

The effects of job loss on health

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Motivation

- Job loss leads to substantial drops in income (Stevens, 1997) and consumption (Stephens, 2004).
- Potential long-term effects if job loss also affects health.
- Costs of job loss beyond direct costs of unemployment (Kuhn et al., 2009)? Negative external effects?
- Implications for short-time work arrangements (e.g. *NOW*, *Kurzarbeitergeld*)

Contribution

- Causal inference of job loss on health
 - Issues of *reverse causality* and *omitted variables bias*.
 - Various approaches:
 - Firm closures (e.g. Eliason & Storrie, 2009).
 - Matching (e.g. Browning et al., 2006).
 - IV (e.g. Caroli & Goddard, 2016).
 - FE (e.g. Böckerman & Ilmakunnas, 2008).
 - Job loss expectations (Stephens, 2004).
- Variety of subjective/objective/physical/mental health measures.
 - Meta-study: Important driver of differences in conclusions (Knoef, Been, Van Mourik, 2020)

Institutional framework NL

- Relatively generous UI benefits
 - Till 2016, RR=75% for total duration (max. 2,900 euros p/m).
 - Collective labor agreements can top this up to 100%.
 - Till 2016, duration up to 38 months depending on work history.
 - After exhaustion, asset- and income-based means-tested welfare.
- Universal health insurance coverage
 - Basic coverage includes physician, home nursing, hospital, mental health care, prescription drugs.
 - Relatively low OOP health spending.

LISS Data

- LISS Core Study:

- Yearly panel 2007-2019.
- 4,500 representative households.
- Health module: variety of health measures for 2008-2018.
- Work & Schooling module: employment/unemployment, subjective job loss expectations

What is the probability of losing your job in the next 12 months on scale from 0 to 100?

100 is absolutely certain that you lose your job.

Econometric model

$$\Delta y_{it} = \gamma_0 + \gamma_1 \text{jobloss}_{it} + \text{age}'_{it} \gamma_2 + \Delta \mathbf{X}'_{it} \gamma_3 + \mathbf{t}'_t \gamma_4 + \varepsilon_{it} \quad (1)$$

$$\Delta y_{it} = \gamma_0 + \gamma_1 \text{shock}_{it} + \text{age}'_{it} \gamma_2 + \Delta \mathbf{X}'_{it} \gamma_3 + \mathbf{t}'_t \gamma_4 + \varepsilon_{it} \quad (2)$$

with

$\text{jobloss}_{it} = 1$ if ($\text{work}_{it-1} = 1$ & $\text{unem}_{it} = 1$)

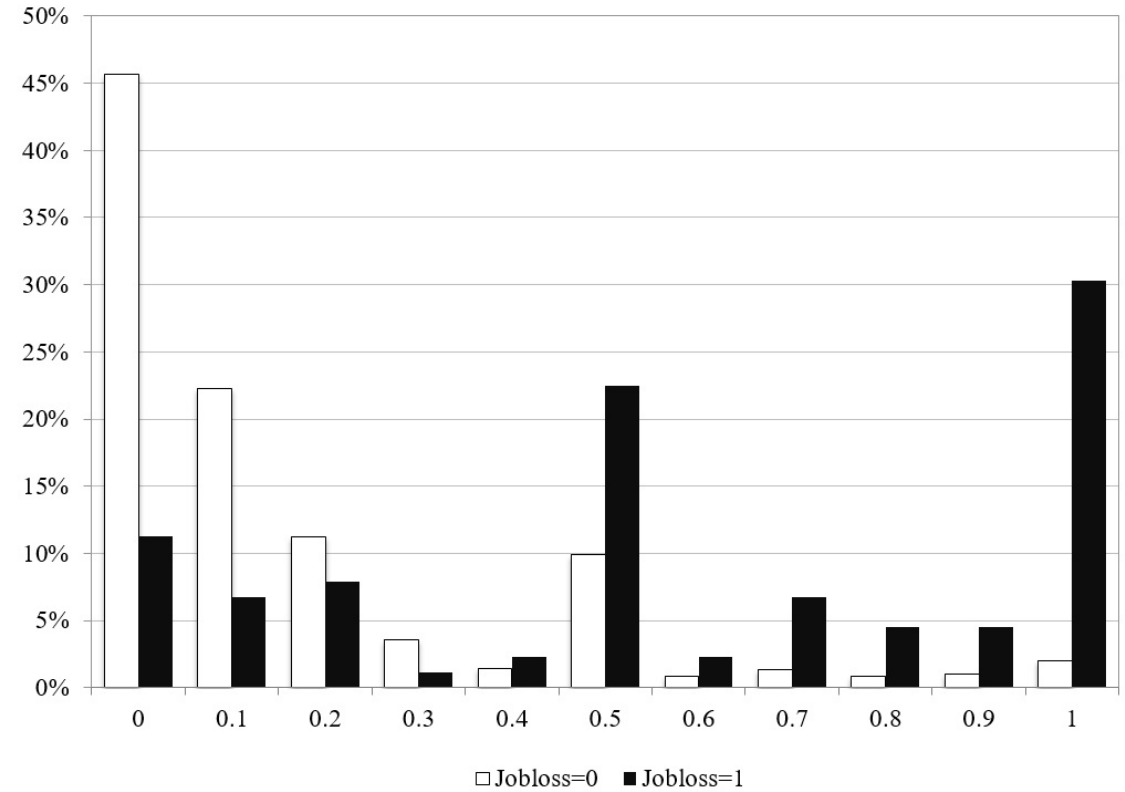
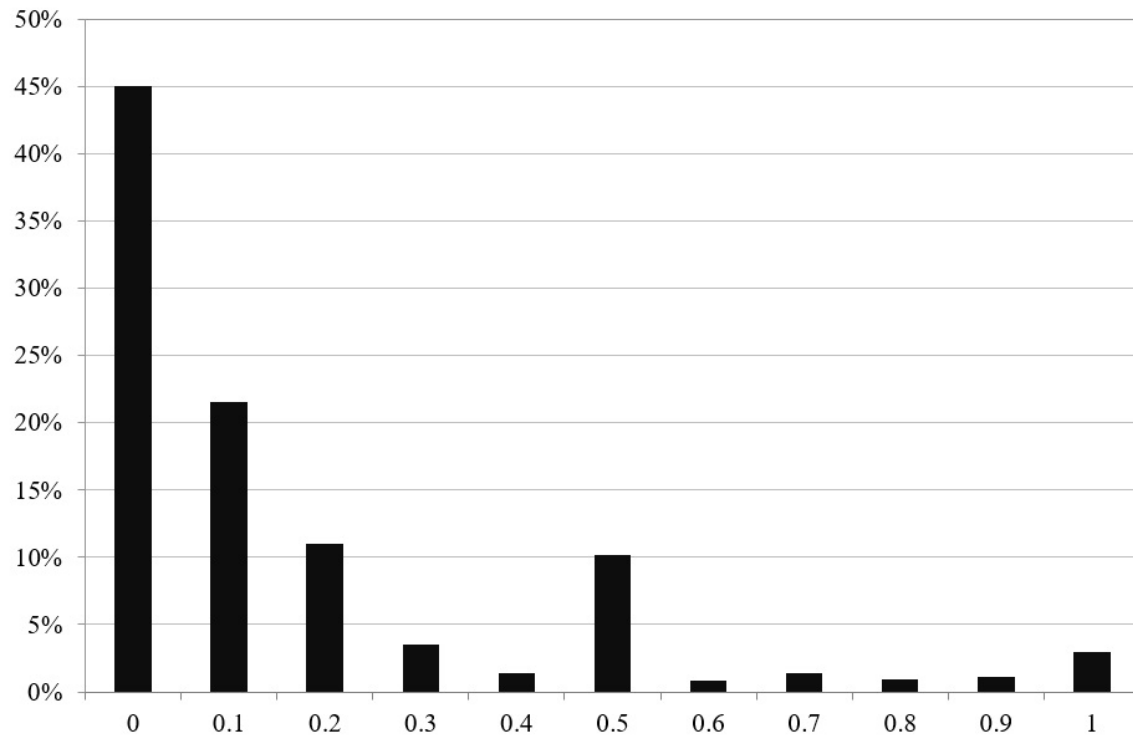
$\text{jobloss}_{it} = 0$ if ($\text{work}_{it-1} = 1$ & $\text{work}_{it} = 1$)

$\text{shock}_{it} = [\text{jobloss}_{it} - E_{it-1} \text{jobloss}_{it}]$

Unexpected job loss is $\text{jobloss}_{it} = 1$ and $E_{it-1} \text{jobloss}_{it} < 1 \rightarrow$ Interval $[0,1]$

Unexpected job keep is $\text{jobloss}_{it} = 0$ and $E_{it-1} \text{jobloss}_{it} > 0 \rightarrow$ Interval $[-1,0]$, converted to $[0,1]$

Job loss expectations



Estimation results 1 – Subjective health

Dependent variables	Independent variables			Observations
	Job loss	Unexpected job loss	Unexpected job stay	
	(1)	(2)	(3)	
Subjective health[1-5]	-0.150*** -0.049	-0.214** (0.085	0.224*** -0.035	11,163
Life satisfaction[0-10]	-0.737*** -0.104	-0.856*** -0.187	0.501*** -0.063	11,100

Estimation results 2 – Mental health

Independent variables				
Dependent variables	Job loss	Unexpected job loss	Unexpected job stay	Observations
	(1)	(2)	(3)	
Medication for sleeping problems[0,1]	0.008	0.026	-0.028***	11,133
Anxiety or depression medication[0,1]	-0.013	-0.025	-0.01	
	0.031*	0.061*	0.017**	11,133
	-0.018	-0.034	-0.008	

Estimation results 3 – Health behavior

Dependent variables	Independent variables			Observations
	Job loss	Unexpected job loss	Unexpected job stay	
	(1)	(2)	(3)	
Smoking[0,1]	0.052	0.107*	0.029	11,150
	-0.035	-0.063	-0.028	
Alcohol use[1-6]	-0.201	-0.624***	-0.153	11,150
	-0.133	-0.231	-0.115	
Drug use[0,1]	0.033*	0.059*	0.004	11,165
	-0.018	-0.035	-0.009	

Estimation results 4 – No effects

No significant effects of (unexpected) job loss on:

- BMI
- Blood pressure
- Cholesterol
- GP visits
- Medical specialist visits
- ADL's

Conclusion

- Job loss decreases health, especially if **unexpected**, but only
 - Subjective health
 - Mental health
 - Health behavior
- Job loss anticipation important driver of subjective health.
- Long-run effects on physical health?
- Increased (mental) health care costs due to job loss?

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