Supplementary Materials to

"A Selected Literature Review of the Effect of Covid-19 on Preferences"

Submitted to: Journal of the Economic Science Association

Hamza Umer

Hitotsubashi Institute for Advanced Study (HIAS), Hitotsubashi University, Tokyo, Japan Institute of Economic Research (IER), Hitotsubashi University, Tokyo, Japan

a223315a@r.hit-u.ac.jp

Items

Appendix A: Summary of Studies on Covid-19 and Altruism

Appendix B: Summary of Studies on Covid-19 and Cooperation

Appendix C: Summary of Studies on Covid-19 and Trust

Appendix D: Summary of Studies on Covid-19 and Inequity Aversion

Appendix E: Summary of Studies on Covid-19 and Risk Taking

Appendix F: Summary of Studies on Covid-19 and Patience / Time Discounting

Study & Country	Observations & Statistical Method	Nature of Data Collection / # of Waves	Games & Stakes	Subject Pool	Main Question	Main Findings
		Pan	el A: Incentiviz	ed Decisions		
Aksoy et al. (2021) USA	N = 1995 OLS Regressions	Pre-and- post pandemic	DG with fellow participant Stakes = 0.17\$ ~ 0.5\$	AMT workers	Experiments to perform a pre- and-post pandemic comparison ¹	Post-pandemic sample shows higher altruism than pre- pandemic sample
Grimalda et al. (2021) USA & Italy	N (USA) = 932; N (Italy) = 723 Probit & Tobit Models	Post pandemic	DG with charity recipient Stakes = USA 5\$ Italy = 4 Euros	General Population	Experiment to examine the effect of personal & country level exposure to the Covid-19	 Personal exposure to the Covid-19 increases probability of donating as well as donations Country level exposure has no effect on both probability of donating or donations
Shachat et al. (2021) China	N = 304 OLS Regressions	Pre-and- post lockdown ²	DG with student recipient Stakes = 5 RMB	Students	Experiments to examine the impact of lockdown	Post lockdown altruism increased as compared to pre-lockdown

Appendix A: Summary of Studies on Covid-19 and Altruism

¹ Aksoy et al. (2021) performed experiments with AMT workers after the start of pandemic. The authors compare their observations with data collected pre-pandemic by Snowberg and Yariv (2021) also with AMT workers. Aksoy et al. (2021) replicate the basic experimental procedures and games used by Snowberg and Yariv (2021) and therefore, preferences in both studies elicited through similar tools are used to perform a pre and post-pandemic comparison. ² Shachat et al. (2021) also compare preferences elicited after the start of the pandemic in five waves. The evidence suggests that a lower trust and higher risk aversion in gains is observed wave 3 (base category) compared to wave 2.

These effects however phase out till wave 5.

Adena and Harke (2022) UK	N = 3525 OLS Regression	Post pandemic	DG with charity recipient Stakes = 1 Pound	General Population	Experiments to examine the impact of Covid- 19 versus neutral priming. - Examine the impact of local virus cases & Covid-19 news	 Higher altruism in the Covid-19 than neutral frame Number of local virus cases and news articles about the Covid- 19 have positive effect on donations
Brañas- Garza et al. (2022) Spain	N = 969 OLS Regressions	Post pandemic - Six waves of experiments	- DG with Charity Recipient Stakes = 100 Euros - Expectations about others' donations	General population	Experiments to examine temporal stability amid increase in Covid-19 severity	- Own and expected donations decreased in the later experiments
Lohmann et al. (2023) China	N = 1044 DID Analysis	Pre and post pandemic Balanced panel data	DG game with student recipient Stakes = 10 Yuan	Students	Experiments to examine the impact of exposure to city virus severity on behavior	Insignificant impact of city level severity on altruism
		Panel B: Uni	ncentivized/Hy	pothetical D	ecisions	
Lotti (2020) USA	N = 1255 OLS, Logit, Tobit and Quintile Regressions	-Post pandemic -Eight waves of experiments	DG with four recipients (anonymous person, government, relative and neighbor)	AMT workers	Experiments to examine temporal stability	Altruism increased for all recipients in later compared to former experiments

Alsharawy et al. (2021) USA	N = 1484 Linear Fixed Effects Regressions	Post pandemic -Three survey waves	 DG with good causes as recipient Willingness to give to good causes 	AMT workers	Surveys to examine the effect of Covid- 19 fear and local death rate	Covid-19 fear & local death rate increase altruism Altruism across waves does not differ significantly
Bogliacino et al. (2021) Italy, Spain, UK	N = 4980 OLS Regressions	Post pandemic	 DG with anonymous recipient Willingness to share with others 	General Population	Survey to examine the effect of labor, health, stressful events & mental shocks	No conclusive significant effect of the negative Covid-19 labor, health, stressful events or mental health shocks on altruism
Cappelen et al. (2021) USA	N = 8116 OLS Regressions	Post pandemic	Self-versus society tradeoff	General Population	Experiment to examine the effect of the Covid-19 reminder versus no reminder	Preference for society increased in the treatment as compared to the control group
Heap et al. (2021) USA	N = 2151 Fixed Effects Regression	Post pandemic - Unbalanced Panel surveys (baseline & follow up)	DG with charity recipient	General Population	Unbalanced panel surveys to examine temporal stability	No change across baseline and follow up waves
Kiss and Keller (2022) Hungary	N = 426 Linear Probability Model	Post pandemic - Two waves	DG with student recipient	School children	Experiments to examine temporal stability	No change across the two waves
Umer (2023) Netherlands	N = 4500 for Fixed Effects N = 2744 for DID	Pre and post pandemic	Proportion of donors giving to noble causes	General population	Surveys to examine temporal stability &	Unchanged across time (FE) and no causal impact of

Fixed Effect	ts - Balanced	in the last	causal impact of	virus contraction
& DID	panel data	year	virus infection	(DID)
Analysis				(212)

Note: DG = Dictator Game. AMT = Amazon Mechanical Turk. Hypothetical = Tasks / questions that do not have real monetary consequences. Post-pandemic refers to the time after the start of the Covid-19. RMB = Renminbi (Chinese currency). DID = Difference in differences.

Study & Country	Observations & Statistical Method	Nature of Data Collection / # of Waves	Games / Measures & Stakes	Subject Pool	Main Question	Main Findings		
Panel A: Incentivized Decisions								
Buso et al. (2020)	N = 468	Post	PG	Studente	Experiments to examine the	Cooperation decreased if lockdown		
Italy	Two-nested level model	pandemic	Stakes = 25 Euros	25 Students	impact of length of lockdown experienced	experienced for more than 6 weeks		
Aksoy et al. (2021)	N = 1995	Pre-and-	PD	AMT	Experiments to perform a pre-	Post-pandemic higher		
USA	OLS Regressions	post pandemic	Stakes = 0.05\$ ~ 0.2\$	workers	and-post pandemic comparison	cooperation than pre- pandemic		
Shachat et al. (2021) China	N = 593 for SHG N = 594 for PD Logistic Regressions	Pre and post lockdown	SHG & PD Stakes (SHG) = 0 ~ 8 RMB Stakes (PD)	Students	Experiments to examine the impact of lockdown	Post-lockdown cooperation decreased in SHG increased in PD than pre-lockdown		
			= 0 ~ 9 RMB					
	Р	anel B: Unin	centivized/Hypo	thetical Deci	sions			
Lohmann et al. (2023)	N = 1044	Pre and post pandemic	PG	Students	Experiments to examine the impact of	Insignificant impact of city		
China	DID Analysis	Balanced panel data		Students	exposure to city virus severity on behavior	on cooperation		
Note: $PG = Pub$	lic Goods Game, Pl	D = Prisoner's	Dilemma, SHG	= Stag Hunt (Game. Post-pandemi	c refers to the time		

Appendix B: Summary of Studies on Covid-19 and Cooperation

after the start of the Covid-19. RMB = Renminbi (Chinese currency). DID = Difference in differences.

Study & Country	Observations & Statistical Method	Nature of Data Collection / # of Wayas	Games / Measures & Stakes	Subject Pool	Main Question	Main Findings		
Panel A: Incentivized Decisions								
Li et al. (2020) China	N = 999 Probit Regressions	Pre and post pandemic	TG Stakes = 0 ~ 20 RMB	Students	Experiments to perform a pre-and-post pandemic comparison	Post-pandemic trust decreased while trustworthiness increased compared to pre-pandemic		
Shachat et al. (2021) China	N = 153 OLS Regressions	Pre-and- post lockdown	TG Stakes = 8 RMB	Students	Experiments to examine the impact of lockdown	As compared to pre-lockdown, trust increased post-lockdown		
Panel B: Unincentivized/Hypothetical Decisions								
Brück et al. (2020) Argentina, Australia, Finland, Germany, India, Portugal, Spain, UK, US	N = 6067 ~ 7811 (depending on the nine regressions) OLS Regressions	Post pandemic	- Trust in family & neighbors (Interpersonal trust) - Trust in institutions	General Population	Experiment to test the effect of direct, indirect exposure to the Covid-19 & job loss	 Direct exposure has no effect on trust Indirect exposure & job loss reduce interpersonal & institutional trust 		
Daniele et al. (2020) Germany, Italy, Netherlands, Spain	N = 8235 OLS Regressions	Post pandemic	Trust in politicians, government, police, media, science, EU and general trust	General population	Experiment to examine the effect of the Covid-19 priming	 Priming negatively influences social trust, trust in media, politicians & EU Priming has no effect on trust in government Priming has positive effect 		

Appendix C: Summary of Studies on Covid-19 and Trust

						on trust in
						police and
						science
	For cross-				- Surveys to	- Infected trust
	sectional				examine	more than
	analysis, N				temporal	uninfected
	varies from				stability and	
	1049 ~ 1163	Devi			the effect of	- Health &
	depending on	Post			virus	livelihood
Contents	the three	pandemic	Trust (i-e- expect		infection	priming
Gambetta	waves	Thurse	neighbor, police			increases trust
		- Inree	or stranger to		- Examine the	
(2022)	For panel	waves of	return wallet. 1=		effect of	- Solidarity
Tc . 1	analysis, N =	surveys	Not all likely; 4		priming	priming has no
Italy	3000 ~ 3006	(halanaad	= Very likely) ³		about health,	effect
		(Dataliced			livelihood	
	OLS &	pallel data)			risks of the	- Covid-19
	Within-				Covid-19 and	infections in
	Between				solidarity	one's network
	Random				(first wave	have no effect
	Effects Model				only)	on trust
Sibley et al.	N = 2006		Institutional trust		Surveys to	Post lockdown
(2020)		Pre-and-	(police,	General	examine the	institutional
	MANOVA &	post	politicians &	population	impact of	trust increased
New Zealand	Paired t-tests	lockdown	science)		lockdown	lookdown
					Sumou to	IOCKUOWII
					Survey to	No offect of
					immost of	-INO effect of
Bogliacino et	N = 4080				labor boalth	stressful event
al. (2021)	N = 4900	Post	Trust question	Conoral	strossful	shocks on trust
	OI S	rost	(people have		sucssiui	shocks on trust.
Italy, Spain,	Degrassions	pandenne	best intentions)	population	montal health	Montal boalth
UK	Regressions				shocks	shock reduces
					caused by	trust
					nandemic	uust
					pundenne	Trust in
	Two different	Post				authorities and
	samples are	pandemic	- Trust in		Surveys to	general trust
Esaiasson et	used		government		examine	increased in the
al. (2021)	N1 = 7206 &	- Two	authorities	General	temporal	follow up
	$N_2 = 1415$ for	survey	uuuionues	population	stability	survey in
Sweden	institutional	waves	- General trust		during the	comparison to
	trust	(balanced	Concrui trust		pandemic	the baseline
	u uot	panel data)				survey
						3011109

³ The authors also examine general trust and trust in Italians. However, the main findings are related to trust with regards to lost wallet question and hence it is reported here.

	N1 = 7184 & N2 = 1407 for general trust					
	Paired t-test & Fixed Effects Regressions					
Heap et al.	N = 2079	Post pandemic	- General Trust		Surveys to examine temporal stability & to	- No change across baseline and follow up waves
(2021) USA	Fixed Effects Regression	waves of surveys (baseline and follow up)	- Trust in government	General population	study the impact of perceived economic vulnerability	- Perceived economic vulnerability reduces trust in government
Bellani et al. (2022) Germany	N = 6176 for unbalanced panel N = 4932 for balanced panel Fixed Effects Regressions	Post pandemic - Three waves of surveys (balanced & unbalanced panels)	General Trust question and Institutional Trust questions	General population	Surveys to examine effect of county level Covid-19 infections	 Insignificant effect of Covid-19 infections on general trust Negative effect of Covid-19 infections on institutional trust
Umer (2023) Netherlands	N = 4396 for Fixed Effects N = 2744 for DID Fixed Effects & DID	Pre and post pandemic - Balanced panel data	General Trust question	General population	Surveys to examine temporal stability & causal impact of virus infection	Unchanged across time (FE) and no causal impact of virus contraction on trust (DID)
Lohmann et al. (2023) China	N = 1044 DID Analysis	Pre and post pandemic Balanced panel data	TG	Students	Experiments to examine the impact of exposure to city virus severity on behavior	Insignificant impact of city level severity on trust

Note: TG = Trust Game. Unincentivized tasks / questions do not have real monetary consequences. Post-pandemic refers to the time after the start of the Covid-19. RMB = Renminbi (Chinese currency). DID = Difference in differences.

Appendix D: Summary of Studies on Covid-19 and Inequity Aversion

Study & Country	Observations & Statistical Method	Nature of Data Collection / # of Waves	Games / Measures	Subject Pool	Main Question	Main Findings
Cappelen et al. (2021) USA	N = 8116 OLS Regressions	Post pandemic	Acceptance of inequalities due to luck	General population	Experiment to examine the impact of the Covid-19 reminder (treatment group) as compared to the control group	Treatment group became more accepting of the inequalities caused by luck
Bellani et al. (2022) Germany	N = 6176 for unbalanced panel N = 4932 for balanced panel Fixed Effects Regressions	Post pandemic - Three waves of surveys (balanced & unbalanced panels)	How much pie size should be given to top 20% and bottom 20%	General population	Surveys to examine effect of county level Covid-19 infections	Covid-19 infections increase inequity aversion
Brañas- Garza et al. (2022) Spain	N = 969 OLS Regressions	Post pandemic - Six waves of experiments	To what extent people care about relative money	General population	Experiments to examine temporal stability as pandemic prolongs	No difference across waves

(All Hypothetical / Unincentivized Studies)

Note: Hypothetical = Tasks / questions that do not have real monetary consequences. Post-pandemic refers to the time after the start of the Covid-19.

Study & Country	Observations & Statistical Method	Nature of Data Collection / # of Waves	Games / Measures & Stakes	Subject Pool	Main Question	Main Findings			
Panel A: Incentivized Decisions									
Angrisani et al. (2020) UK	N = 108 Means Test (t-test)	Pre and post pandemic - Balanced panel data	BRET Stakes = 20 pence per box	Students Traders	Experiments to perform pre and post pandemic comparisons	Risk taking unchanged pre-and-post pandemic			
Li et al. (2020) China	N = 999 Probit Regressions	Pre and post pandemic	Holt & Laury (2002) Lottery Stakes = 16.4 ~ 38.5 RMB	Students	Experiments to perform pre and post pandemic comparisons	Post- pandemic risk aversion increased compared to pre- pandemic			
Adema et al. (2022) Czechia, India, Mexico, Spain	N = 303 Fixed Effects Regression	Pre and post pandemic - Balanced panel data Balanced panel data	Lottery choice (x or 0 with 50% chance and 2.5x with 50% chance) Stakes (x) = 100 Euros	Students	Experiments to perform pre and post comparisons	Risk taking in lottery choice increased			
Aksoy et al. (2021) USA	N = 1995 OLS Regressions	Pre and post pandemic	 Risk Project (Safe vs risky investment) Stakes = 0.17\$ ~ 0.33\$ Risky Urns (MPL lottery versus sure amount) Stakes = 0.17\$ ~ 0.25\$ 	AMT workers	Experiments to perform a pre- and-post pandemic comparison	- Risk seeking in Risky Project higher in post- than pre- pandemic sample - Risk seeking in Risky Urns is lower in post- than pre- pandemic sample			
Bokern et al., (2021)	N = 1035	Post pandemic	- Convex Time Budget	General population	Experiments to examine	Risk is largely			

Appendix E: Summary of Studies on Covid-19 and Risk Taking

Netherlands	OLS Regressions	Four waves of experiments	Stakes = 75 ~ 87 Euros - Holt & Laury (2002) Lottery Stakes = 75 ~ 90.98 Euros		temporal stability as Covid-19 severity varies	unchanged across four experiments
Drichoutis and Nayga (2022) Greece	N = 47800 Structural Modelling	Pre and post pandemic - Balanced panel data	 Holt & Laury (2002) Lottery Stakes = 0.48 ~ 3.85 Euros Payoff varying task (PV) Stakes = 0.70 ~ 7.60 Euros 	Students	Experiments to perform pre and post pandemic comparison	No difference in risk pre-and- post pandemic
Guenther et al. (2021) UK	N = 1254 Means comparisons (t-test) & OLS Regressions	Post pandemic	- BART Stakes = 0.01 GBP per pump (20 balloons; max. pumps not revealed) - Binswanger, Eckel & Grossman Task (BEG) (Eckel & Grossman, 2002) Stakes = 28 ~ 70 GBP	General population	 Experiments to compare risk taking among healthy and unhealthy people. To examine whether Covid- 19 risky behavior is linked to risk- taking 	- No difference between healthier and relatively unhealthy people - Covid-19 risky behavior is not related to any risk measure
Shachat et al. (2021) China	N = 565 for Gain Frame N = 581 for Loss Frame N = 573 for Ambiguity Frame OLS Regressions	Pre and post lockdown (post pandemic)	Lottery versus sure amount in the gain and loss domains Stakes = 3 ~ 9 RMB	Students	Experiments to perform pre and post lockdown comparisons	- As compared to pre- lockdown, decreased risk aversion and risk- tolerance in the gain and loss domains post- lockdown

			- BART			
Zhang and Palma (2021) USA	N = 322 Mann Whitney Test & Chi-Square Test	Pre and post national emergency declaration (post pandemic)	Stakes = 1cent per pump (max. 128 pumps) (30 balloons) - Gamble Choice by Eckel & Grossman (2008) Stakes = 10 ~ 44 cents	AMT workers	Experiments to perform pre and post emergency comparisons	- Risk aversion in BART increased post emergency - No changes in Gamble Choices
Gassmann et al. (2022) France	N = 723 Means Comparisons (t-test)	Pre and post pandemic (during lockdown, soon after lockdown and 4 months after lockdown)	Quantity of money versus lottery Stakes: Expected quantity of money = 45 Euros Expected Lottery money = 32 ~ 116 Euros	Students	Experiments to perform pre and post lockdown comparisons	As compared to pre- lockdown, risk aversion decreased during and soon after lockdown.
Harrison et al. (2022) USA	N = 598 (after pandemic sample) N = 232 (pre- pandemic sample) Structural models of EUT and RDU using maximum likelihood	Pre and post pandemic Six waves of data collected after pandemic is compared with a pre- pandemic sample	Unordered Binary Lottery Choices (for atemporal risk aversion) Stakes = \$5 - \$55	Students	Experiments to analyze risk over different waves after pandemic Experiments to perform pre and post pandemic comparison	- Risk premiums as per EUT are relatively stable over post- pandemic waves - Risk premiums as per EUT are similar in pre and post pandemic comparisons - Risk premiums as per RDU in wave 3 lower than wave 1, 4 and 6

						- Pre- pandemic sample is largely risk neutral while post pandemic sample is risk averse as per RDU ⁴		
Lohmann et al. (2023) China	N = 1044 DID Analysis	Pre and post pandemic Balanced panel data	Lottery Choices Stakes = 4 Yuan ~ 140 Yuan	Students	Experiments to examine the impact of exposure to city virus severity on behavior	Insignificant impact of city level severity on risk taking		
Panel B: Unincentivized/Hypothetical Decisions								
Bu et al. (2020) China	N = 1369 OLS Regressions	Pre and post pandemic	 Planned risk (take more or less risk next year compared to the last year) Lottery versus sure choice 	Students	Surveys to perform pre and post pandemic comparisons	 Planned risk after the start of pandemic decreased as compared to pre-Covid-19 Planned risk & Lottery selection decreased with Covid- 19 severity 		
Graeber et al. (2020) Germany	N = 12786 Fixed Effects Regressions	Pre and post pandemic - Balanced panel data	Willingness to take risk	General population	Surveys to perform pre and post pandemic comparisons To study the impact of state level infections	 Willing to take risk decreased in 2020 in comparison to 2019 State level Infection rate has a negative 		

⁴ The authors report that further analysis using 232 pre-pandemic subjects who also participated in post pandemic experiments also leads to similar findings.

						effect on willingness to take risk
Adema et al. (2022) Czechia, India, Mexico, Spain	N = 303 Fixed Effects Regression	Pre and post pandemic - Balanced panel data	Willingness to take risk	Students	Experiments to perform pre and post comparisons	Willingness to take risk decreased post pandemic as compared to pre- pandemic
Aksoy et al. (2021) USA	N = 1995 OLS Regressions	Pre and post pandemic	Willingness to take risk	AMT workers	Experiments to perform a pre- and-post pandemic comparison	- Risk seeking higher in post- than pre- pandemic sample
Alsharawy et al. (2021) USA	N = 1484 Linear Fixed Effects Regression	Post pandemic Three waves of surveys	 Lottery Willingness to take risk (both measures combined by 1st principal component) 	AMT workers	Surveys to examine the effect of Covid- 19 fear and local death rate	 Covid-19 fear reduces risk tolerance No effect of death rate on risk
Bogliacino et al. (2021) Italy, Spain, UK	N = 4980 OLS Regressions	Post pandemic	Willingness to take risk	General population	Survey to examine the effect of labor, health, stressful events & mental shocks	 Covid-19 labor, health or stressful events shock make people risk loving. Mental health shock has insignificant effect on risk
Frondel et al. (2021) Germany	N = 10330 for financial loss analysis N = 10305 for severe financial loss analysis	Pre and post pandemic	Willingness to take risk	General population	Surveys to examine the effect of financial and severe financial losses	- Respondents with severe financial loss take less risk - Risk taking unchanged for

	Fixed Effects Regressions					Respondents with financial loss
Guenther et al. (2021) UK	N = 1254 Means comparisons (t-test) & OLS Regressions	Post pandemic	Self-reported willingness to take risk	General population	Experiments to compare risk taking among healthy and unhealthy people. To examine whether Covid- 19 risky behavior is linked to risk- taking	 Healthier participants show higher risk tolerance in comparison to less healthy. Covid-19 risky behavior is not related to risk taking
Heap et al. (2021)	N = 2243 Fixed Effects	Post pandemic	General risk	General population	Surveys to perform pre and post pandemic	No change across baseline and
USA	Regression	Two survey waves		1 1	comparisons	follow up waves
Meunier and Ohadi (2021) Anglosphere	N = 72 Paired t-test & Wilcoxon matched-pairs signed-rank test	Pre and post pandemic - Balanced panel data	MPL choices	General population	Surveys to perform pre and post pandemic comparisons	Loss aversion increased post- pandemic compared to pre- pandemic
Lohmann et al. (2023) China	N = 1044 DID Analysis	Pre and post pandemic Balanced panel data	Investment Game (Share of endowment not invested in a lottery with 50/50 odds)	Students	Experiments to examine the impact of exposure to city virus severity on behavior	Insignificant impact of city level severity on risk aversion

Note: BRET = Bomb Risk Elicitation Task, MPL = Multiple Price List, BART = Balloon Analogue Risk Task. AMT = Amazon Mechanical Turk. Anglosphere as per authors includes respondents from the UK, US, Australia, mainland Europe & Turkey. Hypothetical = Unincentivized tasks / questions that do not have real monetary consequences. Post-pandemic refers to the time after the start of the Covid-19. RMB = Renminbi (Chinese currency). GBP = Great Britain Pound. EUT = Expected Utility Theory, RDU = Rank Dependent Utility. DID = Difference in differences.

Study	Observations & Statistical Method	Nature of Data Collection / # of Waves	Games / Measures & Stakes	Subject Pool	Main Question	Main Findings
		Panel A	: Incentivized De	cisions		
Li et al. (2020) China	N = 999 OLS Regressions	Pre and post pandemic	Less money sooner or more later Stakes = 10 ~ 40 RMB	Students	Experiments to perform pre and post pandemic comparisons	Post- pandemic patience decreased compared to pre-pandemic
Bokern et al., (2021) Netherlands	N = 1035 OLS Regressions	Post pandemic Four waves of experiments	Modified Convex Time Budget for time preferences Stakes = 75 ~ 87 Euros Modified Multiple Price Lists for Time Preferences Stakes = 75 ~ 90.98 Euros	General population	Experiments to examine temporal stability amid varying Covid-19 severity	Time preference is unchanged across four experiments
Drichoutis & Nayga (2022) Greece	N = 47800 Structural Modelling	Pre and post pandemic Balanced panel data	Less money sooner (x) or more later (x + $5\% \sim 50\%$ more) Stakes (x) = 60 & 90 Euros	Students	Experiments to perform pre and post pandemic comparisons	No difference pre-and-post pandemic
Gassmann et al. (2022) France	N = 723 Means comparisons (t-test)	Pre and post pandemic (during lockdown, soon after lockdown and 4 months after lockdown)	Sooner versus later payment Stakes: x sooner: 55 ~ 98 Euros x later = 100 Euros	Students	Experiments to perform pre and post lockdown comparisons	Present bias is stable across all experiments

Appendix F: Summary of Studies on Covid-19 and Patience / Time Discounting

	Panel B: Unincentivized/Hypothetical Decisions							
Lohmann et al. (2023) China	N = 1044 DID Analysis	Pre and post pandemic Balanced panel data	Convex Time Budgets Stakes = 0 ~ 100 Yuan	Students	to examine the impact of exposure to city virus severity on behavior	Insignificant impact of city level severity on present bias and patience		
Harrison et al. (2022) USA	N = 598 (after pandemic sample) N = 230 (pre- pandemic sample) Exponential and Quasi- Hyperbolic discounting models using maximum likelihood and adjusting for the curvature of the utility function	Pre and post pandemic Six waves of data collected after pandemic is compared with a pre- pandemic sample	Less money sooner versus more money later Stakes: About \$40-\$50	Students	Experiments to analyze risk over different waves after pandemic Experiments to perform pre and post pandemic comparison	- Time preferences using Exponential discounting models are relatively stable across post- pandemic waves and comparable to pre- pandemic outcomes - Time preferences using Quasi- Hyperbolic discounting show relatively more variation across six waves implying a parabolic U- shape. The post- pandemic time preferences are however comparable to pre- pandemic discounting		

						- Covid-19
	NI 1404	Post			Surveys to	fear
Alsharawy et	N = 1464	pandemic	Willingness to		examine the	decreases
al. (2021)	Liner Fired		give something	AMT	effect of	patience
	Liner Fixed	-Three	today for future	workers	Covid-19 fear	
USA	Effects	survey	benefit		and local death	- Local death
	Regressions	waves			rate	rate increases
						patience
Bogliacino et al. (2021) Italy, Spain, UK	N = 4980 OLS Regressions	Post pandemic	Willingness to give something today for future benefit	General population	Survey to examine the effect of labor, health, stressful events & mental shocks	 No significant effect of negative Covid-19 labor or mental health shock on patience Health and stressful events shocks
						increase patience
Frondel et al. (2021) Germany	N = 10332 for financial loss analysis N = 10306 for severe financial loss analysis Fixed Effects Regressions	Pre and post pandemic	Patience question (0 = very impatient; 10 = very patient)	General population	Surveys to examine the effect of financial and severe financial losses	No effect of financial or severe financial losses on patience
Heap et al. (2021)	N = 2242	Post pandemic	Patience question	General	Surveys to examine temporal stability as	No change across
USA	Fixed Effects Regression	Two waves of surveys	impatient; 10 = very patient)	population	Covid-19 severity changes	follow up waves
	N = 72	Dro and			-	Patience
Meunier and Ohadi (2021)	Paired t-test & Wilcoxon	post pandemic	Smaller money sooner versus	AMT	Surveys to perform pre and post	increased post- pandemic
Anglosphere	matched-pairs signed-rank test	Balanced panel data	larger later	workers	pandemic comparisons	compared to pre-pandemic setting

Note: AMT = Amazon Mechanical Turk. Hypothetical = Unincentivized tasks / questions that do not have real monetary consequences. Post-pandemic refers to the time after the start of the Covid-19. Anglosphere as per authors includes respondents from the UK, US, Australia, mainland Europe & Turkey. DID = Difference in differences.

References

Adema, J., Nikolka, T., Poutvaara, P., & Sunde, U. (2022). On the stability of risk preferences: Measurement matters. *Economics Letters*, 210, 110172.

Adena, M., & Harke, J. (2022). COVID-19 and pro-sociality: How do donors respond to local pandemic severity, increased salience, and media coverage? *Experimental Economics*, 25(3), 824-844.

Aksoy, B., Chadd, I., Osun, E., & Ozbay, E. (2021). *Behavioral Changes of MTurkers during the COVID-19 Pandemic*. SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3920502</u> Accessed 8 March 2022.

Alsharawy, A., Ball, S., Smith, A., & Spoon, R. (2021). Fear of COVID-19 changes economic preferences: evidence from a repeated cross-sectional Mturk survey. *Journal of the Economic Science Association*, 7(2), 103-119.

Angrisani, M., Cipriani, M., Guarino, A., Kendall, R., & Ortiz de Zarate, J. (2020). *Risk preferences at the time of COVID-19: An experiment with professional traders and students*. FRB of New York Staff Report, (927). <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3609586</u> Accessed 8 March 2022.

Bellani, L., Fazio, A., & Scervini, F. (2022). *Collective Negative Shocks and Preferences for Redistribution: Evidence from the COVID-19 Crisis in Germany*. KOPS. <u>http://kops.uni-konstanz.de/handle/123456789/56146</u> Accessed 8 March 2022.

Bogliacino, F., Codagnone, C., Montealegre, F., Folkvord, F., Gómez, C., Charris, R., ... & Veltri, G. A. (2021). Negative shocks predict change in cognitive function and preferences: Assessing the negative affect and stress hypothesis. *Scientific Reports*, 11(1), 1-10.

Bokern, P., Linde, J., Riedl, A., & Werner, P. (2021). The effect of the COVID-19 crisis oneconomicandsocialpreferences.Netspardiscussionpaper.https://www.netspar.nl/assets/uploads/P20211223_DP031_Riedl.pdfAccessed 21 Sep 2022.

Brañas-Garza, P., Jorrat, D., Alfonso, A., Espín, A. M., Muñoz, T. G., & Kovářík, J. (2022). Exposure to the COVID-19 pandemic environment and generosity. *Royal Society Open Science*, 9(1), 210919.

Brück, T., Ferguson, N., Justino, P., & Stojetz, W. (2020). *Trust in the time of corona*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3631597 Accessed 8 March 2022.

Bu, D., Hanspal, T., Liao, Y., & Liu, Y. (2020). *Risk taking, preferences, and beliefs: Evidence from Wuhan.* SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3559870</u> Accessed 8 March 2022.

Buso, I. M., De Caprariis, S., Di Cagno, D., Ferrari, L., Larocca, V., Marazzi, F., ... & Spadoni, L. (2020). The effects of COVID-19 lockdown on fairness and cooperation: Evidence from a lablike experiment. *Economics Letters*, 196, 109577.

Cappelen, A. W., Falch, R., Sørensen, E. Ø., & Tungodden, B. (2021). Solidarity and fairness in times of crisis. *Journal of Economic Behavior & Organization*, 186, 1-11.

Daniele, G., Martinangeli, A. F., Passarelli, F., Sas, W., & Windsteiger, L. (2020). *Wind of change? Experimental survey evidence on the COVID-19 shock and socio-political attitudes in Europe*. SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3671674</u> Accessed 8 March 2022.

Drichoutis, A. C., & Nayga, R. M. (2022). On the stability of risk and time preferences amid the COVID-19 pandemic. *Experimental Economics*, 25(3), 759-794.

Eckel, C. C., & Grossman, P. J. (2008). Forecasting risk attitudes: An experimental study using actual and forecast gamble choices. *Journal of Economic Behavior & Organization*, 68(1), 1-17.

Eckel, C. C., & Grossman, P. J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, 23(4), 281-295.

Esaiasson, P., Sohlberg, J., Ghersetti, M., & Johansson, B. (2021). How the coronavirus crisis affects citizen trust in institutions and in unknown others: Evidence from 'the Swedish experiment'. *European Journal of Political Research*, 60(3), 748-760.

Frondel, M., Osberghaus, D., & Sommer, S. (2021). *Corona and the stability of personal traits and preferences: Evidence from Germany*. ZEW-Centre for European Economic Research Discussion Paper, (21-029). <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3820484</u> Accessed 8 March 2022.

Gambetta, D., & Morisi, D. (2022). COVID-19 infection induces higher trust in strangers. *Proceedings of the National Academy of Sciences*, 119(32), e2116818119.

Gassmann, X., Malézieux, A., Spiegelman, E., & Tisserand, J. C. (2022). Preferences after pan (dem) ics: Time and risk in the shadow of Covid-19. *Judgment and Decision Making*, 17(4), 745-767.

Graeber, D., Schmidt, U., Schroeder, C., & Seebauer, J. (2020). *The effect of a major pandemic* on risk preferences-evidence from exposure to COVID-19. SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3724461</u> Accessed 8 March 2022.

Grimalda, G., Buchan, N., Ozturk, O., Pinate, A., Urso, G., & Brewer, M. (2021). *Altruism in the time of COVID-19: We are all in this together, but who is we?* Research Square. https://assets.researchsquare.com/files/rs-139076/v2/18ffa9a5-00d0-4083-8513-044f8958ed12.pdf?c=1631870006 Accessed 8 March 2022. Guenther, B., Galizzi, M. M., & Sanders, J. G. (2021). Heterogeneity in risk-taking during the COVID-19 pandemic: evidence from the UK lockdown. *Frontiers in Psychology*, 12, 643653.

Harrison, G. W., Hofmeyr, A., Kincaid, H., Monroe, B., Ross, D., Schneider, M., & Swarthout, J.T. (2022). Subjective beliefs and economic preferences during the COVID-19 pandemic. *Experimental Economics*, 25, 795-823.

Heap, S. P. H., Koop, C., Matakos, K., Unan, A., & Weber, N. (2021). *Never waste a "good" crisis! Priming the economic aspect of crises fosters social capital build-up and prosociality.* SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3859282</u> Accessed 8 March 2022.

Holt, C. A., & Laury, S. K. (2002). Risk aversion and incentive effects. *American Economic Review*, 92(5), 1644-1655.

Kiss, H. J., & Keller, T. (2022). The short-term effect of COVID-19 on schoolchildren's generosity. *Applied Economics Letters*, 29(9), 842-846.

Li, K. K., Huang, B., Tam, T., & Hong, Y. Y. (2020). *Does the covid-19 pandemic affect people's social and economic preferences? evidence from china. Evidence from China.* SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3690072 Accessed 8 March 2022.

Lohmann, P. M., Gsottbauer, E., You, J., & Kontoleon, A. (2023). Anti-social behaviour and economic decision-making: Panel experimental evidence in the wake of COVID-19. *Journal of Economic Behavior & Organization*, 206, 136-171.

Lotti, L. (2020). *Generosity during Covid-19 the effect of social distancing and framing on donations in dictator games*. MPRA Paper No. 102144. <u>https://mpra.ub.uni-muenchen.de/id/eprint/102144</u> Accessed 8 March 2022.

Meunier, L., & Ohadi, S. (2021). The Impact of the COVID-19 Crisis on Individuals' Risk and Time Preferences. *Economics Bulletin*, 41(3), 1050-1069.

Shachat, J., Walker, M. J., & Wei, L. (2021). How the onset of the Covid-19 pandemic impacted pro-social behaviour and individual preferences: Experimental evidence from China. *Journal of Economic Behavior & Organization*, 190, 480-494.

Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H., ... & Barlow,F. K. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *American Psychologist*, 75(5), 618.

Snowberg, E., & Yariv, L. (2021). Testing the waters: Behavior across participant pools. *American Economic Review*, 111(2), 687-719.

Umer, H. (2023). Stability of pro-sociality and trust amid the Covid-19: panel data from the Netherlands. *Empirica*, 1-33.

Zhang, P., & Palma, M. A. (2021). *Do risk preferences change during COVID-19? comparisons between pre and on-pandemic parallel experiments. Comparisons between Pre and On-Pandemic Parallel Experiments.* SSRN. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3849536</u> Accessed 8 March 2022.