Social security for all?
Job loss, household income and income inequality in different welfare regimes

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EQUALLIVES project

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Context

Job loss is a significant income shock
- Prevalent - 2-5% across OECD, higher in crisis times (Quintini and Venn, 2013)
- Costly - 20-50% decline in yearly earnings, persistent (Bertheau et al., 2022)
- Consequences for family life, health and subjective well-being (Brand, 2015)

Risk society
- Rising work and family instability $\rightarrow$ rising insecurity $\rightarrow$ rising inequality
- Rising job insecurity (Kalleberg, 2011; 2018)
- Diverging destinies (McLanahan, 1993) - intergenerational effects
Motivation

Job loss (risk events) as main drivers of inequality (Di Prete, 2002)
- It is risk events that stratify, not the social class
- Gradient in the risk and penalty of events
- Welfare regimes as suppression and mitigation of risks

Compensation by the market, family and welfare state

Most evidence focuses on
- market compensation i.e., individual earnings/employment and not HH incomes
- average effects, not distribution
- often single countries, not effect of institutions
- microsimulation studies are exceptions, but static with assumptions on take-up and labour supply response, especially difficult for long-term
Questions

1. To what extent and for which income groups loses are compensated through the market, within the household and by the state in different welfare regimes?

2. Which household income groups bore the greatest cost of job loss in different welfare regimes?

3. To what extent is job loss associated with income inequality in different welfare regimes?
Theory

Cost = risk * penalty

Welfare regimes stratify!  (Esping-Andersen, 1999)

In other words, for which groups job loss is more/less costly depends on

- how the responsibility of risks distributed between market, family and state
- how social risks are managed within market, family and state
  - regulation in LM
  - two, one-and-a-half vs. one earner
  - residual, universal vs. insurance model
Hypotheses/existing evidence

Accumulating disadvantage
Those at the bottom experience more frequently and lose more strongly
(e.g., Di Prete, 2002; Popova and Novikke, 2019)

Squeezing the middle
Those at the middle do not have adequate public or private help for compensation and lose the most
(e.g., Van de Vliert et al., 2011; Gangli, 2006; England et al. 2016)

Levelling up
Those at the top have more to lose and do not benefit from public support so lose the most
(e.g., Nido and Oesch, 2021; Ehllert, 2013; Grollt, 2016)

No influence
Loses are equally compensated by family & state
(e.g., Nido and Oesch, 2021; Ehllert, 2013; Grollt, 2016)
Research design (1)

Data
- BHPS (UK); GSOEP (Germany); CNEF; Admin data from Finland and Denmark
- 1991-2019 (Finland from 1997; UK until 2008)
- Ages 25-55; no self-employed

Measurement
- Job loss = employed min. 5 months (t-1) & unemployed min 3 months (t)
- Pre-gov. HH income = HH earnings + investment/capital income
- Post-gov. HH income = Pre-gov. HH income - taxes + transfers
Research design (2)

Initial cost: 100% of own earnings

Market compensation
- % re-employed
- among re-employed, % earnings replaced

Household compensation
- % earnings loss that is replaced by other earners = % loss in own - HH earnings

State compensation
- % loss in HH income before vs. after taxes and transfers

Final cost: % loss in post-gov HH income
Research design (3)

Residualizing outcomes for age, gender and year

\[ Y'_r = \log \left( \frac{Y_i}{\hat{Y}_i} \right) = \alpha_i + \beta_k I[k = \text{age } it] + \beta_l I[l = t] + \beta_f f + \varepsilon_i \]

Smooth-varying coefficient model (Rios-Avila, 2020)

\[ Y'_t - Y'_0 = \beta_{tq}(Q) * [\beta_{jt}(J_{it}) + \beta_{xt}(X_{it}) + (\varepsilon_{it} - \varepsilon_{i0})] \]

RIF - Unconditional Quantile Regression (Firpo, 2009; Rios-Avila and Maroto, 2021)

\[ \text{RIF}(Y_i, F_y) = Q_\tau(y) + \frac{\tau - \Delta(Y_i < Q_\tau(y))}{f_y(Q_\tau(y))} \]

\[ \text{RIF}(Y_i, \nu(F_y)) = \beta_{j_1} J_i + \beta_{x_1} X_i + \gamma_i + \varepsilon_i \]
Risk and duration of job loss
Quantiles based on post-gov HH income at t-1
Market compensation (1)

% re-employed

DK
FI
DE
UK

Quantiles (t-1)
Quantiles (t-1)
Quantiles (t-1)
Quantiles (t-1)

% re-employed
% re-employed
% re-employed
% re-employed

Short-term
Long-term
Market compensation (2) among re-employed, % earnings replaced
Family compensation

% earnings replaced
State compensation

% HH income replaced

DK

FI

DE

UK

0% 20% 40% 60% 80% 100%

Quantiles (t-1)

% income replaced

Short-term

Long-term
Cost of job loss

% loss in post-gov HH income
### Job loss on income inequality

**RIF regressions**

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**Notes:** The graphs show absolute change in different inequality indicators as a result of an 1% increase in the rate of job loss. Models without fixed effects reflect the influence of the level of job loss, while models with fixed effects reflects the influence of the changes in the rate of job loss over time. The influence we observe in these UQR models is a function of three main components (Borgen et al. 2021): i) the risk of job loss across the distribution, ii) the penalty of job loss across the distribution, iii) the level of inequality in the initial distribution. We have used the rifhddreg command in STATA by Rios Avila (2019).
Similarly across countries

- Market and family compensation are significant, but only in the 1st year and benefit more those with higher incomes
- State compensation is very progressive and long-term

Differences across countries

- Market compensation is lower in Germany, especially in the long-term
- State compensation is the highest in Denmark, and the lowest in the UK
Despite the gradient in the risk of job loss, we do not see an influence on income inequality. Why?

- penalties are higher for richer groups (above 8th decile)
- job loss is still too rare to affect the whole distribution - crisis?
- if many turns into long-term unemployment, potential to influence income inequality, mainly at the tails
- Welfare states (all) strongly correct inequality created by job loss, market and family compensation

Wider point

- risk events $\rightarrow$ economic insecurity $\rightarrow$ inequality?
- risk events $\rightarrow$ economic insecurity $\rightarrow$ poverty
Discussion (3)

Limitations

- Comparability - capital income unemployment def.
- Number of countries limit more general conclusions
- Job loss definition does not capture movements within the same year
- Welfare states (all) strongly correct inequality created by job loss, market and family compensation

Future plans

- Distinguishing between risk and penalty using decomposition
- Other risk events i.e. childbearing and partnership dissolution
Thank you!

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Cost on pre-gov HH income
Before taxes and transfers

DK

FI

DE

UK

Income loss

Quantiles (t-1)

Short-term

Long-term
### Long-term unemployment on income inequality

#### RIF regressions

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LM characteristics
Data: OECD

A. Job tenure

B. Unemployment duration

C. Atypical employment

- % of total employed
- % of workers with a 10+ years tenure
- Long-term unemployment rate
- Short-term unemployment rate
- Share of involuntary part-time employment
- Share of temporary work
Household employment
Data: OECD
Welfare state

Data OECD

A. Unemployment insurance
Replacement rate, 2, 6, 12, 24 months after job loss

B. Adequacy of minimum income benefits

C. Employment Protection

EPL Stringency Index

- Collective dismissals
- Temporary jobs
- Regular jobs
Average risk and duration of job loss