Crypto investors – an agenda

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with (in various geometries)

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Why?

- Crypto exists
- And grows
- BTC blockchain started from scratch, now 670.71 GB

- Market cap of all crypto (10 July 2025) – 3,500,000,000,000

- Transactions

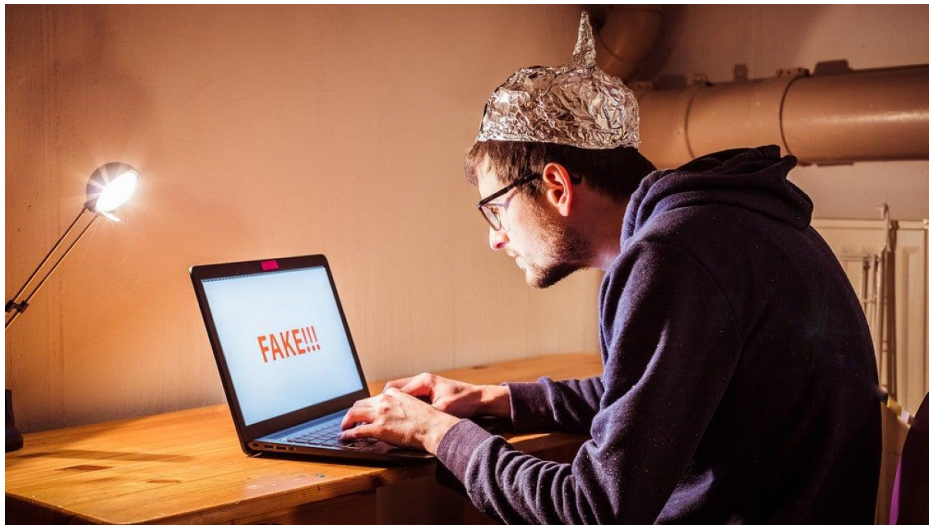
- Cryptosphere expands
- Stablecoins
  - transaction volume =1.6 trillion
- Even entering bond markets
  - BENJI (Franklin OnChain U.S. Government Money Fund)
  - over 2.5 million transactions involving more than 220,000 addresses in just two weeks

- Who are these crypto-investors?
- What do they think?
- How do they behave?

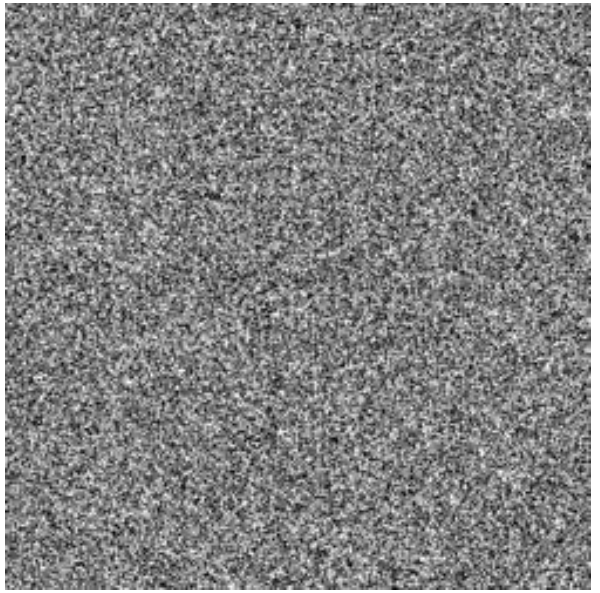
Caricatures?

- Who are these crypto-investors?

- How do they behave?



What do they think?



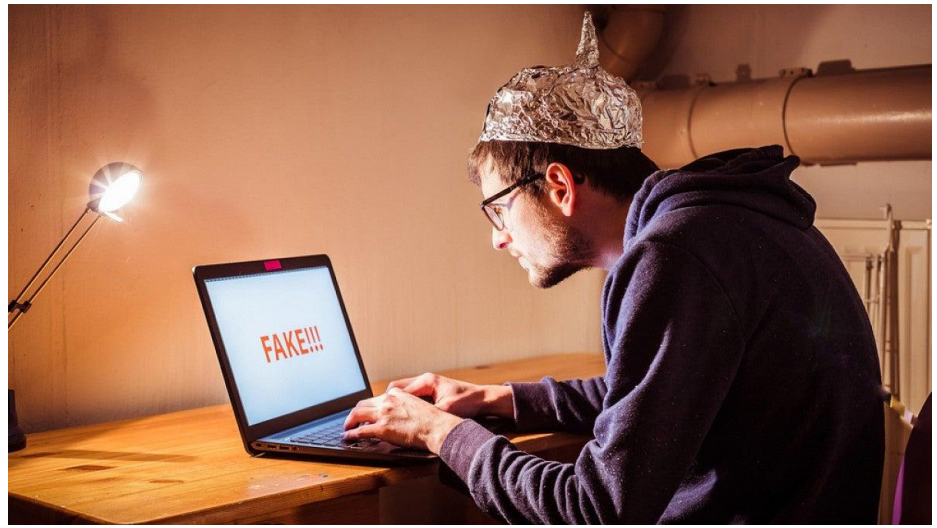
Fair comparison?

- Who are these ***stock***-investors?

- What do they think?

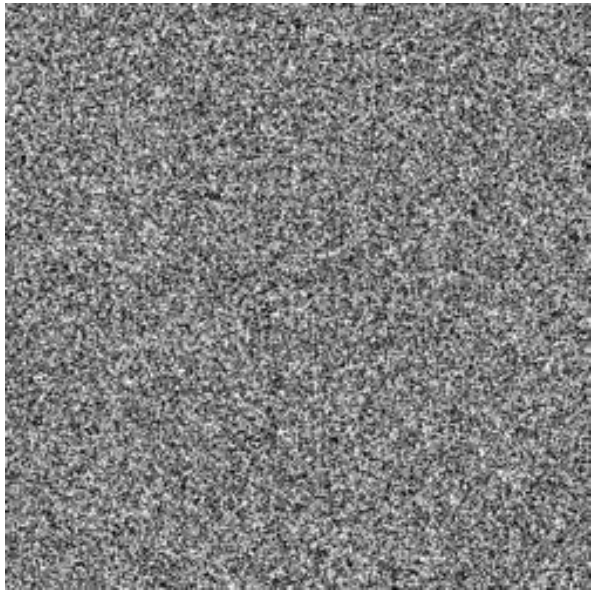
- How do they behave?

- Who are these stock-investors?



What do they think?

- How do they behave?



Existing data

- Some surveys
  - Almeida & Gonçalves (2023) provide an overview

- Several different countries, different methodologies

- Sample issues (size, selection)

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> herding behavior in the cryptocurrency market, where there are indications that the main intentions behind crypto investment are mostly affected by social influence or public sentiment; the crypto market is dominated by irrational investors who base their investment decisions on market sentiment; the uncertainty of the fundamentals leads to investors' dispersed beliefs, which in turn leads to high

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What else could it be???

- Different countries, different methodologies

- Sample issues

Existing data

- Major results

- On strategies
  - Herding
  - News effects
  - Momentum trading

- On markets
  - Efficiency (rising)
  - Volatility (high)
  - Bubbles

Our work

- 5365 participants in two waves (and counting)

- Representative samples in several countries
  - California, Texas, NY
  - UK, Germany, Greece, …

- Compare existing crypto holders to other population groups
  - Relevant economic parameters (risk, patience)
  - Financial literacy

- Ask specifically about investment strategies
- And try to measure sophistication
  - E.g. robustness to losses
- Rationality after all?

The sample

	Wave 1	Wave 2	USA	NY	CA	TX
Investor types						
Gamblers	686	887				
Stock Investors	437	465				
Crypto Holders	399	461				
Gender						
Males	44.59%	44.77%	48.5%	47.65%	48.97%	48.86%
Females	55.41%	55.23%	51.5%	52.35%	51.03%	51.14%
Age Groups						
18-24	11.07%	13.1%	11.92%	11.83%	12.29%	13.31%
25-34	17.63%	19.03%	17.36%	18.38%	18.90%	18.86%
35-44	16.29%	16.93%	16.33%	15.94%	17.28%	18.03%
45-54	17.42%	17.42%	15.83%	15.65%	16.15%	16.38%
55-64	15.59%	13.88%	16.81%	16.80%	15.80%	15.48%
65+	22%	19.65%	21.55%	21.40%	19.52%	17.94%
Age						
Mean Age	47.25	45.68	38.5	39.2	37.8	37.0
Std. Dev.	(16.74)	(16.78)	(17.2)	(17.5)	(16.9)	(16.4)
Income						
Median Monthly Income	3333.33	6250	3120.0	3450.0	3680.0	3240.0
Mean Monthly Income	6021.78	6685.64	5840.0	6275.0	6520.0	5950.0
Std. Dev.	(6625.37)	(7338.25)	(6240.0)	(6580.0)	(6790.0)	(6320.0)

Results!

Who buys crypto?

Table 1: Average Marginal Effects for Crypto Holding

	(1)	(2)	(3)
	Crypto Investment	Crypto Investment	Crypto Investment
Female	-0.141***	-0.118***	-0.111***
	(0.0174)	(0.0165)	(0.0165)
Age		-0.0764***	-0.0696***
		(0.0103)	(0.0102)
Economic Optimism		0.0451***	0.0361***
		(0.0120)	(0.0120)
Financial Literacy		0.0375**	0.0319*
		(0.0187)	(0.0184)
Risk Tolerance		0.0492***	0.0458***
		(0.0109)	(0.0107)
Perceived Investment Performance			0.0485***
			(0.0101)
Pseudo R^2	0.042	0.117	0.132
Observations	1763	1763	1763
Robust SE	✓	✓	✓

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Confident or worried about job prospects in region

Falk

Measure of savvy

Who buys crypto, by age

Table 2: Likelihood of Investing in Cryptocurrencies, by Age Group

	(1)	(2)	(3)
	18-34 years	35-54 years	55< years
Female	-1.018***	-0.985***	-0.577
	(0.224)	(0.217)	(0.354)
Economic Optimism	0.0162	0.655***	0.127
	(0.162)	(0.150)	(0.254)
Financial Literacy	0.250	0.500**	0.201
	(0.265)	(0.233)	(0.364)
Risk Tolerance	0.328**	0.323**	0.515**
	(0.144)	(0.137)	(0.223)
Perceived Investment Performance	0.440***	0.312**	0.566**
	(0.134)	(0.131)	(0.225)
Constant	-2.327***	-3.644***	-4.766***
	(0.522)	(0.520)	(0.738)
Pseudo R^2	0.087	0.118	0.060
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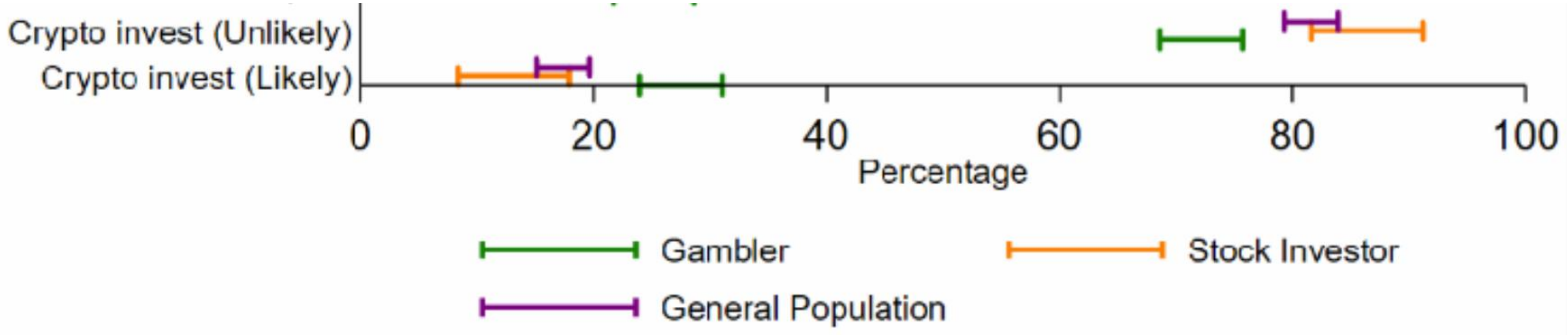
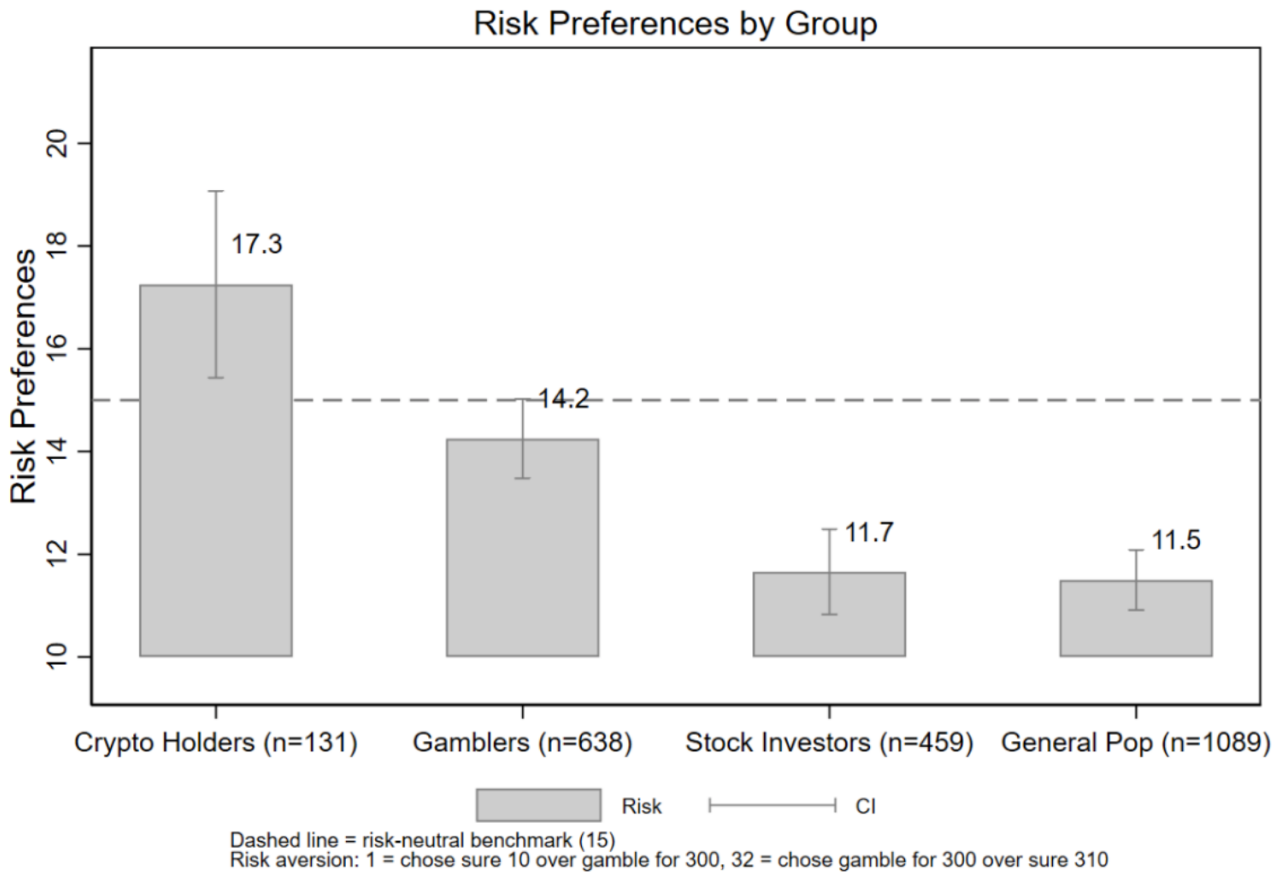
Who might buy crypto?

- How likely are you to invest in crypto in next 5 years?



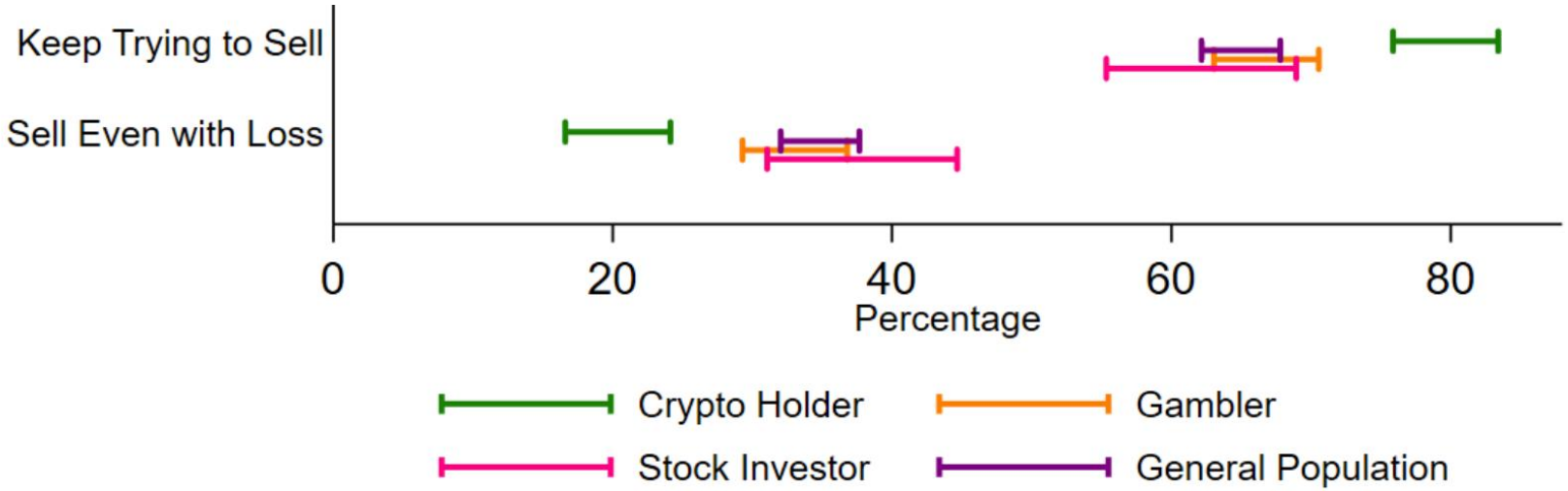
Crypto vs the rest
Risk - (Falk et al. adaptive task)



Sunk costs

You run a small shop and bought $5,000 worth of stock that isn't selling. A wholesaler offers to buy it from you for $3,000, hence at a $2,000 loss. Do you take the offer or keep trying to sell the items yourself, hoping to break even or minimize the loss?

- Very likely to keep trying to sell the items myself
- Somewhat likely to keep trying to sell the items myself
- Somewhat likely to sell to the wholesaler at a $2,000 loss
- Very likely to sell to the wholesaler at a $2,000 loss



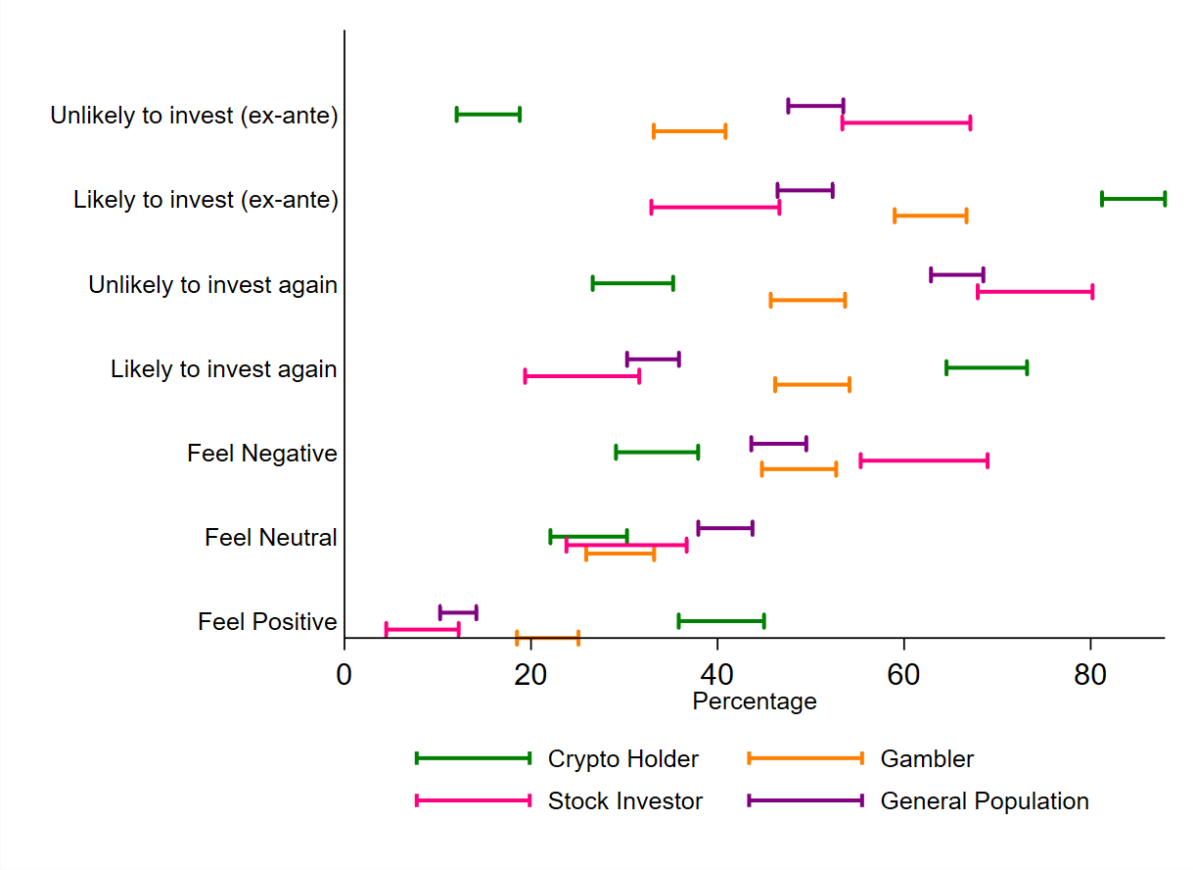
Taking good bets, and robustness to loss?

Q21. Imagine you make an investment where you have a **50%** chance of losing an amount equal to your **monthly income** and a **50%** chance of gaining **three times your monthly income**. You decide to invest, and the outcome is a **loss**.
How do you feel about this outcome?

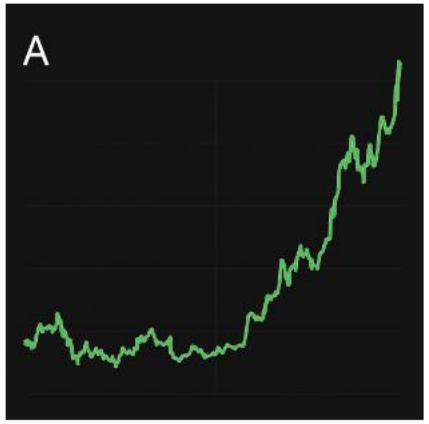
- ◯ Very positively
- ◯ Somewhat positively
- ◯ Neutral
- ◯ Somewhat negatively
- ◯ Very negatively

Q109. Would you make such investment again?

- ◯ Yes, very likely (1)
- ◯ Yes, somewhat likely (2)
- ◯ No, somewhat unlikely (3)
- ◯ No, very unlikely (4)



Investment Strategies: trajectories



When would you buy a token

Stock	9%	13%	14%
Crypto	14%	33%	17%

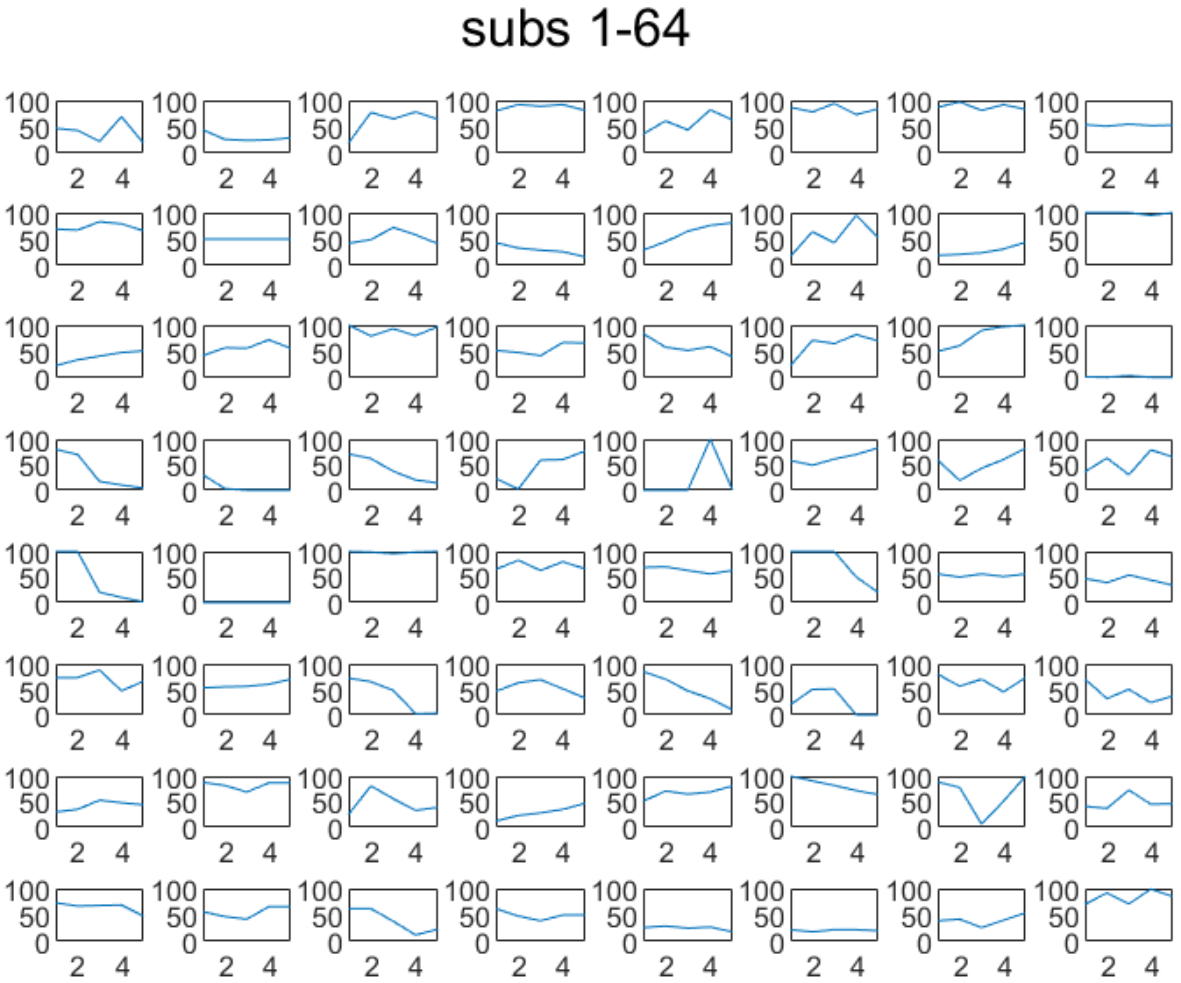
Investment Strategies – demand functions

- Consider that you have a budget of [M]. You have the opportunity to buy a token.

  A new blockchain is created by computer scientists linked with [platform] blockchain. These scientists spend [H] hours and [R] resources in preparation for this.

  We now ask you how much token you would buy at each of the prices below, keeping the rest of the money for yourself, in the original currency.

Investment Strategies – demand functions



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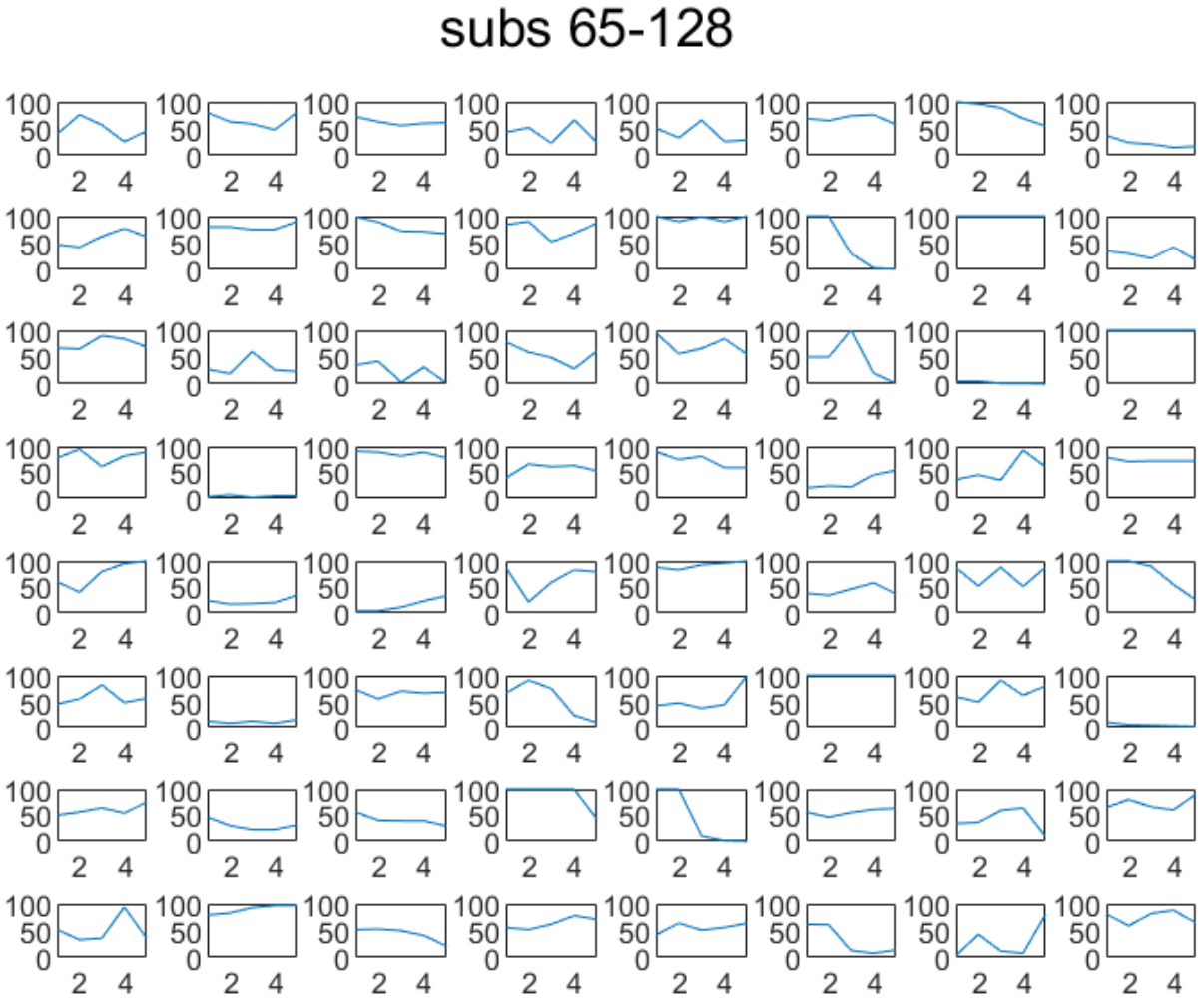

Demand function types

Unclassified	Downward sloping	Upward sloping	U shape	Inverse U
45.4918	15.3689	7.9918	14.1393	17.0082

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So at least 39% have systematically non-standard demands!

Why?

```
## No I really can't
## want now
## I am not sure
## Anything small today is something of great investment in the future
## More chances
## It’s tough to distinguish
## Is always been what is in my mind
## I want hard cash which is more reliable
## I think you have a better chance of the smaller tokens exploding
## It depends on the cost of the token
## The price
## There is no way to predict the value of the tokens, but it is ok to gamble
low amounts.
## Lower conversion rates for making initial purchases.
## Less risk more invest
## because it is more convenient and comfortable for me
```

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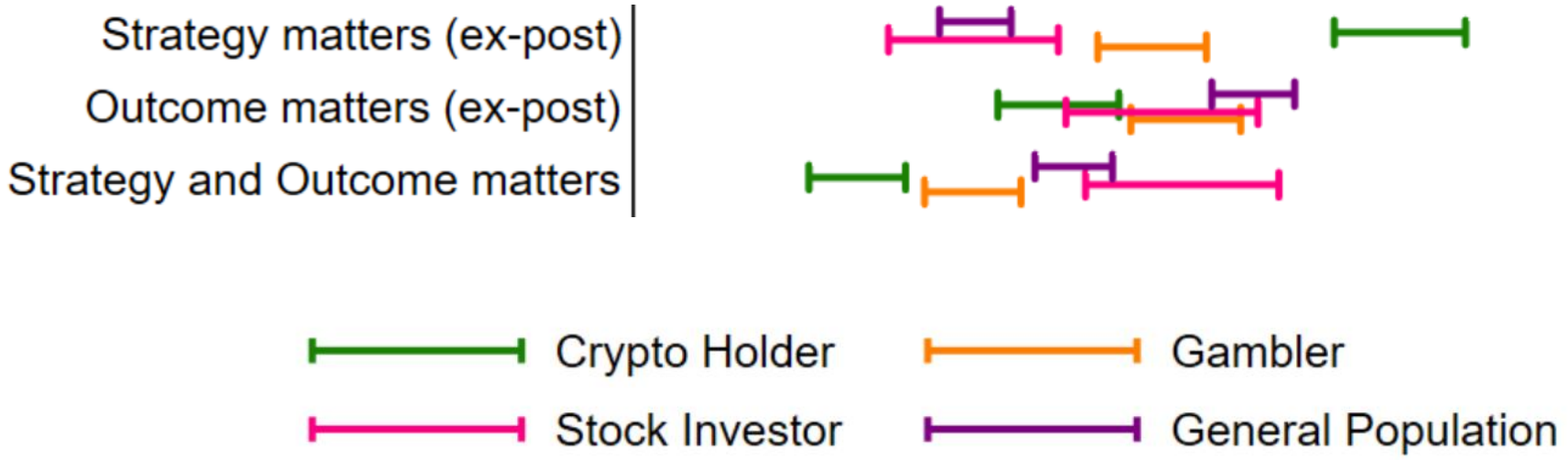
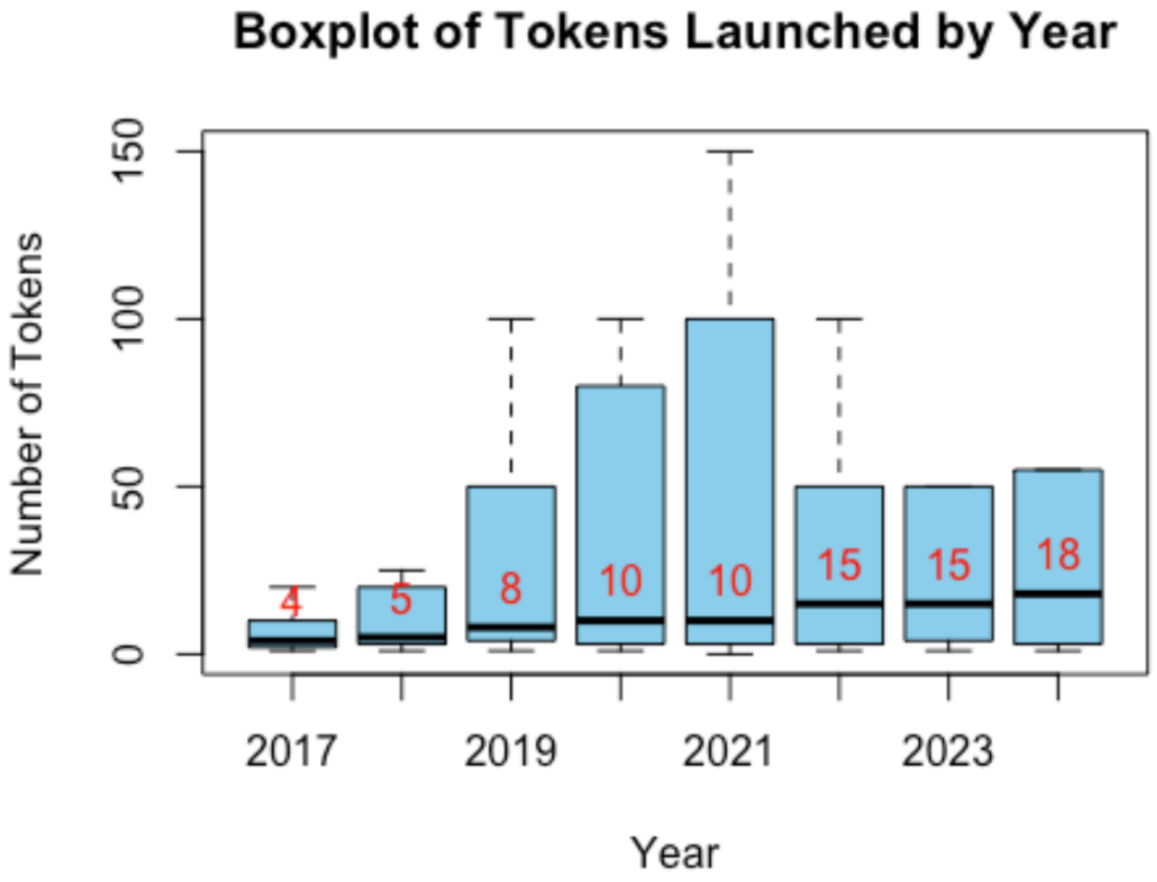
Investment Strategies: ex ante vs ex post

(perceived investment performance)

- Imagine you made an investment based on a strong strategy, but it resulted in a loss. How would you evaluate your decision?



History - quantity



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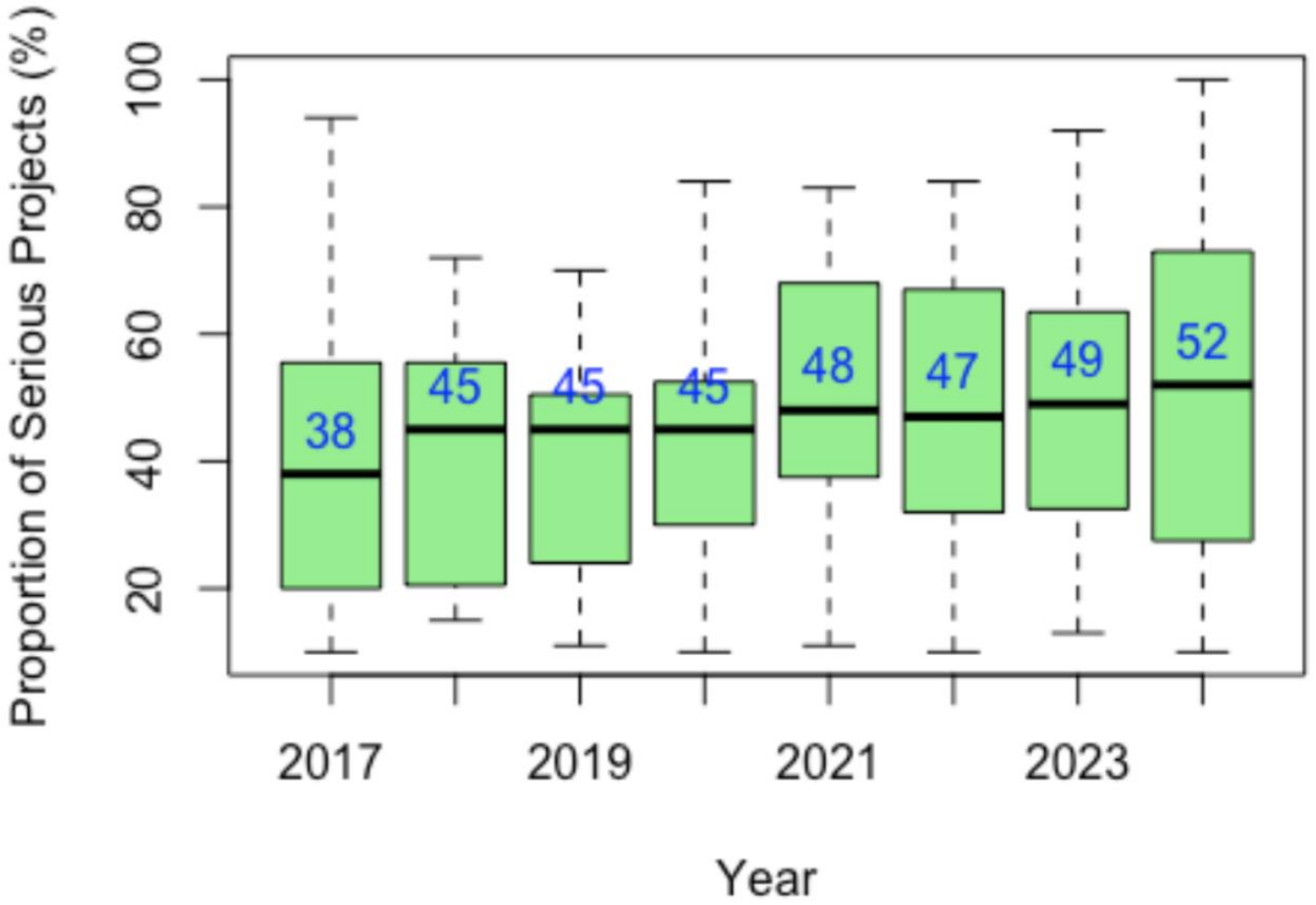


Extensions - A word on losses

- If the value of a stock falls below the purchase price, does this affect the investor's subsequent behavior? Does he seek riskier position or switch to safer? If a casino gambler loses money at the roulette table, does he get discouraged and quit gambling or *chase* his losses?

- Standard expected utility:
  - prior outcomes influence risk-taking only if there is a substantial change in wealth (Savage 1954)
  - risk preferences should be stable with respect to small and moderate losses (Rabin 2000)

- Are they?
- Implications for when and how to airdrop!

A word on losses

- If the value of a stock falls below the purchase price, does this affect the investor's subsequent behavior?

- Following a *realized* loss, individuals *avoid risk*;

if the same loss is not realized, a *paper* loss, individuals take on *greater risk* (American Economic Review, 2016)

- Individuals reinvest 83% if a forced sale results in a gain relative to the initial investment; but reinvest only 40% in the event of a loss (it should be 100%!) (Journal Of Finance, 2022)

Ego-saving savvy-investor-fallacy

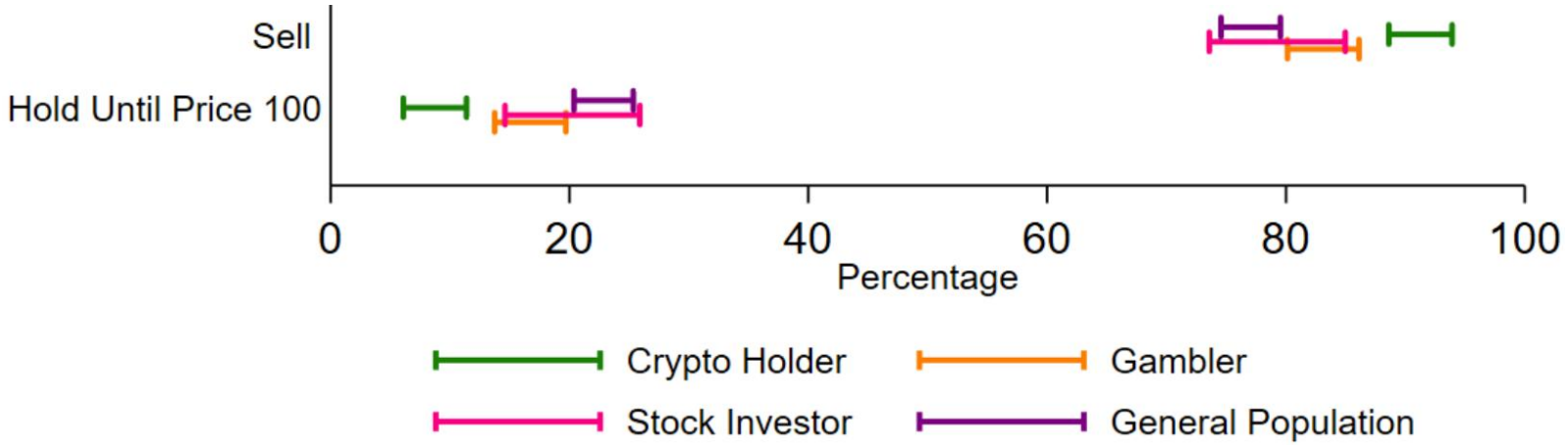
Imagine you bought an object with no use for you, for $100. The market price is now 50. You expect the price to go down to 10 soon, but you will be able to sell for 55 in exactly 3 years. You have a bank account that gives you an interest of 10% a year for the next 5 years, guaranteed. When do you sell?

a) now

b) in 1 year

c) in 3 years

d) only when the price reaches 100 again



Conclusions

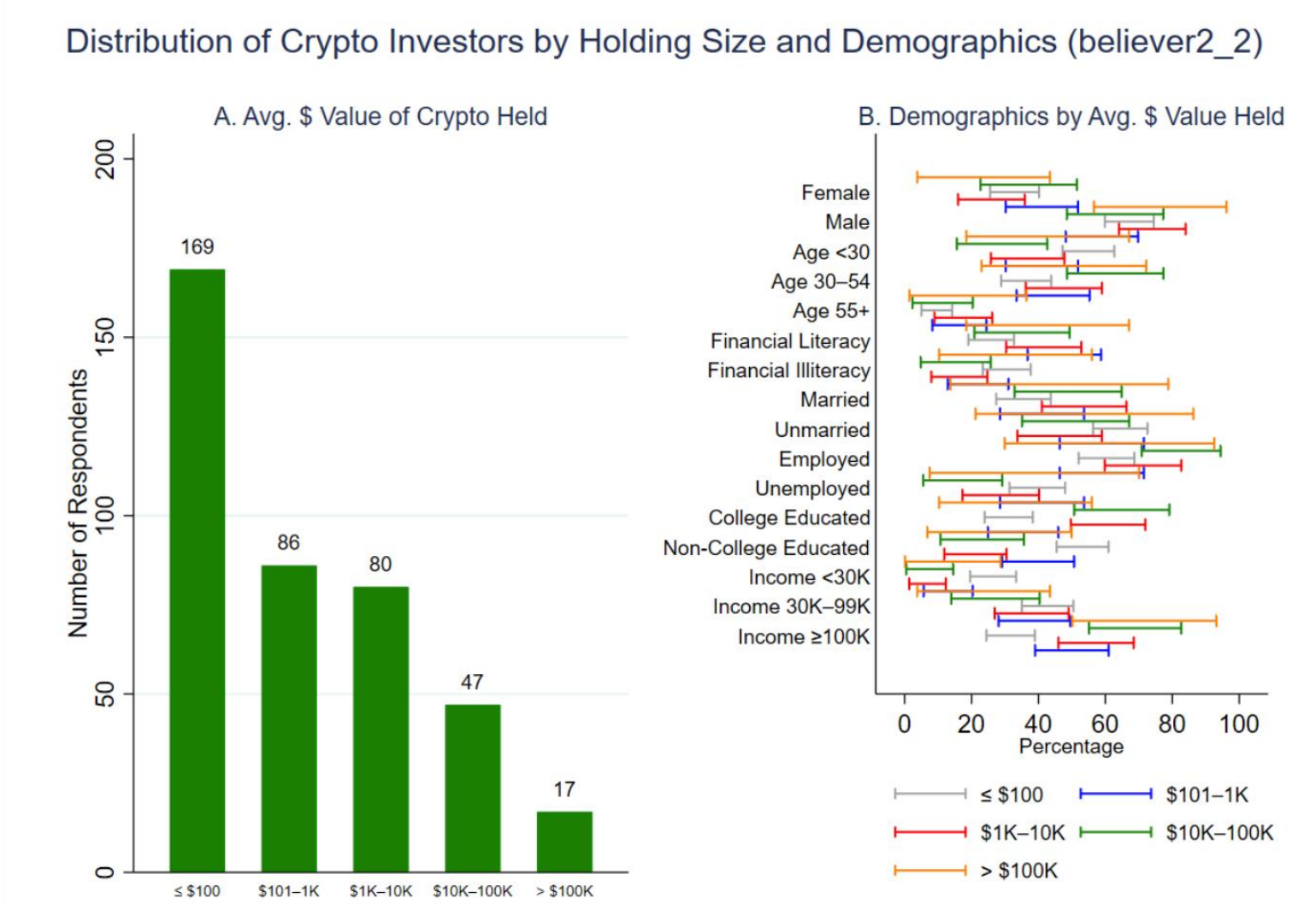
- Crypto people are different
  - Male & young
  - More risk loving
  - Dislike sunk costs
  - Strange demand functions
- But not random

- In some dimensions they look like thick-skinned, seasoned traders
  - Trading experience ameliorates biases! (e.g. List, 2003)

- Causality hard -- of course they could be different to begin with
  - As evidenced from willingness to become a crypto holder

- Extensions – plenty
  - Possibly field experiments

Appendix


Distribution of Crypto Investors by Holding Size and Demographics (believer2_2)
A. Avg. $ Value of Crypto Held
Number of Respondents
0
50
100
150
200
169
86
80
47
17
≤ $100
$101–1K
$1K–10K
$10K–100K
> $100K
B. Demographics by Avg. $ Value Held
Female
Male
Age <30
Age 30–54
Age 55+
Financial Literacy
Financial Illiteracy
Married
Unmarried
Employed
Unemployed
College Educated
Non-College Educated
Income <30K
Income 30K–99K
Income ≥100K
0
20
40
60
80
100
Percentage
≤ $100
$101–1K
$1K–10K
$10K–100K
> $100K

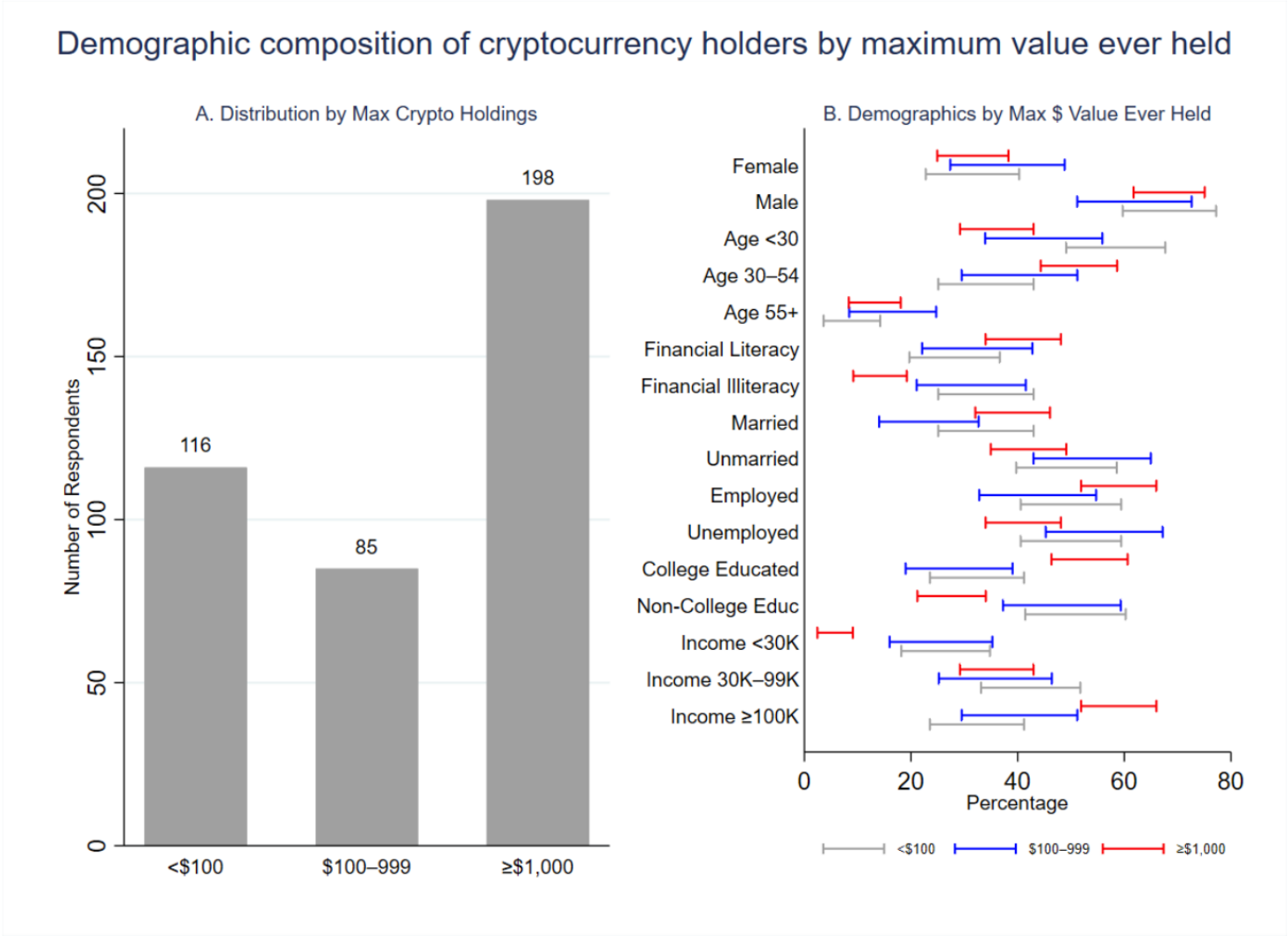


Figure 4: Demographic composition of cryptocurrency holders by maximum value ever held

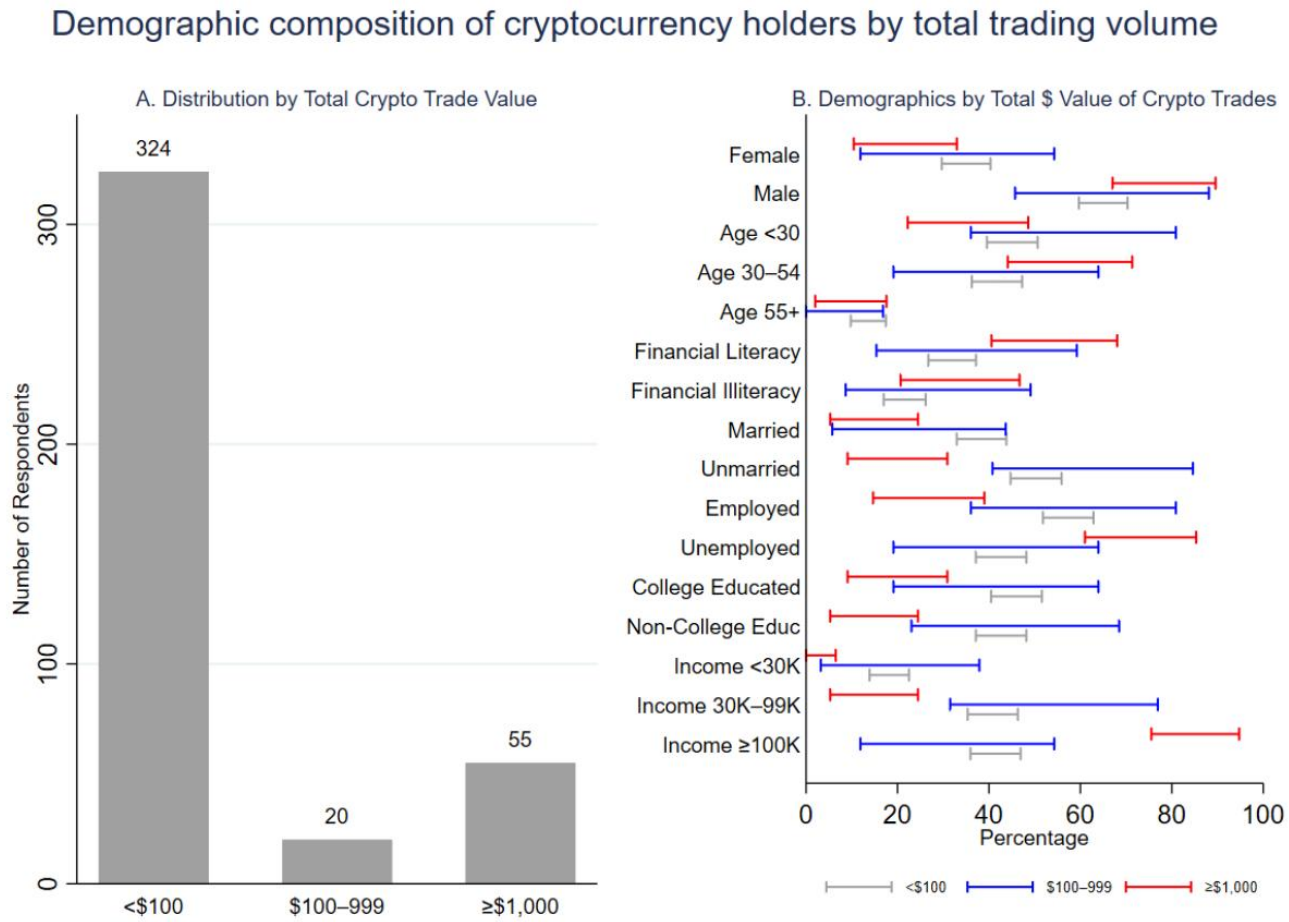


Figure 5: Demographic composition of cryptocurrency holders by total trading volume