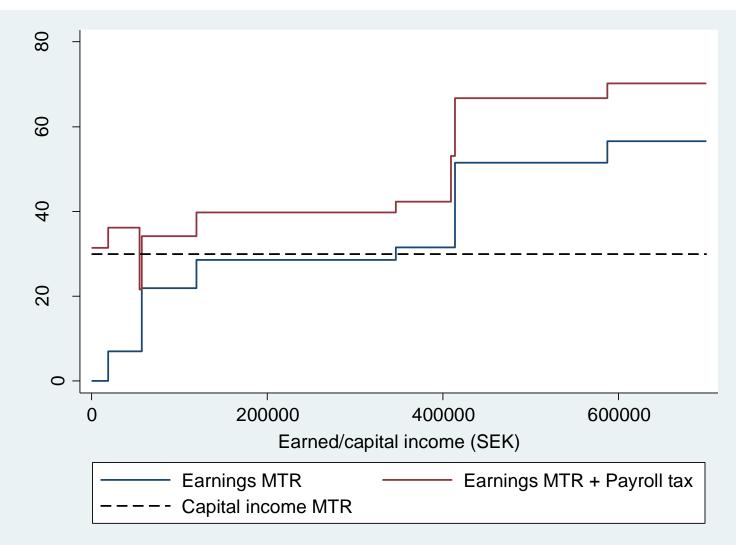
Daniel Waldenström, "Lifetime progressivity in Sweden"

## **Overview of presentation**

- 1. Swedish personal taxation: a brief overview
- 2. Tax progressivity how should it be measured?
- 3. Annual and lifetime tax progressivity
- 4. What accounts for the results?
- 5. Concluding remarks



## Marginal tax rates in Sweden, 2012



# 3. Measuring tax progressivity

#### Income concepts

- Market income (earnings, capital income, payroll tax)
- Disposable income (Market income Taxes + Transfers)

#### Taxes-transfers

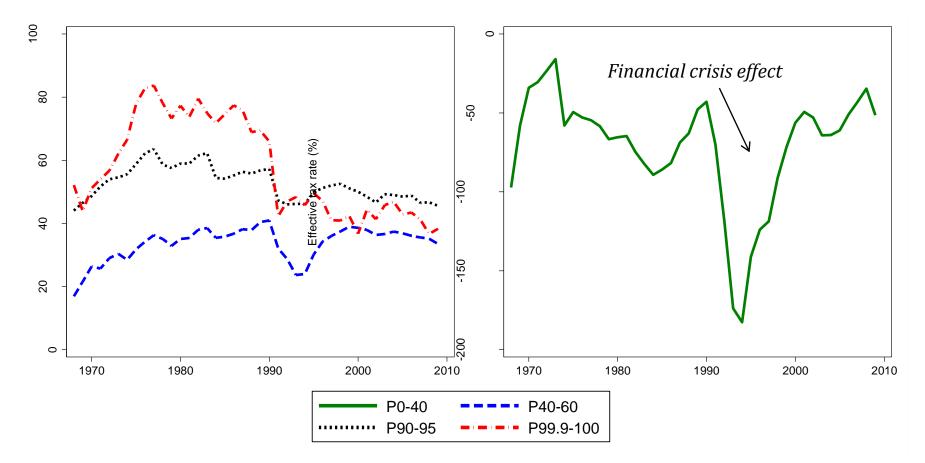
- Taxes on earnings, capital, Property, Wealth, Payroll taxes
- Transfers: Taxed (sickness, unempl.), untaxed (child, house)

#### Tax progressivity

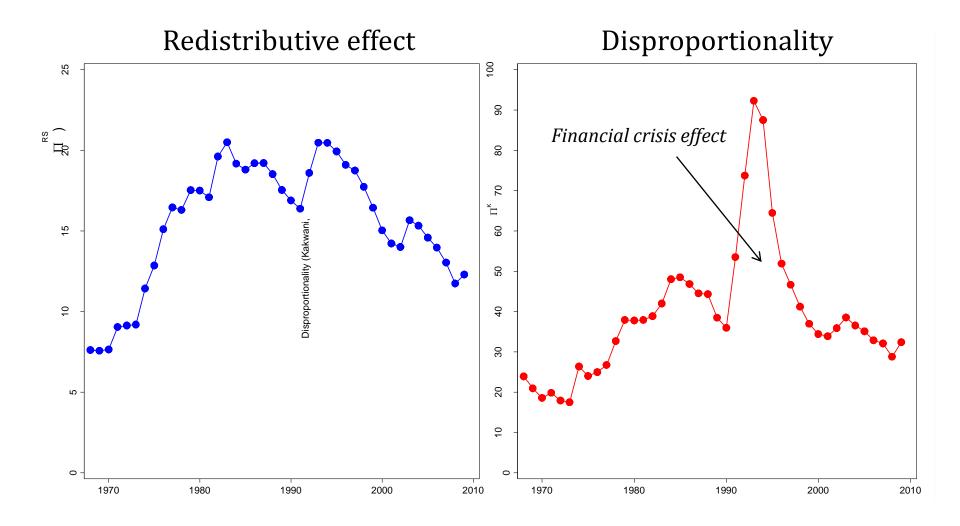
- Redistributive effect: Inequality-reducing impact of taxation
- *Disproportionality*: Deviation from proportional taxation

## 4. Results: Evolution of Swedish taxtransfer rates, 1968–2009

*Effective tax rate = (Market inc. – Disposable inc.) / Market inc.* 



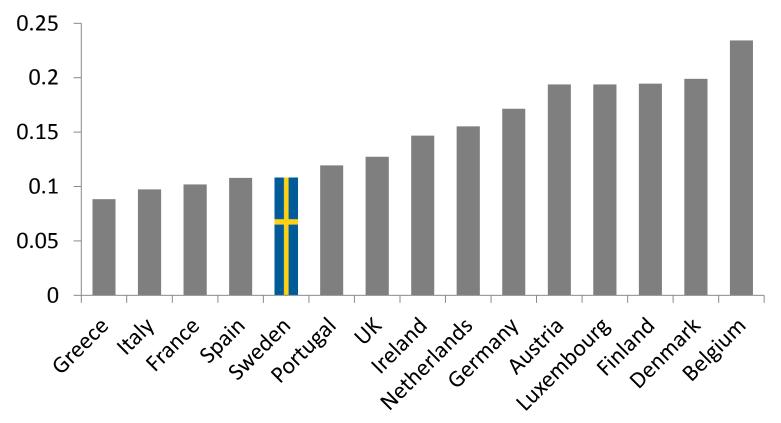
## Annual tax-transfer progressivity



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## Is Swedish progressivity internationally high?

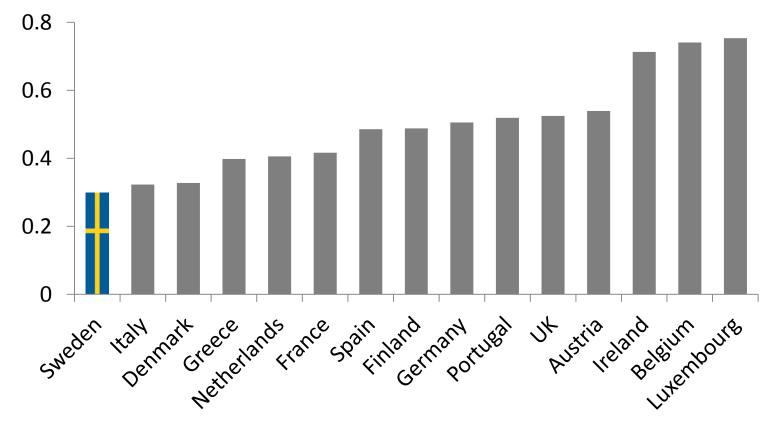
**Redistributive effect** 



Note: Progressivity scaled by pre-tax Gini. Source: Verbist (2004, Euromod)

### Is Swedish progressivity internationally high?

Disproportionality

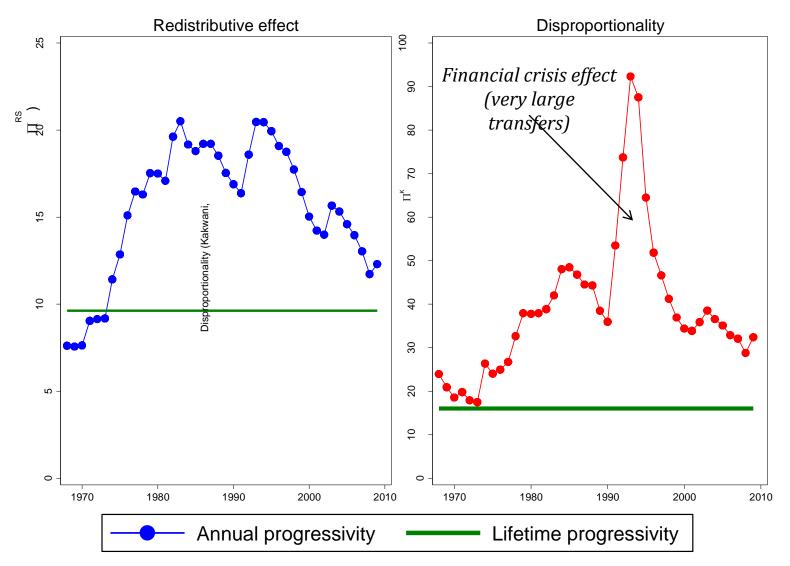


Note: Progressivity scaled by pre-tax Gini. Source: Verbist (2004, Euromod)

## 5. Lifetime tax progressivity in Sweden

- We analyze a cohort of individuals aged 20–40 in 1968
  - Followed for up to 42 years
- Sum all incomes and taxes over lifetime and calculate tax rates

## Lifetime vs annual progressivity

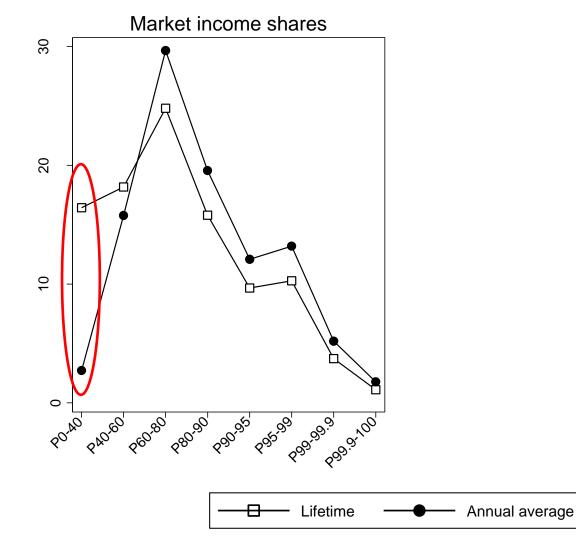


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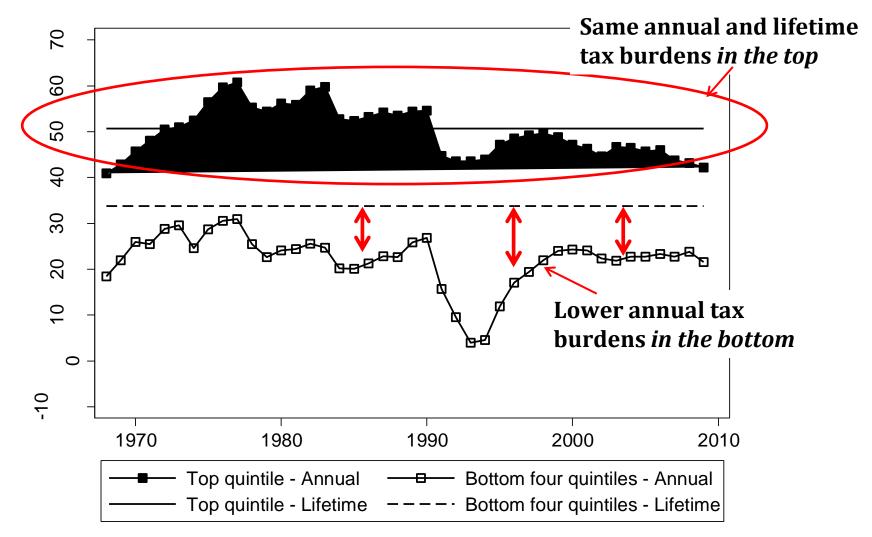
# **Empirical findings**

- 1. Annual progressivity trend follows inverse-U shape
- 2. Lifetime progressivity lower than in a single year
- 3. The level of lifetime redistribution low
  - Inequality is reduced by a fourth (10 Gini points)
  - Suggests within-lifetime redistribution
- $\rightarrow$  What can account for the observed patterns?
- Income distribution channels
- Tax system channels

## Income volatility channel: Transitory "poverty" and Taxes as insurance



## Tax burden volatility channel: The bottom pays higher lifetime taxes



# 6. Concluding remarks

#### 1. Swedish taxes are high, but not very progressive

- High progressivity of the 1970's and 80's exceptions
- Why high taxes and low progressivity?
  - Efficient solution for welfare states
  - Redistribution through welfare services
- 2. Over the lifetime, progressivity is even lower
  - Indicates redistribution *within* lifetime
- 3. Factors driving these results seem to be:
  - Transitory low-incomes
  - Taxes work as insurance against income shocks