

Careers in Jeopardy: How Job Loss Alters the Willingness to Take Risks

Does an exogenous job loss alter the willingness to take risk and if so, is it in line with economic theory?

Motivation & Idea

Controversial empirical results concerning the stability of risk-taking

- No change over time or with changing income
- But, certain events alter risk-taking (e.g. economic crisis, natural disasters)

⇒ Does job loss affect risk-taking?

- No, it does not – at least for older dismissed adults in the US (Sahm 2014)

⇒ Does this hold for a more sufficient identification and representative data?

Theory & Hypotheses

Consider a von Neumann-Morgenstern utility function $u(w + y)$

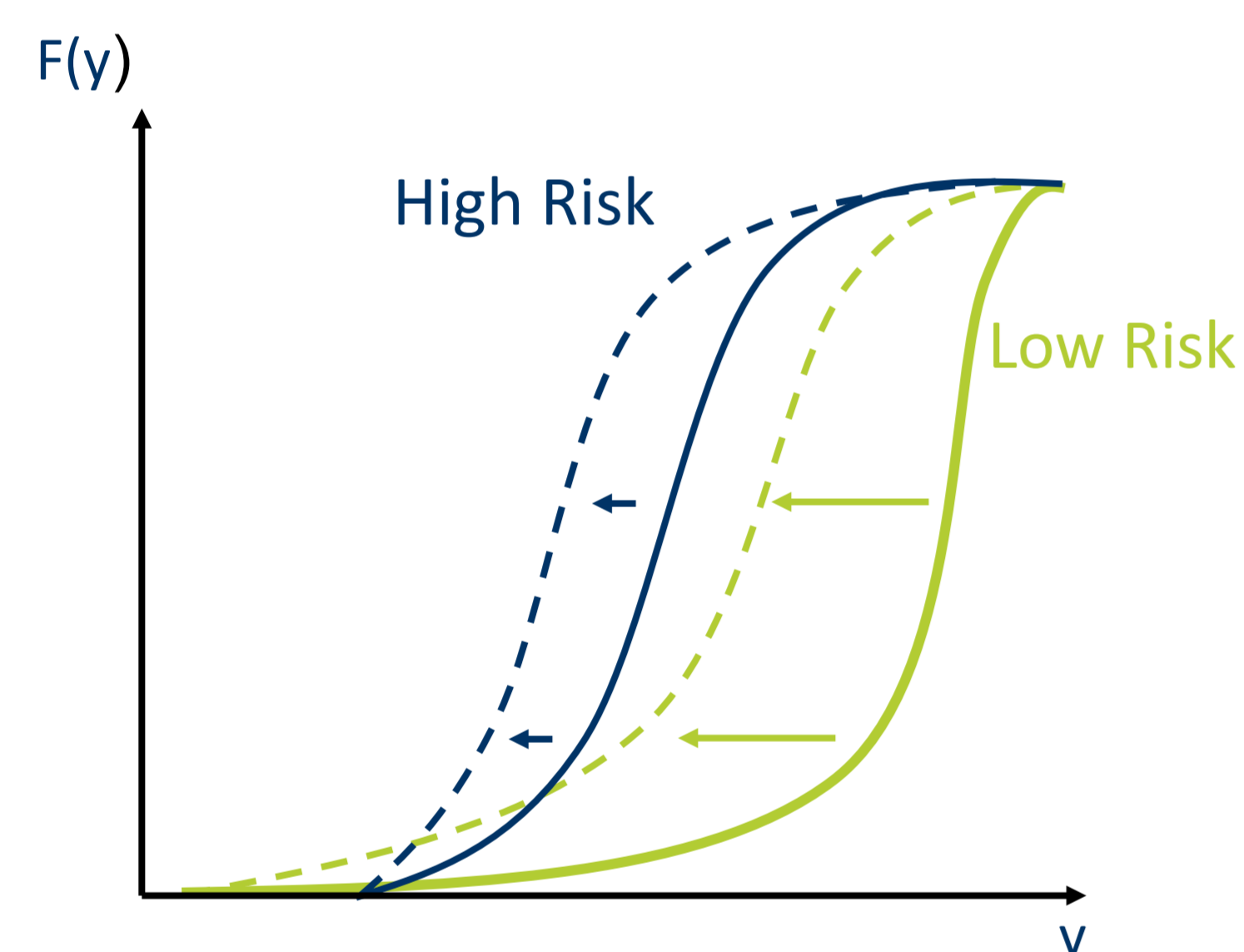
- with w as *non-stochastic* labour income in the next period
- with y as *stochastic* loss from unemployment in the next period

Resulting in a certain level of absolute risk aversion $ARA(w, y)$

The stochastic loss follows a distribution function $F_i(y_i)$, depending on

- the distribution function of job losses in the next period $\alpha(JL | x_i)$
- individual characteristics x_i

An unexpected job loss, which was not accounted for, shifts $F_i(y_i)$



Implications:

- ⇒ An unexpected job loss increases the expected loss from unemployment
- ⇒ Assuming u to be a *DARA* function, ARA diminishes with decreasing expectations
- ⇒ Low risk types are more surprised, therefore, their shift in expected loss and ARA is bigger

Data, Identification & Sampling

Data: GSOEP 2004-2013

- Question about the general risk attitude (GRA) (Dohmen et al. 2011)
"Would you describe yourself as risk-averse or risk prone (scale 0-10)?"

Assumption: inverse GRA represents ARA

Approach: Difference-in-Difference

- Treatment group: Job loss due to plant closure in the last 12 month
- Control group: Employed for three consecutive interviews
- Min. 15 h/week work, no marginal and self-employed, no agency workers

Estimation:

$$\Delta GRA_i = \alpha + \beta Loss_i + \delta X_i + \varepsilon_i$$

- X_i includes year dummies, socio-demographics, parallel life shocks and job characteristics (pre-treatment)
- To circumvent anticipation, we use the two years difference of GRA

References

Dohmen, Thomas, Armin Falk, David Huffman, Uwe Sunde, Jürgen Schupp and Gert G. Wagner (2011): "Individual risk attitudes: Measurement, determinants, and behavioral consequences", *Journal of the European Economic Association*, Vol 9(3).

Sahm, Claudia (2012): "How much does risk tolerance change?", *Quarterly Journal of Finance*, Vol. 2(4).

Results

Table 1. Effect of job loss on GRA

	All Dismissals ¹	Plant Closure Only	Plant Closure and Controls
Job loss	-0.027 (0.079)	-0.327** (0.153)	-0.360** (0.153)
Constant	0.352*** (0.030)	0.356*** (0.030)	0.781** (0.313)
Adj. R ²	0.053	0.053	0.055

Notes: $n = 36,624$ (¹ $n=638$). All specifications include year dummies.

To check for heterogeneity, we divide the sample into high and low risk individuals and introduce an interaction term with the treatment dummy

Table 2. Heterogeneity concerning job loss risk

	By Education	By level of autonomy	By HH income	By local unemp. rate
Job loss				
... and low risk	-0.445** (0.223)	-0.380** (0.171)	-0.530*** (0.185)	-0.476** (0.227)
... and high risk	-0.310 (0.198)	-0.287 (0.255)	-0.210 (0.230)	-0.275 (0.204)
No job loss and high risk	0.009 (0.027)	0.038 (0.030)	0.012 (0.027)	-0.012 (0.023)
Constant	0.837*** (0.310)	0.708** (0.293)	0.851*** (0.320)	0.786** (0.307)
Adj. R ²	0.055	0.055	0.055	0.055

Notes: $n = 36,624$. All controls included.

Robustness

Altering the dependent variable to an annual change in GRA, we derive insights concerning anticipation and reversion. See figure for corresponding interval

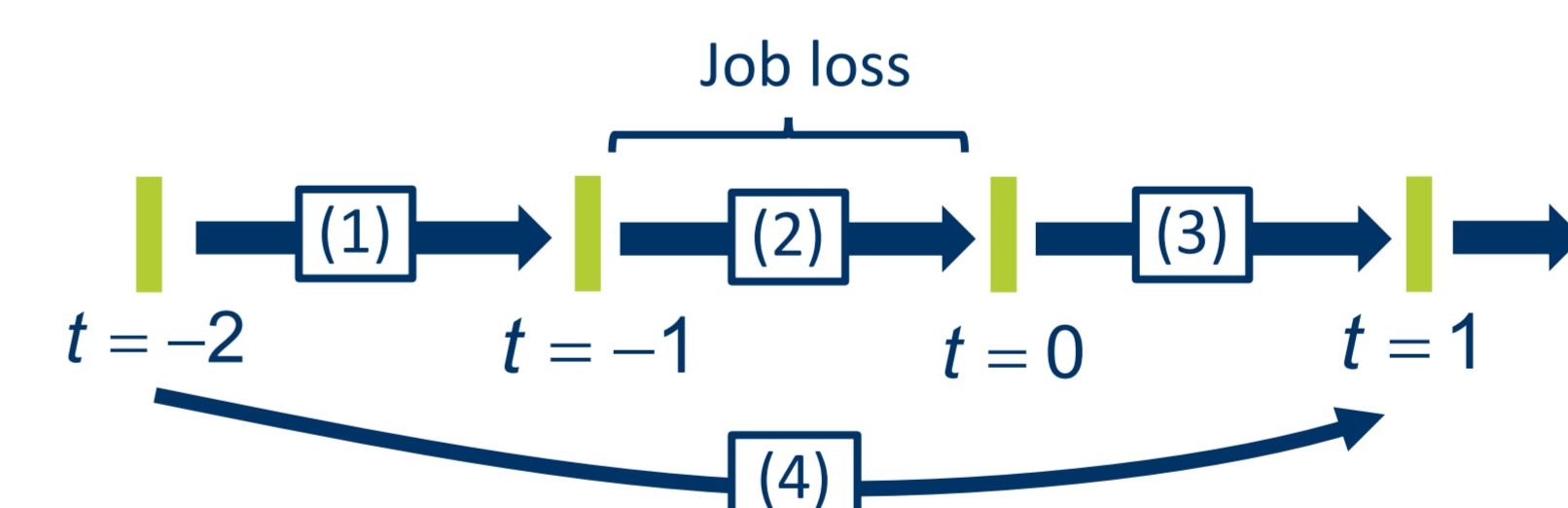


Table 3. Anticipation and reversion

	(1)	(2)	(3)	(4)
Job loss	-0.294* (0.162)	0.084 (0.174)	0.198 (0.143)	-0.019 (0.190)
Constant	0.612* (0.327)	-0.349 (0.336)	-0.472** (0.215)	0.367 (0.380)
Observations	30,320	25,700	30,169	22,835
Adj. R ²	0.032	0.041	0.045	0.047

Notes: All specifications include year dummies. All controls included.

Discussion

- Involuntary job losses increase ARA
 - Individuals with good labor market prospects react stronger
 - Anticipation and reversion
- ⇒ Rather an adaptation to new circumstances than a change in preferences
- ⇒ Question about GRA may represent ARA