Eliciting MPCs in Surveys.

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Introduction

- Marginal propensity to consume is a key parameter:
  - Calibration of macro models,
  - Targeting stimulus payments,
  - Understanding insurance against shocks/pass through to consumption,
  - Identification of households in financially tight circumstances.
- Measurement:
  - Natural (Parker et al. 2013) and actual experiments (Boehm et al. 2025).
  - Covariance of consumption and income shocks (Blundell et al. 2008).
  - Survey elicitation (Shapiro and Slemrod, 1995, 2003).

Advantages of Survey Elicitation

- MPCs can (should) vary according to:
  - State of the economy, policy environment
  - Size and sign of income changes, time horizon,
  - Household characteristics.
- (quasi)experimental variation on all these dimensions not available.
- Each consumer states how they would *respond* in hypothetical situation(s)
  - Individual counterfactuals gives a distribution of MPCs.
- Qs asked in SCE (US), HFCS (Eurozone), SHIW (Italy), Survey of Household Finances (Bank of England).

The Puzzle

- Enormous differences in mean elicited MPCs across studies.
- 0.48 in Jappelli and Pistaferri (2014, AEJMacro).
- 0.08 in Fuster et al. (2021, *ReStud*).
- Why?

‘Direct’ Question from HFCS (European Central Banks)

Imagine you unexpectedly receive money from a lottery, equal to the amount of income your household receives in a month. What percent would you spend over the next 12 months on goods and services, as opposed to any amount you would save for later or use to repay loans?

- Drescher et al., (2020). 17 European countries, mean MPCs range from 0.33 to 0.57, overall mean 0.47.
- SHIW question (Jappelli and Pistaferri, 2014, 2020) very similar (no time horizon).

‘Filtered’ Question from Fuster et al. (2021)

Now consider a hypothetical situation where you unexpectedly receive a one-time payment of $ 500 today.We would like to know whether this extra income would cause you to change your spending behaviour in any way over the next 3 months. Please select only one

- *Over the next 3 months, I would spend/donate more than if I had not received the $500*
- *Over the next 3 months, I would spend/donate the same as if I had not received the $500*
- *Over the next 3 months, I would spend/donate less than if I had not received the $500*

[If more/less then asked how much]

- See also Crossley et al., (2021). UK, covid, 0.11.

Survey Methods Literature

- The survey question design literature cautions against questions that are ”leading” or presumptive.
  - *Avoid leading or loaded questions that push respondents towards an answer.* (Krosnick and Presser, 2010).
- Questions should not imply that the respondent engages in the behavior being asked about (Moser and Kalton, 2017).
  - Filter questions recommended.
- The effects of leading questions/filters have been documented in a range of domains.
  - eg., religous affiliation (Brenner et al, 2023).
- One(two) caveat(s): motivated mis-reporting (Eckmann et al, 2014).

Contribution

- Suggests elicited MPCs may be very sensitive to question wording.
- But studies differ by country, state of the economy.....
- We randomly assigned *filtered* vs *direct* formats to members of the Understanding Society Innovation Panel.

Data and Design

Data and Design

- Fielded in Wave 15 of Understanding Society's Innovation Panel
  - Probability Sample of 1500 households/approx 2500 individual adult respondents.
- Randomization at household level, stratified by mode, sample, incentive group.
  - All inferences account for these features.
  - Balance checks in appendix.
- 2 x 2 x 2 design:
  - Question: direct or filtered.
  - Windfall: £500 or £2500.
  - Spending horizon: 3 months or 12 months.

Questions

Filtered: Follows Fuster et al. (2021) (and Crossley et al, 2021).

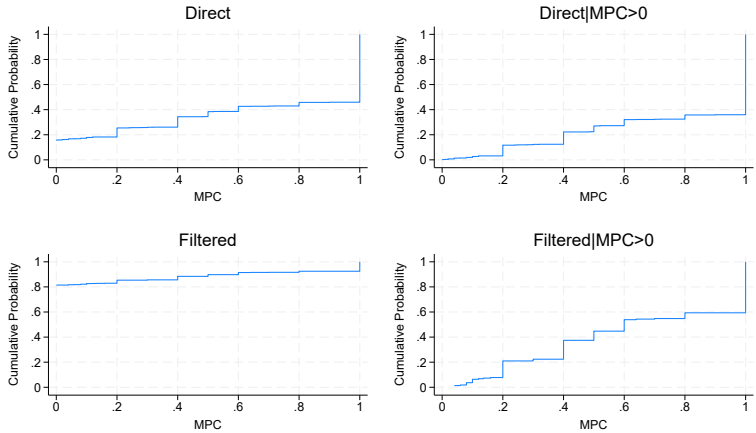
Direct: *Imagine you unexpectedly received a one-time payment of £[AMOUNT] today. How much of it would you spend over the next [DURATION] months?*

Results

Filtered vs direct: MPCs

	Method	Mean	Prob MPC≥0	Mean (if MPC≥0)	N
£500, 3 months	Direct	0.66	0.80	0.83	315
	Filtered	0.13	0.17	0.72	327
	Difference	**0.53**			
		[0.47, 0.60]			
£500, 12 months	Direct	0.79	0.87	0.91	328
	Filtered	0.12	0.14	0.81	291
	Difference	**0.67**			
		[0.61, 0.73]			
£2,500, 3 months	Direct	0.51	0.85	0.60	303
	Filtered	0.12	0.25	0.48	314
	Difference	**0.39**			
		[0.33, 0.44]			
£500, 12 months	Direct	0.68	0.86	0.79	332
	Filtered	0.11	0.16	0.67	286
	Difference	**0.58**			
		[0.52, 0.64]			
Average Difference		**0.54**			
		[0.51, 0.57]			

CDFs by Question Type



- A KS test of equality of the conditional-on-positive distributions is strongly rejected ($p < 0.001$).

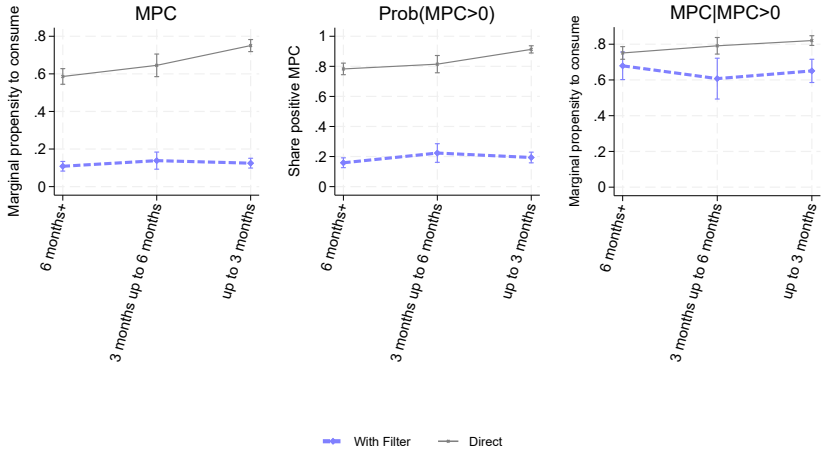
Interaction Effects: Size and Duration

	Direct	Filtered	Difference
		MPC	
Size	-0.13 [-0.18,-0.08]	-0.01 [-0.04,0.03]	-0.12 [-0.18,-0.06]
Spending Horizon	0.15 [0.1,0.2]	-0.01 [-0.04,0.02]	0.16 [0.10,0.22]

Interaction Effects: Size and Duration (2)

	Direct	Filtered	Difference
		$Prob(MPC > 0)$	
Size	0.02 [-0.02,0.07]	0.05 [0.00,0.09]	-0.02 [-0.09,0.04]
Spending Horizon	0.04 [0.00,0.09]	-0.06 [-0.10,-0.01]	0.10 [0.04,0.16]
		$MPC \mid MPC > 0$	
Size	-0.17 [-0.21,-0.13]	-0.19 [-0.28,-0.1]	0.02 [-0.07,0.12]
Spending Horizon	0.14 [0.10,0.18]	0.13 [0.05,0.22]	0.00 [-0.09,0.1]

Average MPC by Liquidity and Question Type



- DinD statistically significant ($p < 0.001$).

Summary

Filtered and direct questions result in:

- very different mean MPCs,
- very different extensive margin *and* different distributions, conditional-on-positive,
- different effects of manipulable parameters (windfall size, spending horizon),
- different correlation with measured liquidity.

Discussion

Conclusion

- A lot of effort has gone into building models that match features of a distribution of elicited MPCs.
  - Especially the high mean, but also, e.g. extensive margin (Fuster et. al., 2021)
- Some of those features may be survey response behaviour.
- We favour ‘filtered’ questions.
  - Question wording considerations.
  - Agreement with covariance restriction estimates, and with revisions to the natural experiment estimates.