

SUPPLEMENTARY APPENDIX, NOT FOR PUBLICATION

A Survey overview

A.1 Protest participation

Student surveys We asked students about their participation in the July 1 protest march in each year from 2016 to 2018. Literally, “Did you attend the July 1 201x March?” In 2019, we asked students whether they participated in the June 9, 2019, protest march. Responses were binary outcomes.

HKPSSD We asked respondents, “In the past 5 years, did you participate in any of the following?” Respondents then were asked to indicate whether they participated or not for each of the following events:

- Candlelight Vigil for June 4 Massacre
- 1 July Marches
- Anti-national Education
- Occupy Central Movement

Responses were converted into a binary outcome indicating participation in any of these protests.

A.2 Explanatory variables

The fundamental individual determinants of protest participation that we consider are: economic preferences, personality, cognitive ability, economic status, and background characteristics.

Economic preferences We elicit a complete profile of students’ fundamental economic preferences, covering five dimensions: (i) risk preferences; (ii) time preferences; (iii) altruism; (iv) reciprocity; and, (v) preferences for redistribution.¹ We code these so that risk tolerance, patience, reciprocity, and a preference for greater redistribution are all coded as larger numbers. Time preferences, risk preferences, and preferences for redistribution were also elicited in the HKPSSD survey.

Risk tolerance

- Please tell me, in general, how willing or unwilling you are to take risks? (0 = completely unwilling to take risks; 10 = very willing to take risks)
- Certainty equivalent from step-wise lottery choices (what would you prefer: a draw with 50 percent chance of receiving 300 HKD, and the same 50 percent chance of receiving nothing, or the amount of xxx HKD as a sure payment?)

¹Elicitation of risk preferences, time preferences, altruism, and reciprocity is based on Falk et al. (2018). We add an incentivized component based on Eckel and Grossman (2002) to their original risk preferences module (question C.1.3).

- Eckel and Grossman (2002) lottery decisions: for the following lottery options, please choose one that you like the most? [*incentivized*]

Patience

- How willing are you to give up something that is beneficial for you today in order to benefit more from that in the future? (0 = completely unwilling; 10 = very willing)
- I tend to postpone tasks even if I know it would be better to do them right away (0 = describes me perfectly; 10 = does not describe me at all)
- Patience index from a step-wise intertemporal choices (would you rather receive 100 HKD today or xxx HKD in 12 months?)

Altruism

- How willing are you to give to good causes without expecting anything in return? (0 = completely unwilling; 10 = very willing)
- Today you unexpectedly received 10,000 HKD. How much of this amount would you donate to a good cause? (value between 0 and 10,000)

Reciprocity

- When someone does me a favor I am willing to return it (0 = describes me perfectly; 10 = does not describe me at all)
- I assume that people have only the best intentions (0 = does not describe me at all; 10 = describes me perfectly)
- When a stranger helps you, would you be willing to give one of the following presents to the stranger as a thank-you gift?
- How willing are you to punish someone who treats you unfairly, even if there may be costs for you? (0 = completely unwilling; 10 = very willing)
- How willing are you to punish someone who treats others unfairly, even if there may be costs for you? (0 = completely unwilling; 10 = very willing)
- If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so (0 = describes me perfectly; 10 = does not describe me at all)

Preference for redistribution

- Average amount of money allocated to a fellow HK local partner in a series of dictator games [*incentivized*]

Personality We elicit individuals' "Big 5" personality traits (Howard et al., 1996). Our survey included 25 questions measuring (i) neuroticism; (ii) extraversion; (iii) openness; (iv) agreeableness; and, (v) conscientiousness.

Big 5 - openness

On each numerical scale that follows, indicate which point is generally more descriptive of you:

- 1 = no-nonsense; 5 = a dreamer
- 1 = practical; 5 = theoretical
- 1 = following authority; 5 = following imagination
- 1 = seek routine; 5 = seek novelty
- 1 = prefer things clear-cut; 5 = comfortable with ambiguity

Big 5 - agreeableness

On each numerical scale that follows, indicate which point is generally more descriptive of you:

- 1 = abrupt; 5 = courteous
- 1 = selfish; 5 = generous
- 1 = cold; 5 = warm
- 1 = independent; 5 = team player
- 1 = skeptical; 5 = trusting

Big 5 - conscientiousness

On each numerical scale that follows, indicate which point is generally more descriptive of you:

- 1 = messy; 5 = neat
- 1 = open-minded; 5 = decisive
- 1 = easily distracted; 5 = stay focused
- 1 = comfortable with chaos; 5 = a preference for order
- 1 = procrastinate; 5 = on time

Big 5 - neuroticism

On each numerical scale that follows, indicate which point is generally more descriptive of you:

- 1 = calm; 5 = eager
- 1 = confident; 5 = cautious
- 1 = upbeat; 5 = discouraged
- 1 = don't give a darn; 5 = easily embarrassed
- 1 = unflappable; 5 = distractible

Big 5 - extraversion

On each numerical scale that follows, indicate which point is generally more descriptive of you:

- 1 = prefer being alone; 5 = prefer being with others
- 1 = pessimistic; 5 = optimistic
- 1 = private; 5 = exhibitionist
- 1 = cool; 5 = outgoing
- 1 = thoughtful; 5 = conversational

Cognitive ability We measure cognitive ability using the Cognitive Reflection Test (Frederick, 2005).

Cognitive reflection test

- A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?
- If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?
- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

Economic status and background characteristics We measure HKUST students' economic status using a set of questions regarding their family's economic and social status. We also collect a range of individual demographic characteristics and indicators of students' childhood and household environments. Besides standard demographics (age and gender), we ask students whether they, their parents, or their grandparents were born in Hong Kong, and whether their parents currently reside in Hong Kong. To measure the degree of Hong Kong orientation (as opposed to China orientation) of students' high schools, we asked students whether their high school language of instruction was English. We also measure students' current cultural environment by asking them whether they are atheists or religious. Gender and the number of generations a respondent's family had lived in Hong Kong were also elicited in the HKPSSD survey (birth year was elicited as well, but is excluded from our comparisons, as the HKPSSD covers a very different set of birth years from the student sample, by design).

Economic status

Household economic & social status

- During the past 12 months, what's the average monthly income of your family?
- How many properties in HK do your parents currently own in total?
- Father's highest educational attainment is above high school?

- Mother's highest educational attainment is above high school?

Demographic characteristics

- Gender (0 = female; 1 = male)
- Birth year

HK-oriented childhood environment

- Generations since family migrated to HK (1 = self-migrated; 4 = great grandparents migrated)
- Attended HK high school using English as language of instruction?

Religiosity

- Religiosity (0 = atheist; 1 = religious)

A.3 Summary statistics

Table A.1: Summary statistics for HKUST sample (I): Economic preferences

Variable	Minimum	Maximum	Mean	SD
Economic preferences				
<i>Risk tolerance</i>				
Willingness to take risks	0	10	5.17	2.10
Choose the lottery you like most	1	5	3.23	1.48
Risk preference: certainty equivalent	1	32	11.70	6.87
<i>Patience</i>				
Willingness to give up sth. beneficial today to benefit more in the future	0	10	6.45	1.80
Tendency to procrastinate	0	10	5.17	2.34
Time preference: future equivalent	1	32	19.00	11.46
<i>Altruism</i>				
Willingness to give to good causes without expecting anything in return	0	10	5.95	1.76
Donation amount (Today you unexpectedly received HKD 10,000...)	0	10000	2136.79	2372.37
<i>Reciprocity</i>				
Willingness to punish s.o. who treats you unfairly	0	10	5.35	2.19
Willingness to punish s.o. who treats others unfairly	0	10	4.85	2.02
When s.o. does me a favor, I am willing to return it	0	10	7.54	1.59
When I am treated very unjustly, I will take revenge at the first occasion	0	10	4.77	2.19
I assume that people have only the best intentions	0	10	5.01	2.04
Do you give one of the presents to the stranger as a 'thank-you'-gift?	1	7	4.12	1.77
<i>Preference for redistribution</i>				
Avg. passing in equity-efficiency game to partner from Hong Kong	0	1	0.32	0.19

Notes: Table presents summary statistics for HKUST student sample. N = 3101.

Table A.2: Summary statistics for HKUST sample (II): Personality

Variable	Minimum	Maximum	Mean	SD
Personality				
<i>Neuroticism</i>				
Big 5 - Eager	1	5	2.90	1.05
Big 5 - Cautious	1	5	2.98	1.00
Big 5 - Discouraged	1	5	2.96	0.92
Big 5 - Easily embarrassed	1	5	3.22	1.11
Big 5 - Distractible	1	5	3.04	1.04
<i>Extraversion</i>				
Big 5 - Prefer being with others	1	5	2.92	1.09
Big 5 - Optimistic	1	5	3.01	1.03
Big 5 - Exhibitionist	1	5	2.80	1.07
Big 5 - Outgoing	1	5	3.12	1.01
Big 5 - Conversational	1	5	3.01	1.02
<i>Openness</i>				
Big 5 - Dreamer	1	5	2.99	1.08
Big 5 - Theoretical	1	5	3.00	0.93
Big 5 - Following Imagination	1	5	2.95	0.92
Big 5 - Seek novelty	1	5	3.14	1.04
Big 5 - Comfortable with ambiguity	1	5	2.77	1.07
<i>Agreeableness</i>				
Big 5 - Courteous	1	5	3.38	1.13
Big 5 - Generous	1	5	3.01	0.91
Big 5 - Warm	1	5	3.04	0.93
Big 5 - Team player	1	5	3.05	1.01
Big 5 - Trusting	1	5	3.24	1.05
<i>Conscientiousness</i>				
Big 5 - Neat	1	5	3.19	1.02
Big 5 - Decisive	1	5	2.85	1.04
Big 5 - Stay focused	1	5	2.96	1.02
Big 5 - Preference for order	1	5	3.26	1.10
Big 5 - On time	1	5	3.23	1.16
<i>Cognitive ability</i>				
Quiz: Bat question correctly answered	0	1	0.29	0.45
Quiz: Lily question correctly answered	0	1	0.63	0.48
Quiz: Widget question correctly answered	0	1	0.71	0.45

Notes: Table presents summary statistics for HKUST student sample. N = 3101.

Table A.3: Summary statistics for HKUST sample (III): Demographics

Variable	Minimum	Maximum	Mean	SD
Demographics				
<i>HH economic and social status</i>				
Average monthly income of household during the last 12 months - imputed	500	62500	29368.30	17447.47
Parents' housing: How many properties owned in total?	0	6	0.81	1.00
Father's educational attainment above high school	0	1	0.30	0.46
Mother's educational attainment above high school	0	1	0.27	0.45
<i>Gender</i>				
Gender (0 = female, 1 = male)	0	1	0.54	0.50
<i>Birth year</i>				
Birth year	1987	2001	1997.13	1.69
<i>HK-oriented childhood environment</i>				
Generation in HK (1 = self, 2 = father, 3 = grandfather (father's side), 4 = earlier)	1	4	2.62	0.89
Language at high school was English (0 = no, 1 = yes)	0	1	0.81	0.39
<i>Religiosity</i>				
Not religious (0 = religious, 1 = not religious)	0	1	0.81	0.39

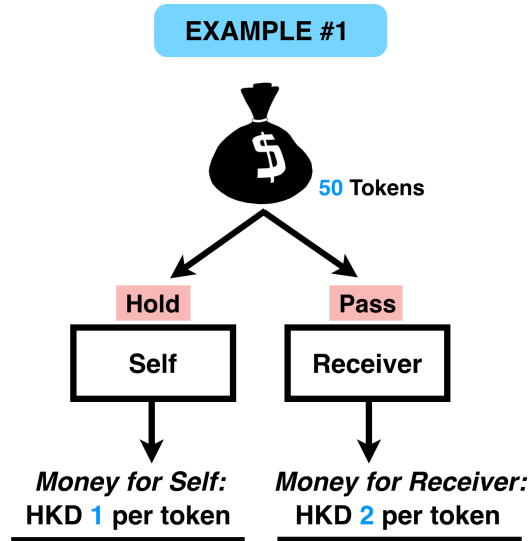
Notes: Table presents summary statistics for HKUST student sample. N = 3101.

Table A.4: Summary statistics for HKPSSD sample

Variable	Minimum	Maximum	Mean	SD	N
Economic preferences					
<i>Risk tolerance</i>					
Willingness to take risks	0	10	5.18	2.00	2627
Risk preference: certainty equivalent	1	32	13.02	6.96	2627
<i>Patience</i>					
Willingness to give up sth. beneficial today to benefit more in the future	0	10	5.07	1.99	2627
<i>Preference for redistribution</i>					
Avg. passing in equity-efficiency game	0	0.96	0.32	0.19	327
Demographics					
Gender (0 = female, 1 = male)	0	1	0.51	0.50	2627
Generation in HK (1 = self, 2 = father, 3 = grandfather (father's side), 4 = earlier)	1	4	2.32	0.66	2627

Notes: Table presents summary statistics for HKPSSD sample.

B Dictator game instructions



Panel A

Divide 20 tokens:

Hold ___ @ HKD 1 per token; and **Pass** ___ @ HKD 3 per token.

How many tokens do you want to **hold** for yourself?

Divide 30 tokens:

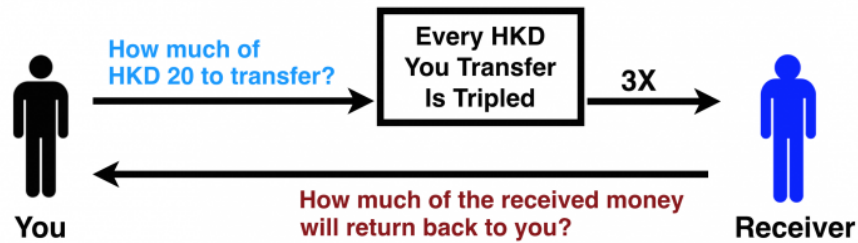
Hold ___ @ HKD 2 per token; and **Pass** ___ @ HKD 1 per token.

How many tokens do you want to **hold** for yourself?



Panel B

Figure B.1: Instructions and actual interface for allocation decisions in the modified dictator game.



At the beginning of the component, you will receive HKD 20.

You are asked to decide whether you wish to **transfer** any amount of the HKD 20 to the Receiver assigned to you; and if so, how much. You will be able to **keep** the amount that you decide **not** to transfer to the Receiver.

You may also **receive money back from the Receiver**, as follows: We will **triple (3x)** the amount you transfer and give it to the Receiver; that is, for every HKD 1 that you transfer, the Receiver will receive HKD 3. In a few days time, we will ask the Receiver to decide if he/she wants to return any of the money that he/she received (i.e. 3x what you transferred) to you; and if so, how much. The amount he/she sent back to you will **not** be tripled.

Panel A

You are given **HKD 20**, and you can **transfer** any amount to the Receiver assigned to you.

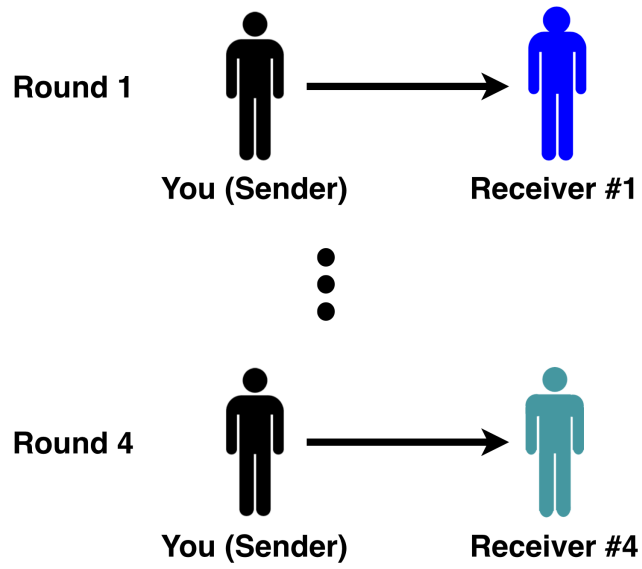
We will **triple (3x)** the amount you transfer and give it to the Receiver.

In a few days time, we will ask the Receiver to decide if $\{e://Field/Heshe_1\}$ wants to **return** any of the money that $\{e://Field/Heshe_1\}$ received (i.e. 3x what you transfer) back to you.

Now, please tell us, how much of the **HKD 20** do you wish to **transfer to the Receiver**?

Panel B

Figure B.2: Instructions and actual interface for allocation decisions in the trust game.



Panel A

We will now assign you the **1st** Receiver.

The **1st Receiver** assigned to you has the following profile:

Age: **19**
Gender: **Male**
Hometown: **Hong Kong (香港)**

Panel B

Figure B.3: Instructions and actual interface for randomly matched recipients in the lab games.

Additional References for Supplementary Appendix

Eckel, Catherine C. and Philip J. Grossman (2002). "Sex Differences and Statistical Stereotyping in Attitudes Toward Financial Risk," *Evolution and Human Behavior*, 23(4), pp. 281–295.

Falk, Armin, Anke Becker, Thomas J. Dohmen, Benjamin Enke, David Huffman, and Uwe Sunde (2018). "Global Evidence on Economic Preferences," *Quarterly Journal of Economics*, 133(4), pp. 1645–1692.

Fisman, Raymond, Shachar Kariv, and Daniel Markovits (2007). "Individual Preferences for Giving," *American Economic Review*, December 2007, 97(5), pp. 1858–1876.

Frederick, Shane (2005). "Cognitive Reflection and Decision Making," *Journal of Economic Perspectives*, 19(4), pp. 25–42.

Howard, P.J., P.L. Medina, and J.M. Howard (1996). "The Big-Five Locator: A Quick Assessment Tool for Consultants and Trainers," in J.W. Pfeiffer, ed., *The 1996 Annual: Volume 1, Training*, San Diego, CA: Pfeiffer and Company.