

# Work Effort and the Cycle: Evidence from Survey Data

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# In a Nutshell

Research question: How does work effort move over the business cycle?

- Labor hoarding theory (Okun, 1963): procyclical effort
- 'Shirking' model (Shapiro and Stiglitz, 1984): countercyclical effort

Our approach

- In this paper, we test these two competing theories
- Difficulty: effort unobserved and therefore hard to measure
- We use self-reported work effort, cross-country and individual-level

Key result

- Work effort robustly procyclical → consistent with labor hoarding

# Motivation

What determines a worker's effort on the job? Two theories:

- 1 **Labor hoarding:** Effort adjusts to avoid costly changes in employment/hours → high in expansion when demand is high
- 2 **Shirking model:** Effort arises from fear of lay-off when caught shirking → high in recession when job finding rate is low

Age-old question: what drives business cycles?

- Procyclical labor productivity (Ohanian and Raffo, 2012)
  - Consistent with technology shocks as main driver of business cycles
  - Also consistent with demand shocks & variable factor utilization, such as procyclical work effort
- Labor hoarding reduces importance of technology shocks (Burnside et al., 1993; Basu and Kimball, 1997)
- Shirking model requires implausibly large technology shocks in RBC model (Uhlig and Xu, 1996)

# Self-reported work effort from WOS

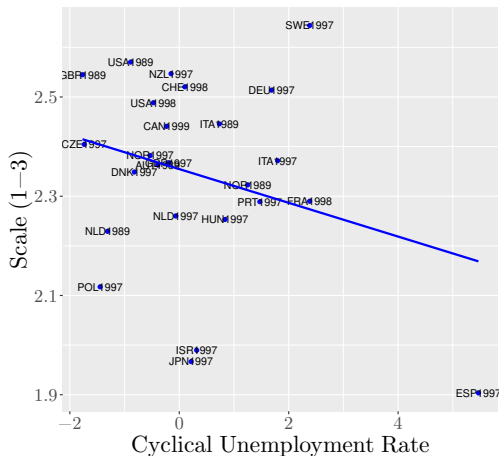
Which of the following statements best describes your feelings about your job? In my job...

- 1 'I only work as hard as I have to.'
- 2 'I work hard, but not so that it interferes with the rest of my life.'
- 3 'I make a point of doing the best work I can, even if it sometimes does interfere with the rest of my life.'

Alternative proxies

- Job-related stress and exhaustion from Work Orientations Survey (WOS). Caveat: Could reflect other aspects of job unrelated to effort
- Attitudes to work effort from World Values Survey (WVS). Caveat: Measure a person's work ethic rather than actual effort

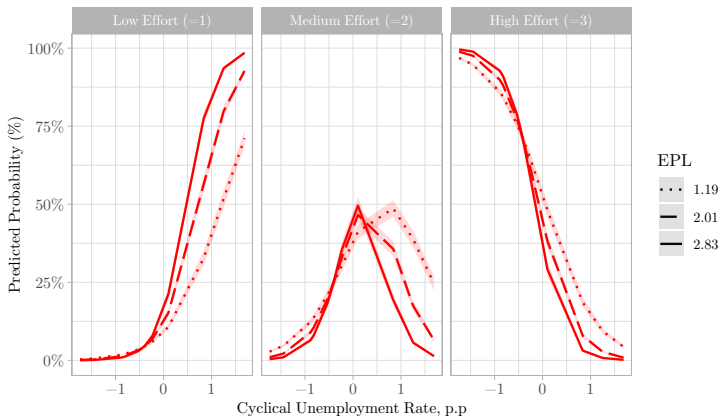
# Self-Reported Effort vs. Cyclical Unemployment



# Regression Results: Ordered Logit

	<i>Dependent variable:</i>		
	Work Effort	Exhaustion	Stress
Cyclical Unemployment Rate	0.361*** (0.001)	0.957*** (0.008)	1.028*** (0.010)
<i>Observations</i>	7388	21418	35139
HP Unemployment Rate	0.390*** (0.002)	0.806*** (0.004)	1.014** (0.006)
<i>Observations</i>	7388	20987	34316
Output Gap $Y^* - Y$	0.782*** (0.003)	0.958*** (0.011)	0.986* (0.008)
<i>Observations</i>	7388	21889	36117
Country FEs	X	X	X
Year FEs	X	X	X
Occupation FEs	X	X	X

# Results: Effort Cyclicality and Employment Protection



*Notes.* Predicted probabilities of self-reported effort levels vs. cyclical unemployment, for increasing strictness of employment protection (Q1-Q3), with 95% confidence bands.

# Conclusion

## Key findings

- Self-reported work effort robustly procyclical
- Consistent with labor hoarding view, inconsistent with shirking model
- Increased employment protection → more procyclical effort

## Policy implications

- Effort reduces costs of employment protection → support for employment stabilization programs that ‘subsidize labor hoarding’ (Giupponi and Landais, 2018)
- Effort makes productivity more procyclical, which dampens inflation fluctuations (Lewis et al., 2019)



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