Competitiveness and Speculative Behavior

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Motivation

- Financial markets are inherently *competitive*
    - traders compete against each other
    - competitive business culture
    - tournament incentives
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- Bubbles driven by *speculative behavior*
    (e.g., Galbraith, 1994; Kindleberger/Aliber 2011;
    Brunnermeier/Schnabel, 2016)

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    - → more speculation / more bubbles?
      (e.g., Fellner/Maciejovsky, 2007; Breaban/Noussair, 2015; Eckel/Füllbrunn, 2015; Holt et al., 2017)
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- Competitiveness related to financial professionals (Kirchler et al., 2018)
  - → less speculation / fewer bubbles?
    (e.g., Weitzel et al., 2020)

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- → introduce cognitive sophistication and common knowledge about others' competitiveness + others' cognitive sophistication

Hypotheses

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Hypothesis 3

Subjects' propensity to speculate is lower with common knowledge about being in a high-performance group than with common knowledge about being in a low-performance group.

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   → sort subjects into groups of three according to *competitiveness* level <u>or</u> according to their *performance*: LOWest 50% and HIGHest 50% in each session

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2. Elicit speculative behavior ('Bubble Game') within these groups

1. Elicit subjects' individual competitiveness / willingness to compete:
   - Task: add as many two-digits numbers as possible within 2 minutes

Experiment

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     - t_i in *tournament* incentive scheme
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2. Sort subjects into groups of three according to competitiveness level or according to their performance:
   LOWest 50%, HIGHest 50%

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   Price 1 $P_1 \in \{1, 10, 100, 1.000, 10.000\}$

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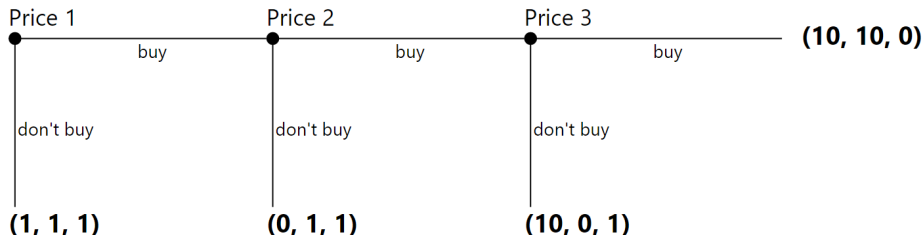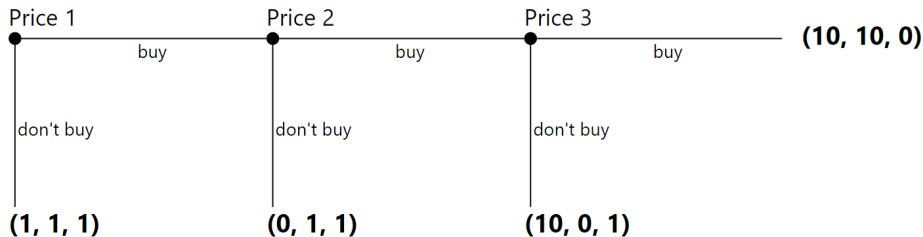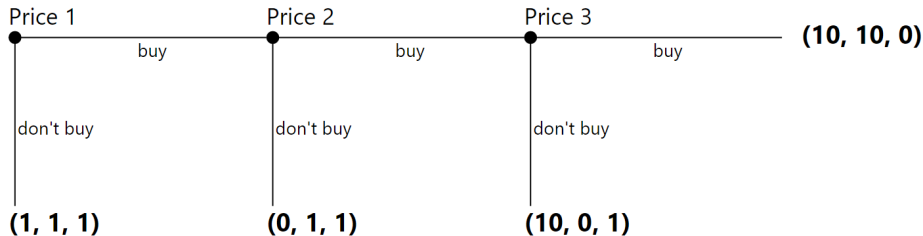
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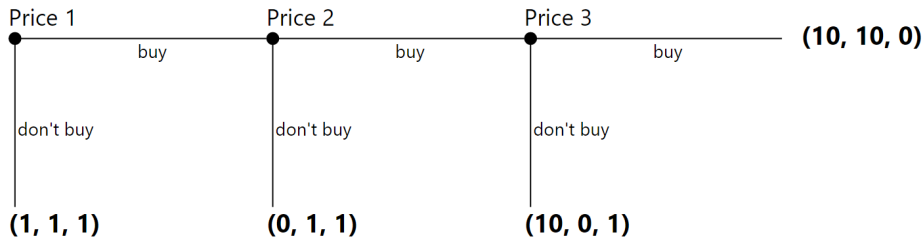
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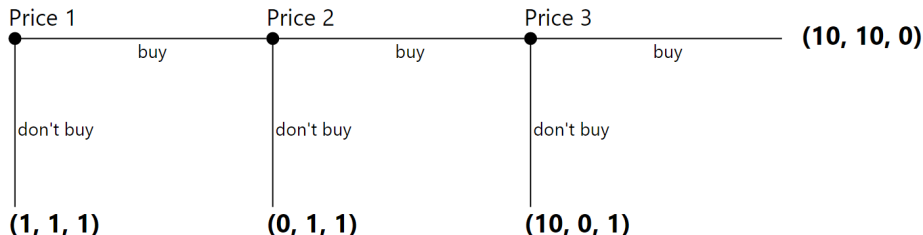$P_2 = 10 \times P_1$, $P_3 = 10 \times P_2$

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- $\rightarrow$ individual measure for propensity to speculate (Janssen et al., 2019)

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- → individual measure for propensity to speculate (Janssen et al., 2019)
- aggregate outcomes: bubble or no bubble

	Information level		
	none	LOW-group	HIGH-group
Information about others' willingness to compete	BASE	$PERF_{LOW}$	$PERF^{HIGH}$
Information about others' performance		$COMP_{LOW}$	$COMP^{HIGH}$

Experiment

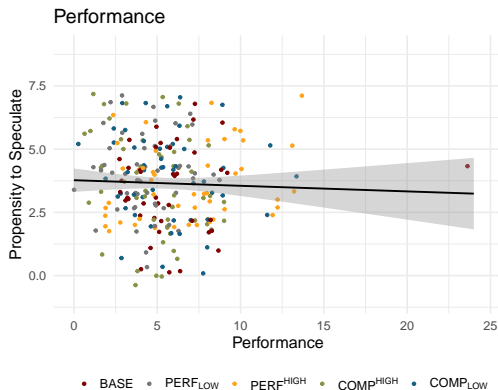246 **male** participants (so far; preregistered: 480, i.e., 96/treatment)

- BASE: 42
- PERF^{HIGH}: 51
- PERF$_{LOW}$: 51
- COMP^{HIGH}: 51
- COMP$_{LOW}$: 51

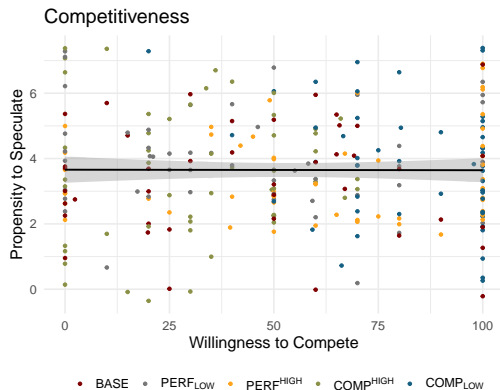Since March 2022, data collection still ongoing

Several labs: WU Vienna, Innsbruck, Graz, Brno

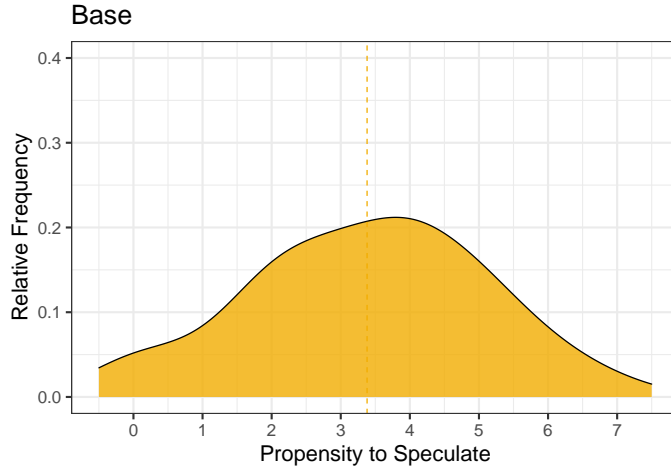Student participants, avg. age: 22.8 - 24.7

Results

Propensity to speculate across treatments

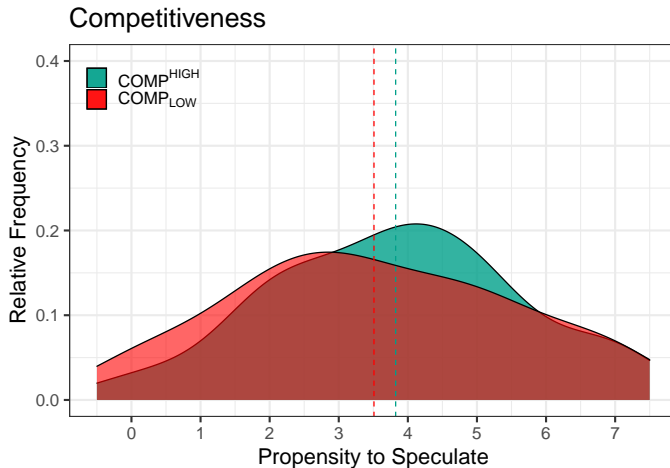| Treatment	Mean	S.d.
BASE	3.381	(1.696)
PERF^{HIGH}	3.529	(1.433)
PERF$_{LOW}$	3.961	(1.523)
COMP^{HIGH}	3.824	(1.786)
COMP$_{LOW}$	3.510	(2.014)

Results
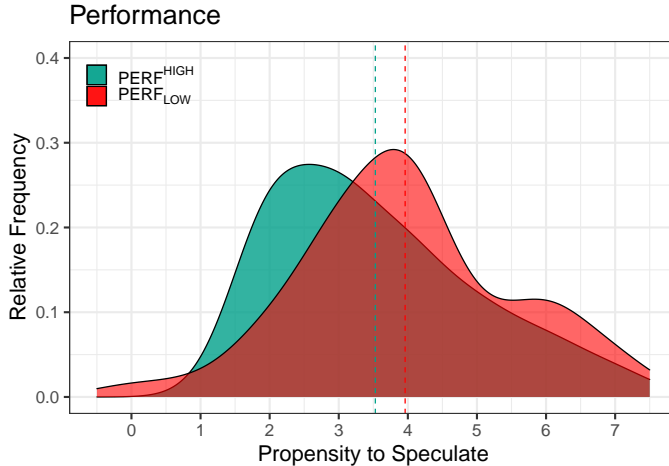
Base

Performance

t-test: $p = 0.144$
Wilcoxon ranksum test: $p = 0.075$
Competitiveness and Speculative Behavior   June 21, 2022   Slide 14

Results

t-test: $p = 0.407$
Wilcoxon ranksum test: $p = 0.401$

Results

Beliefs about *others'* performance/competitiveness across treatments

Treatment	Spec.	Beliefs(Performance)	Beliefs(Competitiveness)
BASE	3.381	4.738	4.476
PERF^{HIGH}	3.529	4.667	4.708
PERF$_{LOW}$	3.961	4.167	4.292
COMP^{HIGH}	3.824	4.267	5.000
COMP$_{LOW}$	3.510	4.800	4.533

(Preliminary) Conclusion

- *Individual* competitiveness does *not* drive speculation

- Cognitive sophistication does *not* drive speculation

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- Beliefs about competitors' cognitive sophistication *is* related to speculation

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- ... more data will tell

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Thanks!