

Higher Order Beliefs in Survey Data: Discussion



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Summary

This is a very **rich** , **novel** and **dense** paper

The authors

1. Provide novel evidence on 2nd order beliefs about inflation
 - Run an information experiment
 - Test link between 2nd order inflation beliefs and behavior
2. Rely on a noisy-information model to
 - Develop testable hypotheses
 - Calibrate structural parameters
3. Conduct a beauty contest experiment
 - In which 2nd order beliefs are elicited (this is novel)
 - To try to refine noisy-information model

So essentially 3 papers in 1 !!!

2nd order Beliefs in the SCE

Starting in 2016, we have collected 1st and 2nd order inflation expectations each month

1st order point prediction question

“Over the next 12 months I expect the rate of inflation/deflation to be ____%”

2nd order point prediction question

“I think that, on average, people who answer the survey this month expect the rate of inflation over the next 12 months to be ____%”

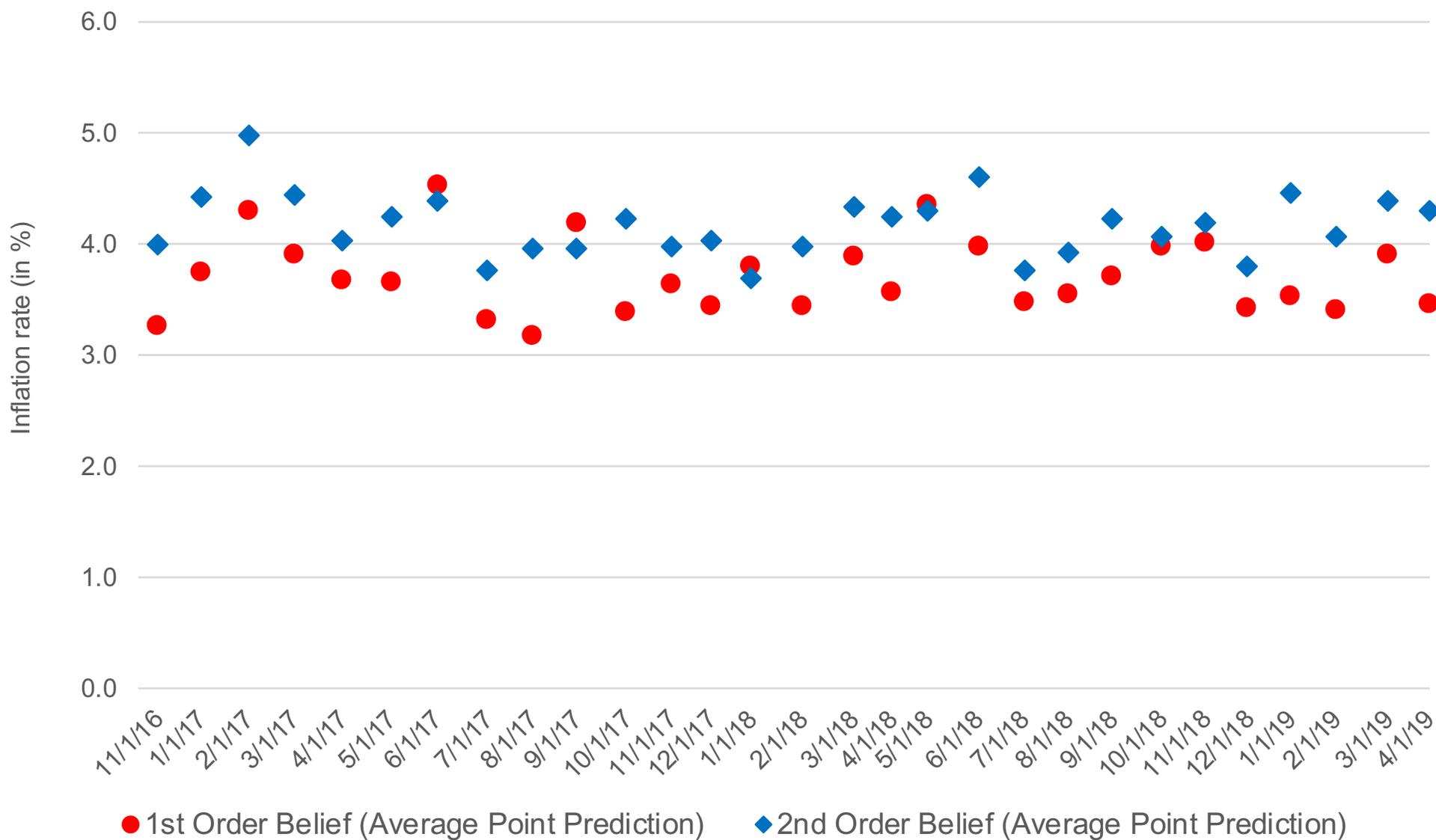
Features of the two Surveys

	Coibon et al.	SCE
Country	New Zealand	U.S
Respondents	Firms	Household heads
Frequency	Conducted twice	Monthly rotating panel
Horizon of expectations	1 year ahead	1 year ahead
1 st order belief elicitation method	Point prediction & density forecast	Point prediction & density forecast
2nd order belief elicitation method	Density forecast	Point prediction
Experiment	Information experiment & beauty contest	Financially incentivized belief elicitation

Results Comparison

	Coibon et al.	SCE
	2 nd order beliefs are well calibrated	

First and Second Order Beliefs each Month



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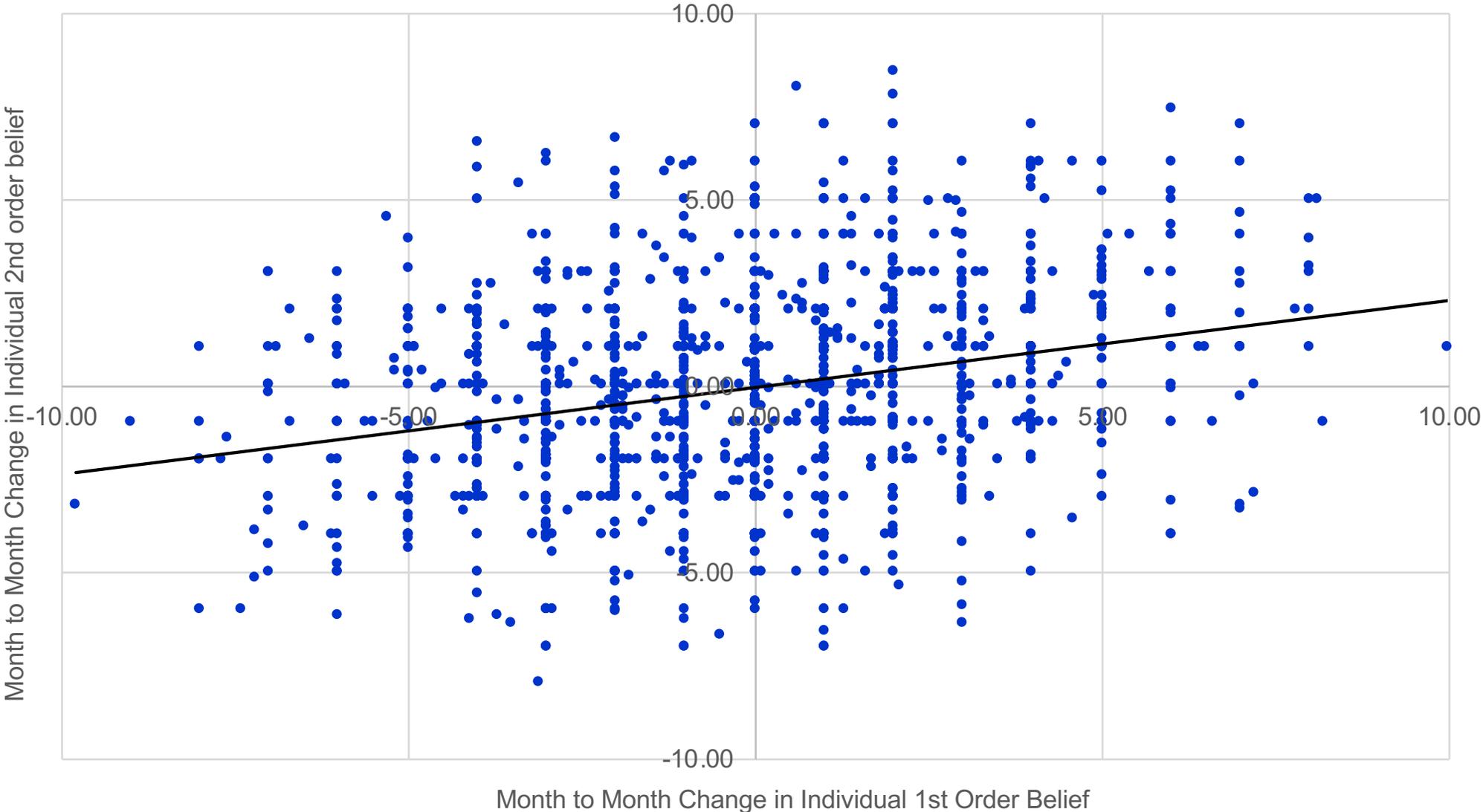
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	Coibon et al.	SCE
✓	2 nd order beliefs are well calibrated	2 nd order beliefs are biased upward
✓	2 nd order beliefs exhibit lower disagreement	2 nd order beliefs exhibit lower disagreement
✓	1 st and 2 nd order expectation are highly correlated (0.68)	1 st and 2 nd order expectation are highly correlated (0.72)

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Change in 1st and 2nd second order Inflation Expectations



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✓	1 st and 2 nd order expectations are highly correlated (0.68)	1 st and 2 nd order expectations are highly correlated (0.72)
✓(?)	1 st and 2 nd order beliefs respond similarly to information	1 st order beliefs are revised more than 2 nd order beliefs

Effect of incentives

- Would survey responses be different if respondents were paid according to the accuracy of their predictions?
- Difficult to incentivize 1st order inflation belief because uncertainty is resolved only 1 year later
- But, one can incentivized 2nd order beliefs because uncertainty is resolved as soon as survey is closed

Effect of incentives

- To address this question we conducted an experiment
- Half of the respondents got a non incentivized question

“I think that, on average, people who answer the survey this month expect the rate of inflation over the next 12 months to be _____% “
- Half of the respondents got got an incentivized question

*“I think that, on average, people who answer the survey this month expect the rate of inflation over the next 12 months to be _____% **If your guess is correct within 0.1% then you will earn an extra \$20**”*

The Effect of Incentives on Second Order Beliefs

