

Individual Uncertainty and Attentiveness to Macroeconomic Conditions

Pedro Simon
UIUC

Shihan Xie
UIUC

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What determines household attention allocation?

- Systematic heterogeneity in the accuracy of expectations across the distribution of households (Weber, D'Auncto, Gorodnichenko & Coibion, 2022)
 - Social economic status, IQ, experiences, political affiliation, . . .
- Attention is state-dependent
 - Information rigidity declines significantly during recessions (Coibion & Gorodnichenko, 2005)
- Households adjust the resources devoted to the collection and processing of information in response to economic conditions

The role of labor market risks

When individual labor market risk increases:

- Precautionary motives
 - Do households pay more attention to economic conditions to hedge against income risk?
- Crowd-out effects
 - Do households spend more effort on job search activities and reduce their attention to economic conditions?

What we do

Provide empirical evidence on the two channels using data from the New York Fed Survey of Consumer Expectations:

- Examine heterogeneous effects of subjective labor market risk on household attentiveness
 - Under different labor forces statuses
 - Over business cycles
 - Across income groups
- Use inflation and house price forecast errors to proxy for household attentiveness
 - Control for time and individual fixed effects
 - Our results can be interpreted as effects of within-individual risk changes and employment status transition

What we find

- Given the assurance of job security, an uptick in individual income uncertainty leads to increases in attentiveness
 - **Precautionary motive**
 - One standard deviation increase in income risk leads to about 0.36 percentage points decrease in inflation forecast error, equivalent to a 10 percent decrease from the baseline
 - Effects are stronger with **lower-income** households and during **recessions**
- Being unemployed or a rising likelihood of unemployment leads to decreases in attentiveness
 - **Crowd-out effects**
 - Actual job losses lead to a 0.25 percentage points increase in household inflation forecast errors, equivalent to a 7 percent increase from the baseline
 - While more time spent on job search activities

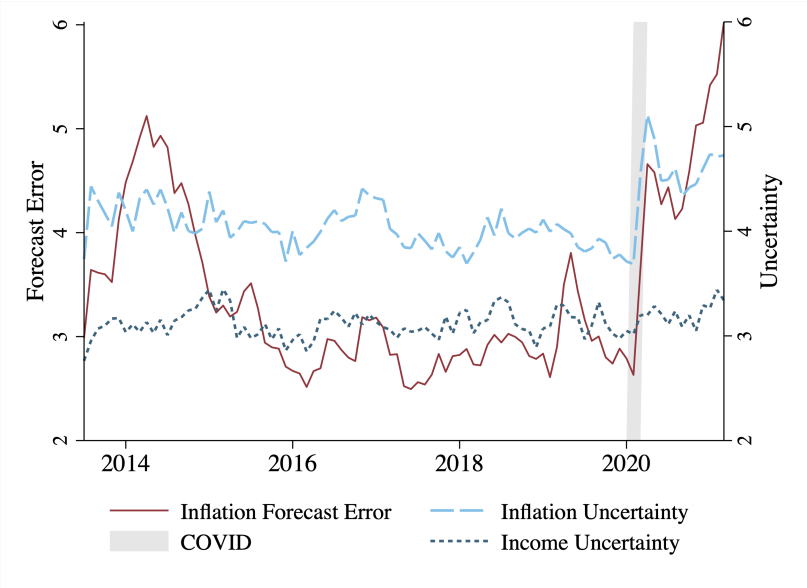
Related literature

- Determinants of household expectations
 - Malmendier and Nagel (2016); Kuchler and Zafar (2019); D'Acunto, Hoang, Paloviita and Weber (2022); Rupal and Ray (2023); Ahn, Xie and Yang (2023)
- Endogenous attention allocation
 - Theory: Sims (2003); Reis (2006); Mackowiak and Wiederholt (2015)
 - Empirical: Coibion and Gorodnichenko (2015)
- **Individual labor market risks** and expectation formation
 - Model: Broer, Kohlhas, Mitman and Schlafmann (2022)
 - Experiments: Roth, Settele and Wohlfart (2022)

New York Fed Survey of Consumer Expectations

- Main survey: conducted monthly since 2013 [Summary statistics](#) [Sample question](#)
 - Measures of consumer expectations: inflation, house prices, . . .
 - Measures of labor market risks
 - **Income risk**: interquartile range of expected income conditioning on working at the current job
 - **Unemployment risk**: the percent chance that one will lose the job during the next 12 months
 - Respondents are tracked for up to 12 months
 - Labor force status
 - Income range
- Special modules
 - Mini-module: 2008 - 2014
 - Labor market module: time-spent on job search

Time series of forecast errors and subjective income risks



Effects of labor market risks on attention allocation

- Use forecast errors \uparrow to measure attentiveness \downarrow

$$\text{Forecast Error}_{it} = \beta_1 \text{Income risk}_{it} + \beta_2 \text{Unemployment risk}_{it} + \text{Controls}_{it} + \epsilon_{it}$$

- Hypothesis:
 - $\beta_1 < 0$: **precautionary attentiveness** to hedge against income risks
 - $\beta_2 > 0$: **crowd-out effects** of job search efforts
- Controls:
 - Local business cycle fluctuations
 - Individual fixed effects
 - Inflation or house price uncertainty
 - Other fixed effects: tenure, commuting zone

Effects of labor market risks on attention allocation

Dependent variable	Inflation forecast error		House price forecast error	
	(1)	(2)	(3)	(4)
Income risk	-1.055*** (0.047)	-0.355*** (0.041)	-0.758*** (0.055)	-0.384*** (0.046)
Unemployment risk	0.004*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Individual FE		✓		✓
State × Time FE	✓	✓	✓	✓
Observations	69,443	67,331	60,726	59,491
Adj. R^2	0.3231	0.6227	0.5962	0.7578

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Heterogeneity by income levels

Dependent variable	Inflation forecast error		House price forecast error	
$\mathbb{I}(\text{Less than } \$40\text{K})$	0.429*** (0.037)		0.443*** (0.086)	
$\mathbb{I}(\text{Greater than } \$100\text{K})$	-0.065* (0.039)		-0.224*** (0.079)	
Income risk	-0.964*** (0.037)	-0.350*** (0.041)	-0.701*** (0.066)	-0.394*** (0.055)
Income risk \times $\mathbb{I}(\text{Less than } \$40\text{K})$	-0.149*** (0.062)	0.036 (0.075)	-0.342*** (0.120)	-0.039 (0.096)
Income risk \times $\mathbb{I}(\text{Greater than } \$100\text{K})$	0.620*** (0.051)	0.150** (0.062)	0.477*** (0.098)	0.220*** (0.082)
Individual FE		✓		✓
Time FE	✓	✓	✓	✓

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Time FE	✓	✓	✓	✓

Effects of employment status transitions on attention allocation

- Baseline group: Employed

$$\text{Forecast Error}_{it} = \alpha_1 \text{Unemployed}_{it} + \alpha_2 \text{Out of the labor force}_{it} + \text{Controls}_{it} + \epsilon_{it}$$

- By labor force status: time-series of forecast errors shares of households
- Hypothesis:
 - $\alpha_1 > 0$: **crowd-out effects** of job search efforts
- Controls:
 - Local business cycle fluctuations
 - Individual fixed effects
 - Inflation or house price uncertainty
 - Other fixed effects: tenure, commuting zone

Effects of employment status transitions on attention allocation

Dependent variable	Inflation forecast error		House price forecast error	
	(1)	(2)	(3)	(4)
Unemployed	1.058*** (0.137)	0.281*** (0.098)	0.710*** (0.126)	0.269*** (0.117)
Out of the labor force	0.390*** (0.063)	0.159* (0.084)	0.068 (0.062)	0.170 (0.107)
Individual FE		✓		✓
State × Time FE	✓	✓	✓	✓
Observations	119,805	116,845	105,158	103,702
Adj. R^2	0.0738	0.5272	0.4930	0.6952

Evidence from time use

- SCE Labor Module
 - *“And within the LAST 7 DAYS, about how many TOTAL hours did you spend on job search activities?”*
 - For households who are employed, time spent on job search increases by 0.36 hours when unemployment risk increases by 10 percentage points
 - For households who become unemployed, time spent on job search increases by 13.6 hours
- American Time Use Survey
 - Households who are out of the labor force are 14% less likely to spend time on financial-related activities

Income uncertainty over business cycles

State-level recessions

Forecast errors	Inflation	House price	Mini-module
Income risk	-0.350*** (0.055)	-0.346*** (0.041)	-0.149*** (0.075)
Income risk \times $\mathbb{I}(\text{Recession})$	-0.146 (0.116)	-0.420*** (0.121)	-0.324*** (0.169)
Unemployment risk	0.002* (0.001)	0.003** (0.001)	0.001 (0.002)
Unemployment risk \times $\mathbb{I}(\text{Recession})$	0.008 (0.004)	0.001 (0.001)	-0.002 (0.003)
Sample period	2013 - 2022	2013 - 2022	2008 - 2014
Individual FE	✓	✓	✓
Time FE	✓	✓	✓

Conclusions

We document two compelling forces that drive individual attentiveness to economic conditions based on their labor market status:

- **Precautionary motives:** given the assurance of job security, an uptick in individual income uncertainty leads to increases in attentiveness
- **Crowd-out effects:** being unemployed or a rising likelihood of unemployment leads to decreases in attentiveness due to more time spent on job search activities

These effects are intensified among lower-income households and during recessions.

Appendix

Summary statistics

[Back](#)

	Observations	Mean	SD	P75	P50	P25
Inflation Forecast Error	120,179	3.42	4.28	4.30	2.00	0.90
House Prices Forecast Error	105,531	5.60	5.94	6.70	3.49	1.63
Inflation Uncertainty	131,397	4.20	4.67	5.00	2.00	1.00
House Prices Uncertainty	115,463	4.41	4.33	5.00	3.00	2.00
Income Uncertainty	88,522	3.14	3.96	3.00	1.00	1.00
Prob of Unemployment	78,343	14.54	20.18	20.00	6.00	1.00

Expected income distribution

[Back](#)

Suppose again that, 12 months from now, you are working in the exact same job at the same place you currently work, and working the exact same number of hours. In your view, what would you say is the percent chance that 12 months from now...

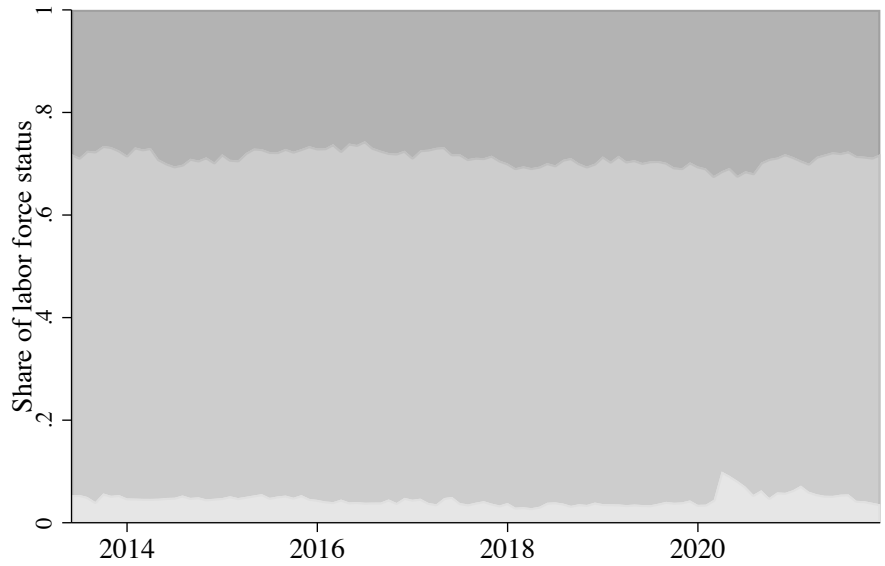
Your earnings on this job, before taxes and deductions, will have...

increased by 12% or more (bin 1)	_____	percent chance
increased by 8% to 12% (bin 2)	_____	percent chance
increased by 4% to 8% (bin 3)	_____	percent chance
increased by 2% to 4% (bin 4)	_____	percent chance
increased by 0% to 2% (bin 5)	_____	percent chance
decreased by 0% to 2% (bin 6)	_____	percent chance
decreased by 2% to 4% (bin 7)	_____	percent chance
decreased by 4% to 8% (bin 8)	_____	percent chance
decreased by 8% to 12% (bin 9)	_____	percent chance
decreased by 12% or more (bin 10)	_____	percent chance
Total	100	

Inflation forecast errors by labor force statuses



Share of households by labor force statuses



State-level recessions

A state is in recession if it experiences an economic contraction of at least one percentage point (annualized) from the preceding quarter for no less than two consecutive quarters.

