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

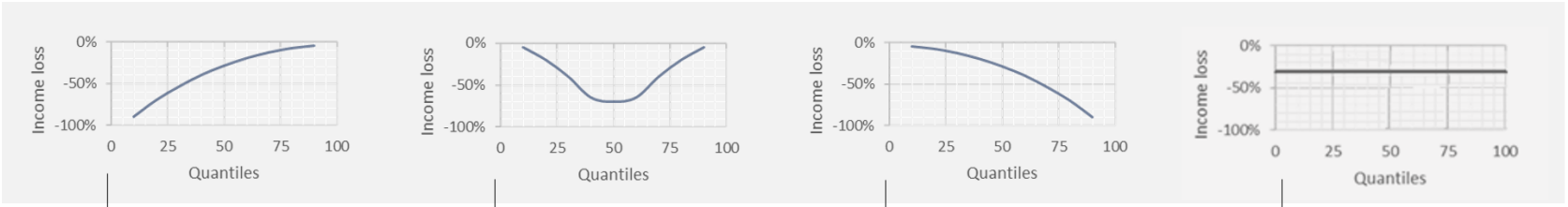
Cost = risk * penalty

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 Navicke, 2019)

Squeezing the middle

Those at the middle do not have adequate public or private help for compensation and lose the most

Levelling up

Those at the top have more to lose and do not benefit from public support so lose the most

(e.g. Vandecasteele et al., 2011; Gangl, 2006; England et al. 2016)

No influence

Loses are equally compensated by family & state

(e.g. Nallo and Oesch, 2021; Ehlert, 2013; Grotti, 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)

$$Y_t^r - Y_0^r = \beta_{tq}(Q) * \left[\beta_{jt}(J_{it}) + \beta_{xt}(X_{it}) + (\varepsilon_{it} - \varepsilon_{i0})\right]$$

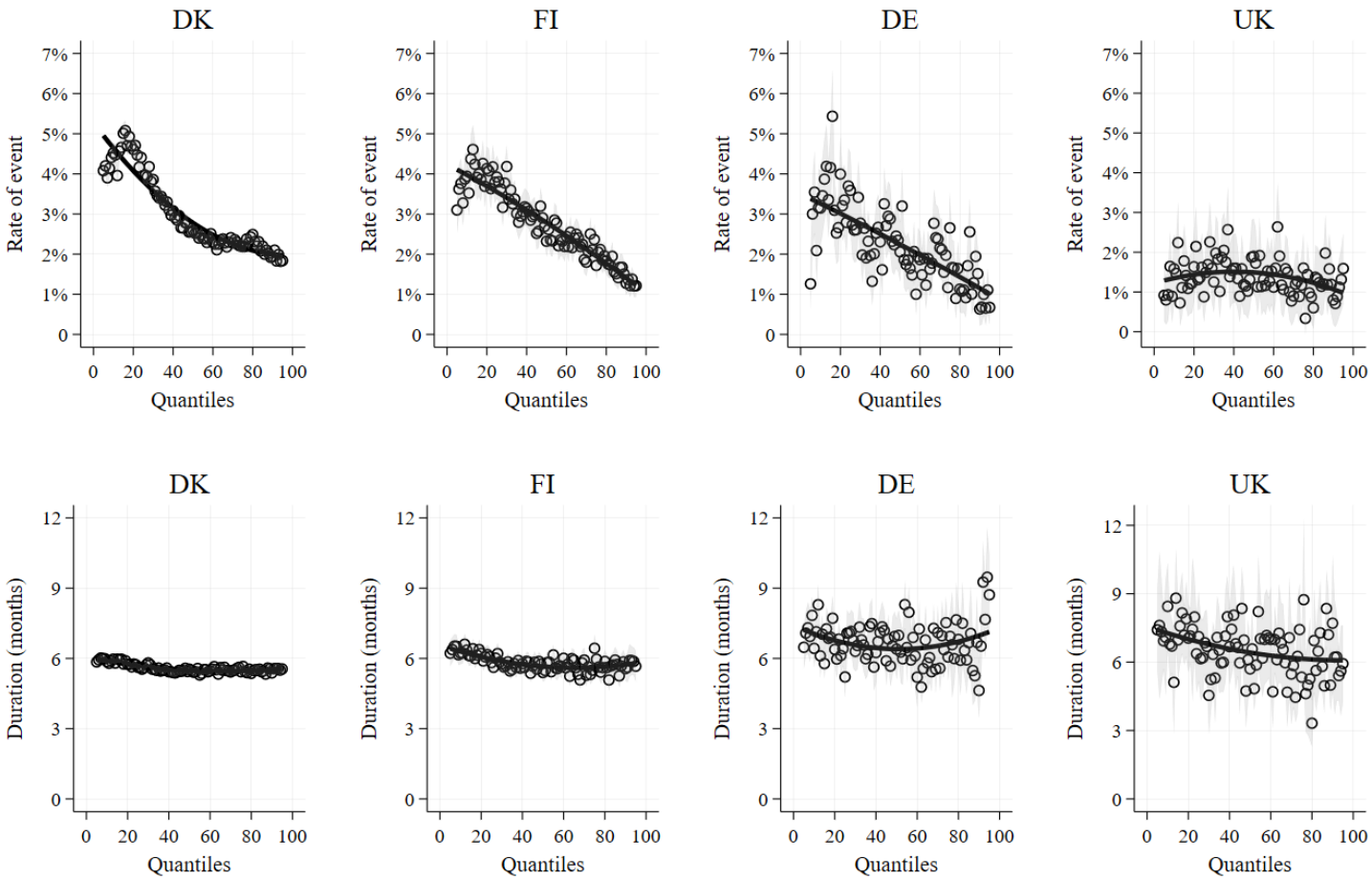
RIF - Unconditional Quantile Regression (Firpo, 2009; Rios-Avila and Maroto, 2021)

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

$$\text{RIF}(Y_i, \nu(F_y)) = \beta_{j_1} J_i + \beta_{x_1} X_i + \gamma_i + \varepsilon_i$$

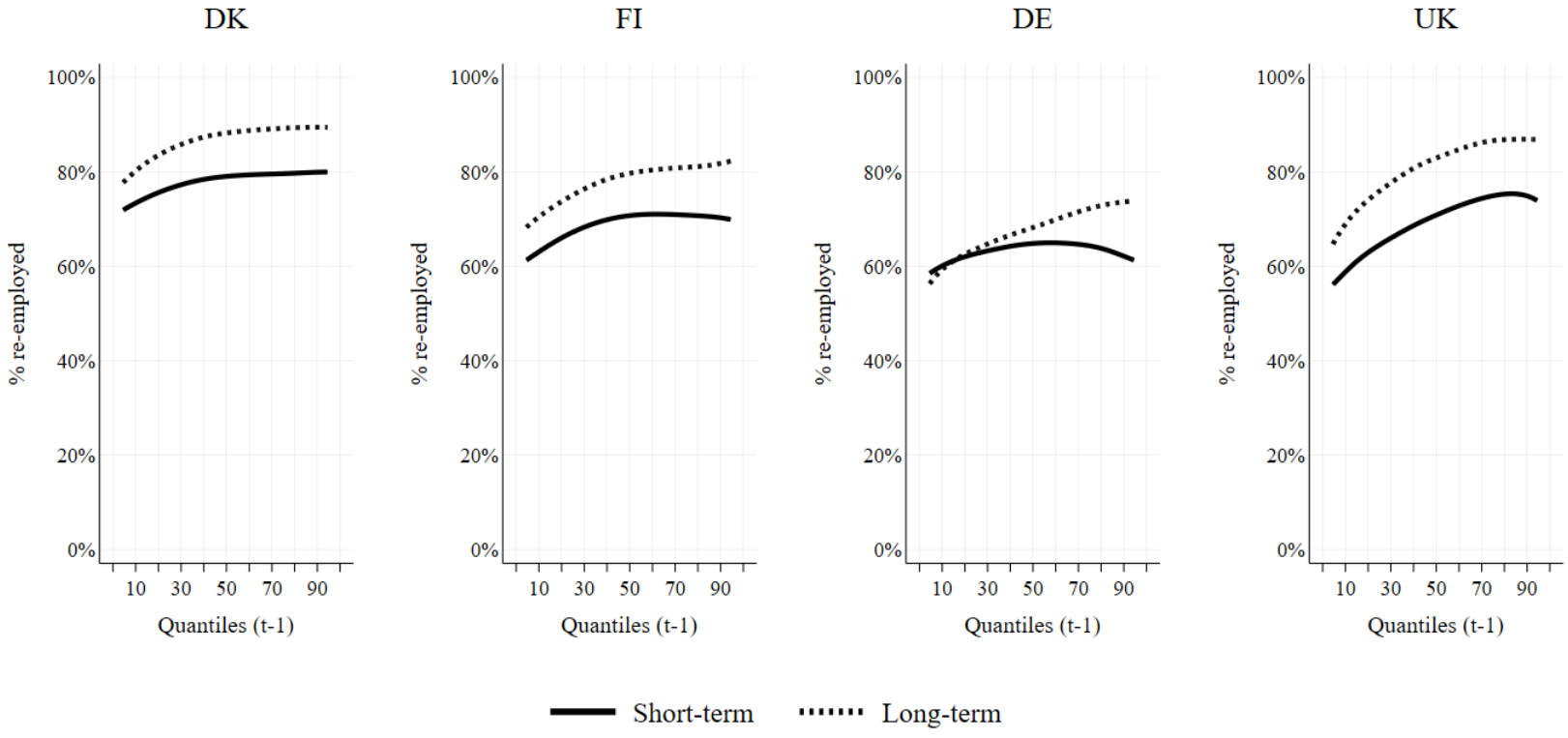
Risk and duration of job loss

Quantiles based on post-gov HH income at t-1



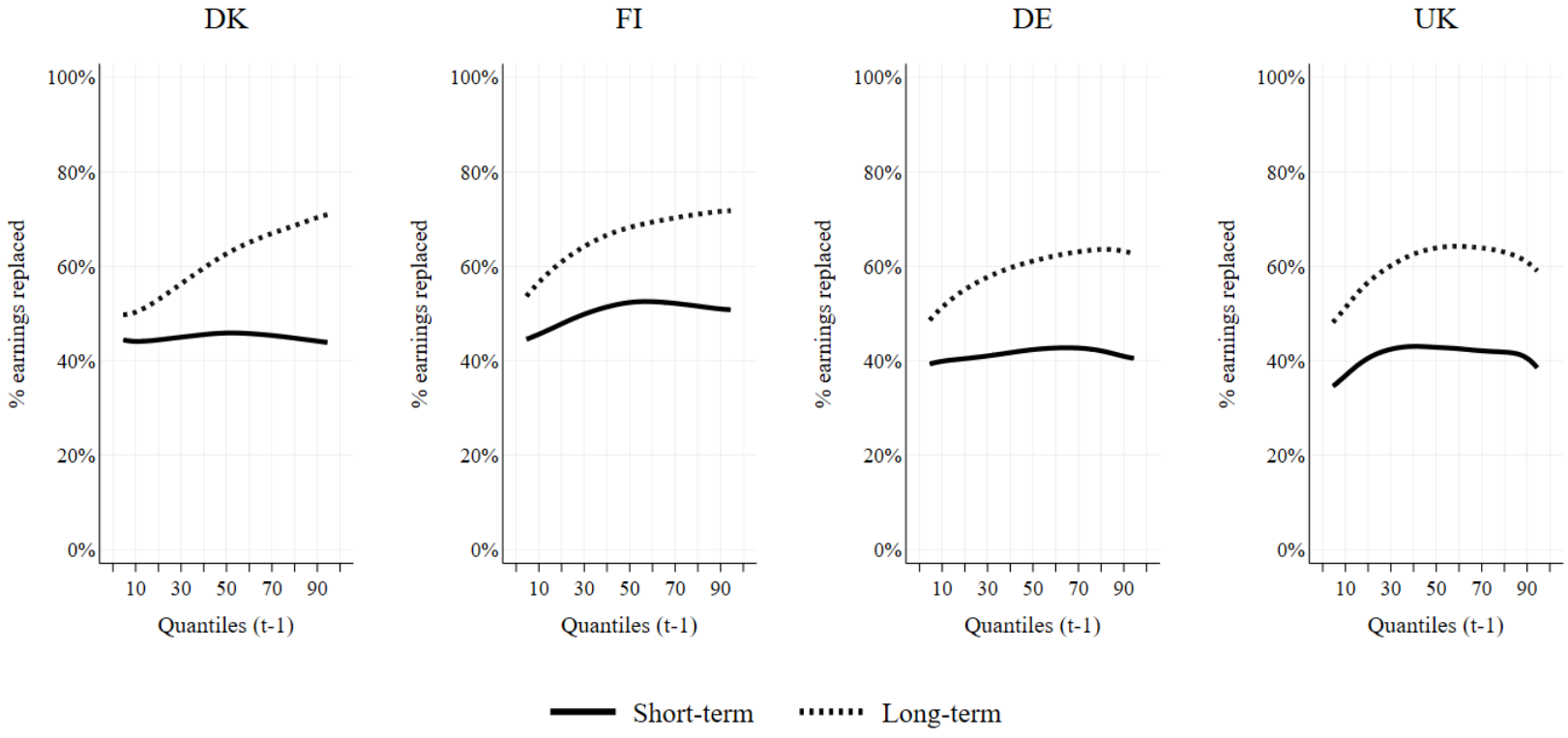
Market compensation (1)

% re-employed



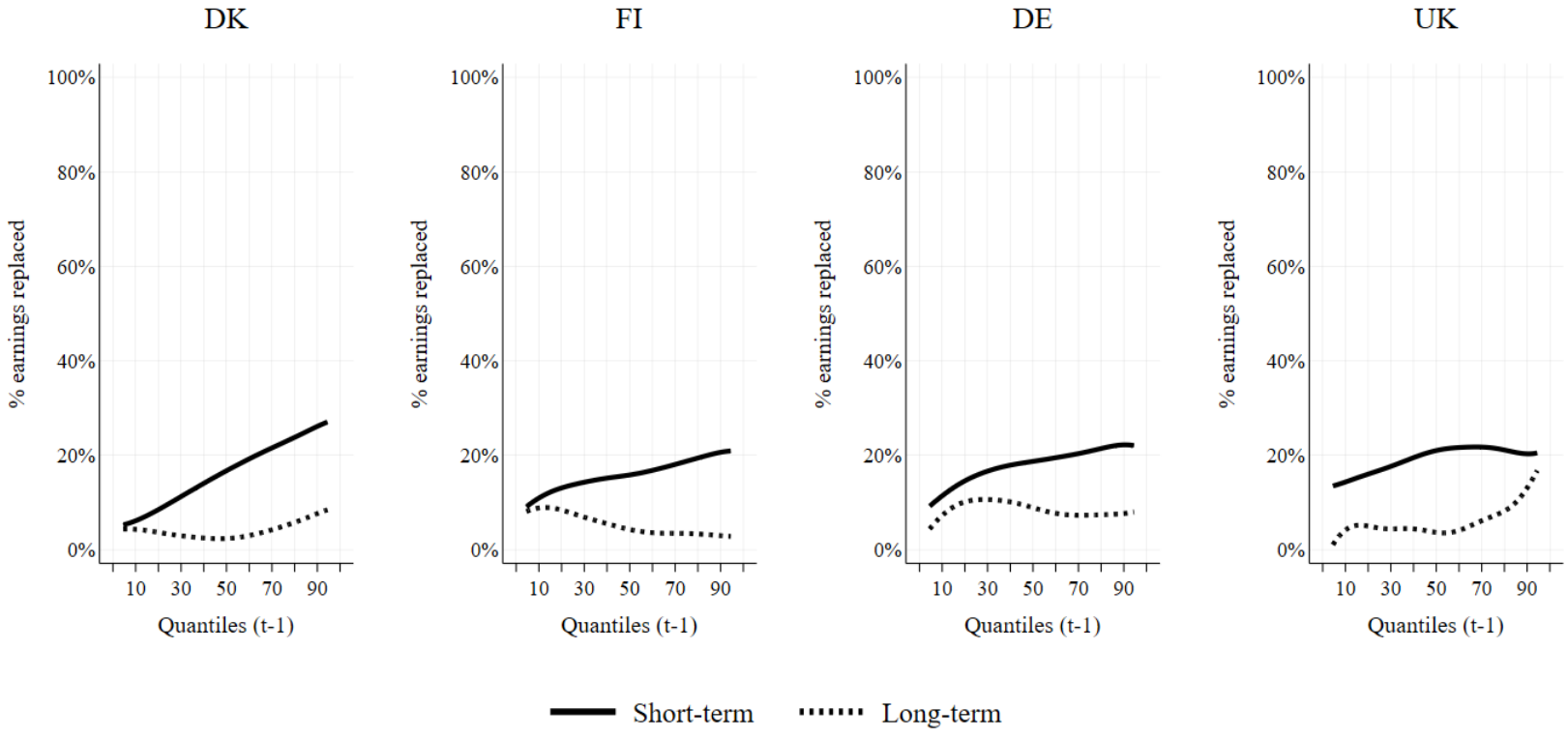
Market compensation (2)

among re-employed, % earnings replaced



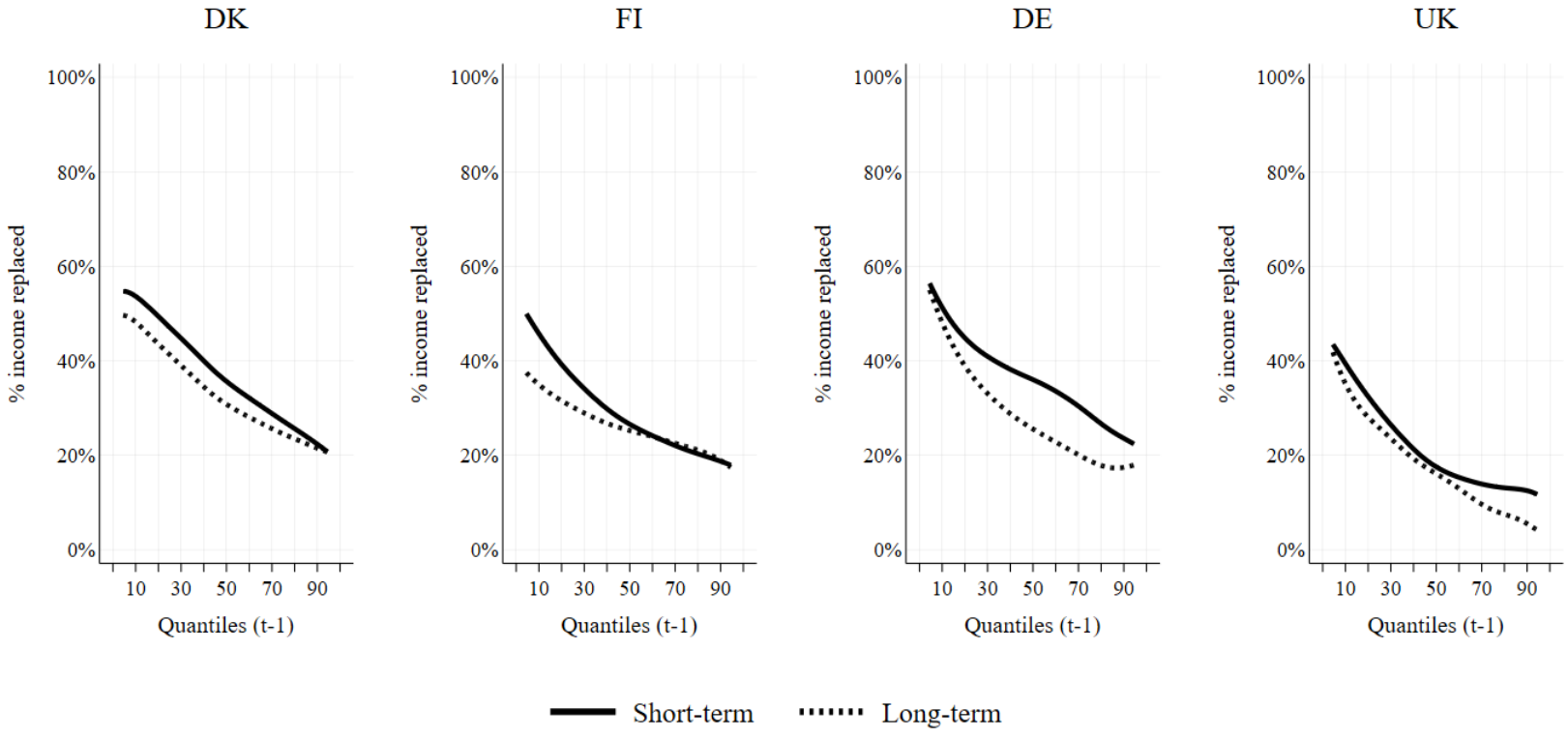
Family compensation)

% earnings replaced



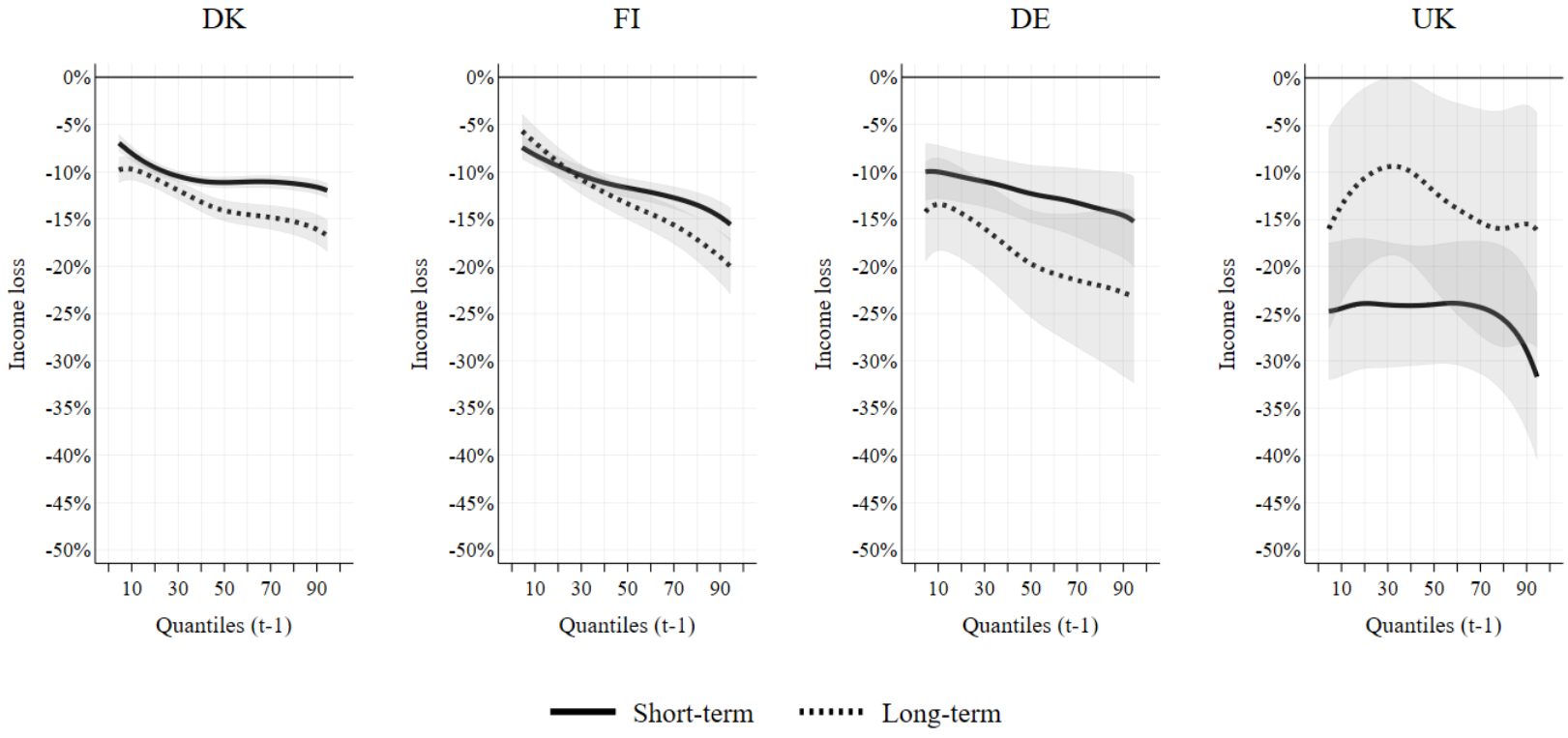
State compensation

% HH income replaced



Cost of job loss

% loss in post-gov HH income



Job loss on income inequality

RIF regressions

		WITH FE				WITHOUT FE			
		DE	**DK**	**FI**	**UK**	**DE**	**DK**	**FI**	**UK**
Pre-gov HH income	Gini	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
	CVAR	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%
	q50q10	1.2%	0.9%	0.6%	1.0%	1.7%	2.8%	1.2%	1.1%
	q90q10	1.3%	1.0%	0.7%	1.2%	2.0%	3.0%	1.3%	1.3%
	s90s10	0.6%	0.4%	0.9%	0.7%	1.6%	3.3%	2.0%	0.7%
Post-gov HH income	Gini	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%	0.1%	0.2%
	CVAR	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%
	q50q10	0.0%	0.1%	0.0%	0.2%	0.0%	0.1%	0.1%	0.3%
	q90q10	0.0%	0.2%	0.1%	0.3%	0.1%	0.2%	0.1%	0.4%
	s90s10	-0.1%	0.0%	0.0%	0.4%	-0.1%	0.0%	0.0%	0.5%

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 rifhdreg command in STATA by Rios Avila (2019).

Discussion (1)

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

Discussion (2)

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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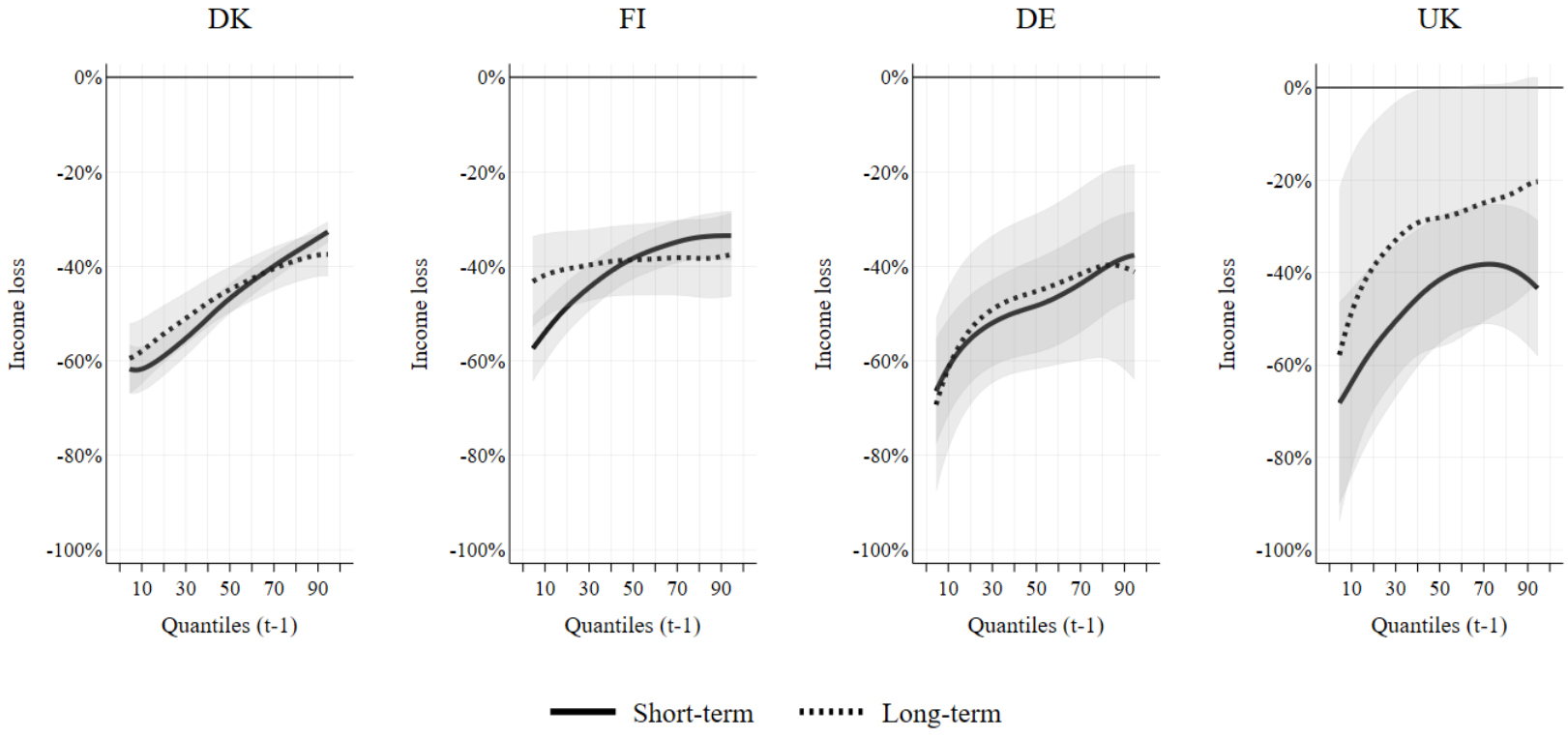
Cost on pre-gov HH income

Before taxes and transfers



Long-term unemployment on income inequality

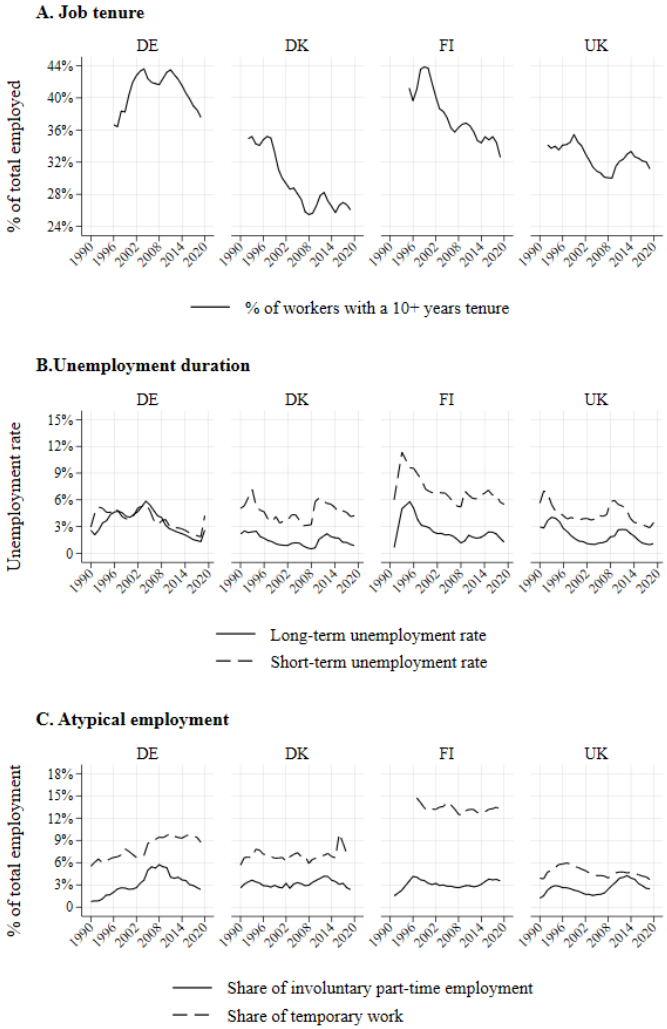
RIF regressions

		WITH FE				WITHOUT FE			
		DE	**DK**	**FI**	**UK**	**DE**	**DK**	**FI**	**UK**
Pre-gov HH income	Gini	0.5%	0.6%	0.4%	0.4%	0.5%	0.6%	0.4%	0.4%
	CVAR	0.4%	0.4%	0.2%	0.4%	0.4%	0.4%	0.2%	0.4%
	q50q10	5.1%	12.0%	7.0%	6.4%	12.0%	18.3%	13.9%	12.4%
	q90q10	5.1%	12.2%	7.2%	6.5%	12.5%	18.7%	14.3%	12.8%
	s90s10	7.9%	16.5%	10.6%	11.3%	20.1%	26.5%	21.3%	20.2%
Post-gov HH income	Gini	0.2%	0.2%	0.2%	0.4%	0.1%	0.2%	0.2%	0.4%
	CVAR	0.1%	0.1%	0.0%	0.3%	0.1%	0.1%	0.0%	0.4%
	q50q10	0.5%	0.4%	0.3%	0.7%	0.7%	0.6%	0.7%	1.1%
	q90q10	0.5%	0.5%	0.4%	0.8%	0.9%	0.8%	0.8%	1.4%
	s90s10	0.3%	0.3%	0.2%	1.2%	0.8%	0.6%	0.5%	1.6%

Notes: The graphs show absolute change in different inequality indicators as a result of an 1% increase in the long-term unemployment (at least 9 months of unemployment in a year). 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 rifhdreg command in STATA by Rios Avila (2019).

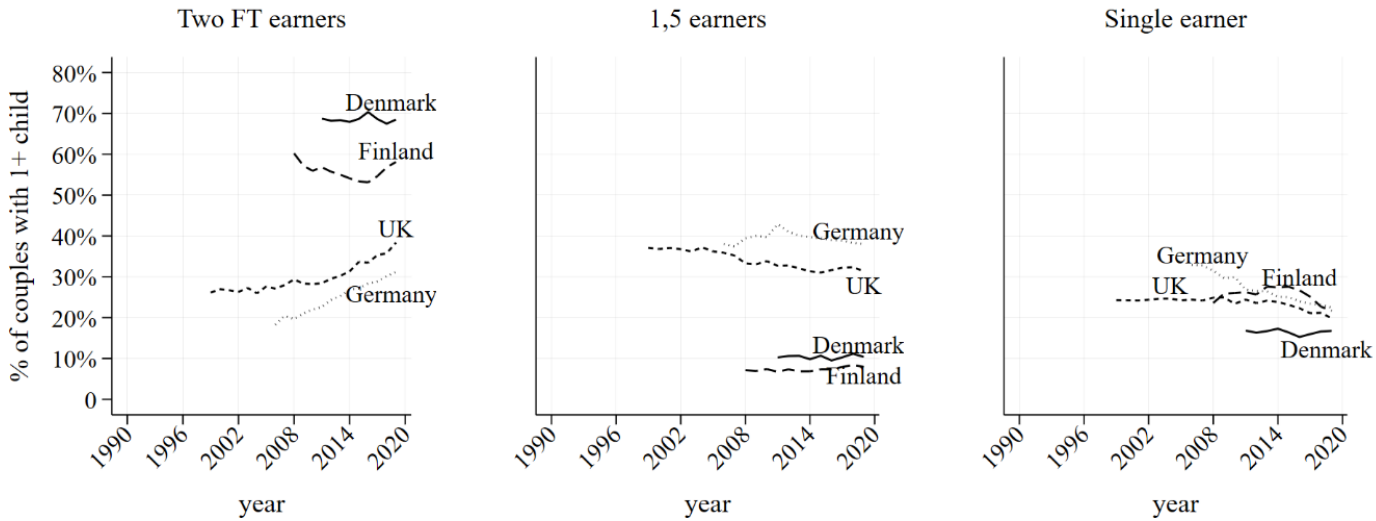
LM characteristics

Data: OECD



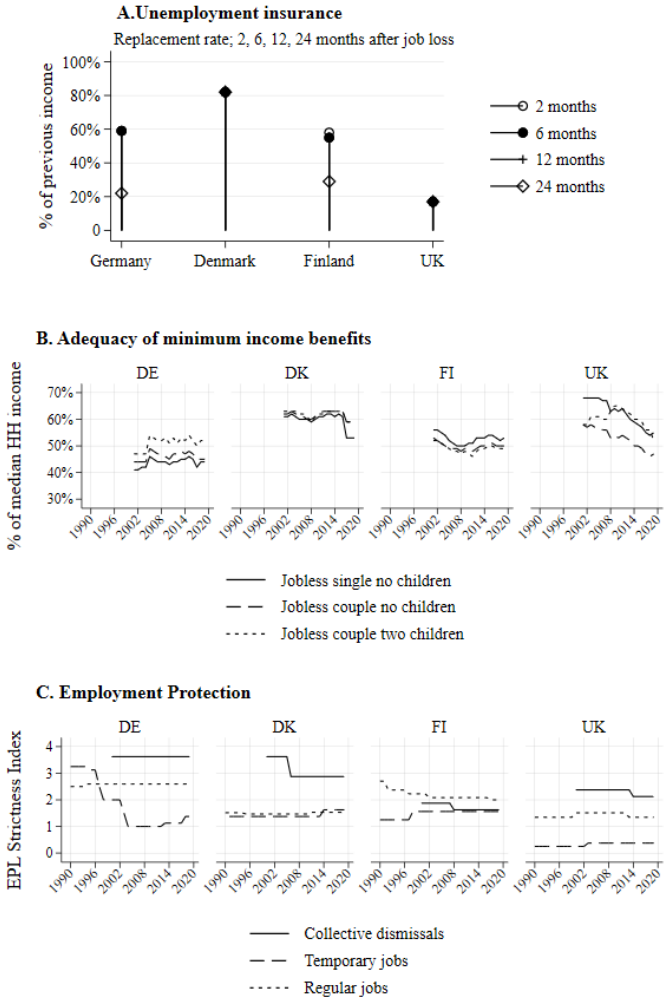
Household employment

Data: OECD



Welfare state

Data OECD



Average risk and duration of job loss