Economía Experimental y del Comportamiento: Shocks

Francesco Bogliacino

Negative Economic Shocks (NES)

Negative Wealth Shocks (NWS)

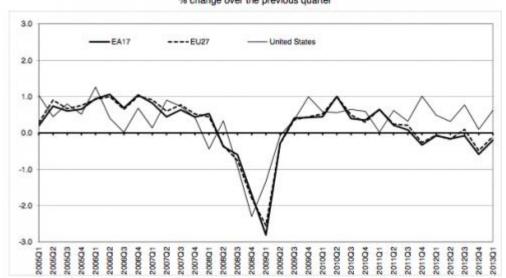


Negative Income Shocks (NIS)





EU27, euro area and United States GDP growth rates % change over the previous quarter







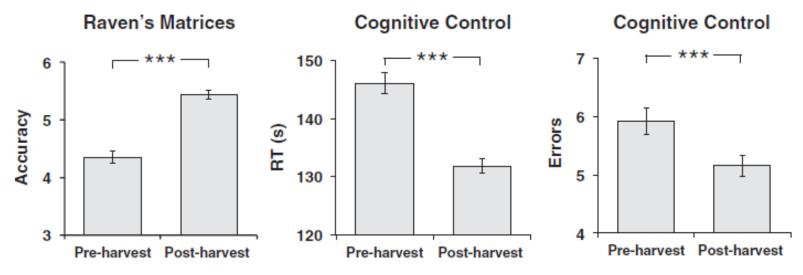
Poverty

- Poverty is associated with many external constraints that affect behavior;
- Poverty is associated with poor quality of decision making
- How do we study the impact of poverty? Using shocks

Poverty and Bandwidth

- Reasoning: an individual's capacity to process information.
- Cognitive control: A family of top-down mental processes needed when one has to concentrate and pay attention, when going on automatic or relying on instinct or intuition would be ill-advised, insufficient, or impossible (Diamond, 2013).
 - 3 components (enabling fluid intelligence):
 - Inhibition
 - working memory
 - cognitive flexibility

Poverty & Cognitive toll





Source: Mani et al. (2014)

Part I - Stylized facts

Some basic design choices

RET (e.g. Niederle & Vesterlund, 2007)

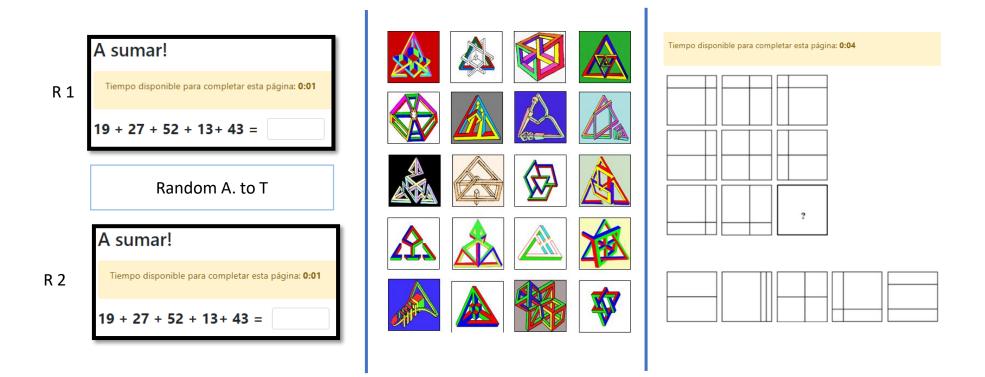
A sumar!

Tiempo disponible para completar esta página: 0:01

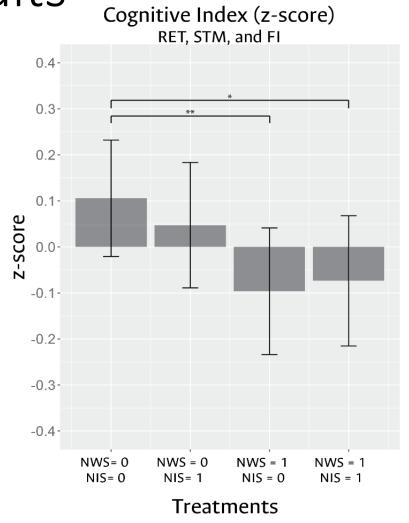
- To achieve better control, we use administered choices
- Alternative RET is the transcription task (for online activity)
- Shocks:
 - Asset
 - Income
 - 50% or 80%

Do negative economic shocks affect cognitive function, adherence to social norms and loss aversion?

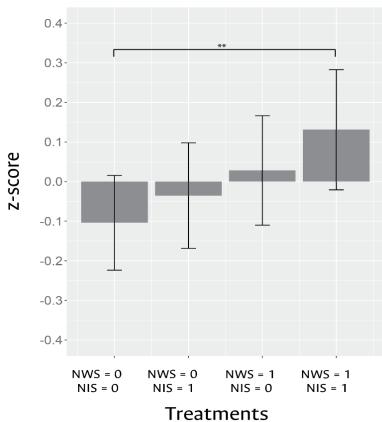
Journal of the Economic Science Association (2020)



Results



Standarized Response Time (z-score) RET, STM and FI



Centro de Investigaciones para el Desarrollo

Negative shocks predict change in cognitive function and preferences: Assessing the negative affect and stress hypothesis in the context of the COVID-19 pandemic and the lockdown mitigation strategy

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ASSA Meeting– Panel on Panel on Preferences, Norms, and Behavioral Change in the Coronavirus Pandemic

January 5th, 2021















The New Hork Times U.S. UNEMPLOYMENT IS WORST SINCE DEPRESSION Georgia Killing Puts Spotlight on a Police Force's Troubled History Ex-Officer and Son in If West Wing In Flynn Case, Russia Inquiry Still Isn't Safe, Is Barr's Target Is Any Office As Official Toll Ignores Reality, Mexico's Hospitals Are Overrun

Motivation

- Covid19 and mitigation strategies (health and labor market shocks)
- Negative Economic Shocks (losses of income or assets)
- Do people exposed to shocks show differences in terms of cognitive function and preferences?
- Do negative affect and stress drive the observed difference?

Outcome variables

• Cognitive function:

• the capacity of an individual to solve tasks for which relying on intuition and instinct is not a reliable guide

• Patience:

• is a measure of the willingness to give up something today in exchange for a larger sum tomorrow

• Risk aversion:

• the willingness to accept certain amounts in exchange for lotteries for which the expected value is larger

• Social preferences:

• showing other-regarding concerns when it is costly and does not depend upon strategic considerations

What do we know about the behavioral consequences of NES?

Shocks and cognitive function:

- Income shocks, natural variation, negative effect (Mani et al. 2014)
- Wealth shocks, lab, negative effect (Bogliacino and Montealegre, 2020).
- Paycheck variation, No effect (Carvalho et al., 2016);
- Violence related shocks, negative effect (Bogliacino et al. 2017)

Shocks and time discounting:

- Wealth shocks, lab, positive effect (Haushofer et al 2013);
- health shocks, quasi experimental, positive effect (Drecker and Schmitz, 2016);
- Violence related shocks, quasi experimental, positive effect (Voors et al. 2012)
- Natural disaster, sel on observables, positive effect (Cassar et al. 2017)

What do we know about the behavioral consequences of NES?

· Shocks and risk aversion:

- Natural disaster, selection on observables, negative effect (Eckel et al 2009) positive effect (Cassar et al 2017);
- Volatility, selection on observables, positive effect (Levin & Vidart 2020);
- Violence related shocks, recall, negative effect (Callen et al. 2014)
- Health shock, sel on observables, positive effect (Drecker and Schmitz, 2016)

Shocks and pro-social preferences:

- Violence related shocks, quasi experimental or recall, positive effect (Cavatorta and Zizzo, 2020; Bogliacino, Gómez and Grimalda, 2020; Bauer et al. 2016);
- Natural disaster, quasi experimental, positive effect (Cassar et al. 2017)
- Quasi experimental, increase in *anti-*social behavior (Bignon et al 2017; Cortés et al 2016; Dix-Carneiro et al. 2018)

What do we know about the behavioral consequences of NES?

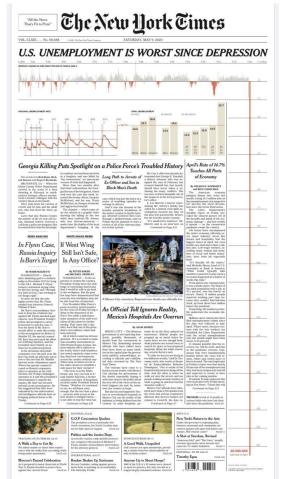
- Shocks as cognitive toll because of Stress/Negative affect
- Stress/negative affect increase risk aversion and time discounting:
 - Evidence from electric shocks, fear induction, and hydrocortisone, (Kassas et al, 2020 were not able to replicate using VR)
- Consistent with impact on social preferences?
 - SHH (Rand et al 2012)
 - Negative affect (Bosman and Widen 2012; Joffily et al. 2014, correlational)

Causal Mechanisms

People more important than the economy, pope says about Covid crisis

Design: the longitudinal study

https://osf.io/tbys6/



'Politicised nature' of lockdown debate delays Imperial report | Free to read

Neil Ferguson's team has sent modelling findings to government but not released them to the public



Design: the longitudinal study

- Launched on April 24th, three data points, ending on June 2nd, IT, ES, UK, online panel;
- Specific modules every week;
- Longitudinal measures of mental health, shocks, compliance;
- All Hs were pre-registered

Longitudinal study on behavioral, psychological, socio-economic effects induced by the exposure to CoViD-19, by government measures, and by communication strategies in three countries: Italy, Spain, and United Kingdom

Design

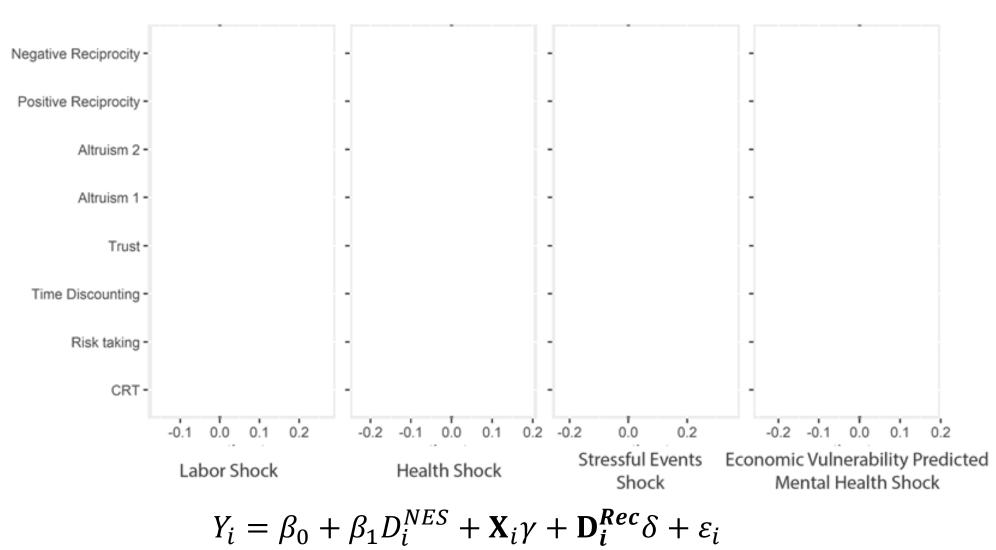
- Random sample from an online panel in the three countries
 - (N=4,890; IT=1,652, ES=1660, UK 1,578).
- Priming:
 - Recall of stressful or fear/anxiety inducing memories.
 - Recall of neutral or joyful memories.
- Outcome variables:
 - Cognitive Reflection Test (Frederick 2005).
 - Preference Survey Module (Risk, Time, and Social Preferences, Falk et al. 2018).
- Shocks:
 - Labor Market Shock.
 - Health Shock.
 - Stressful Events Shock.
 - Mental Health Shock

Recall

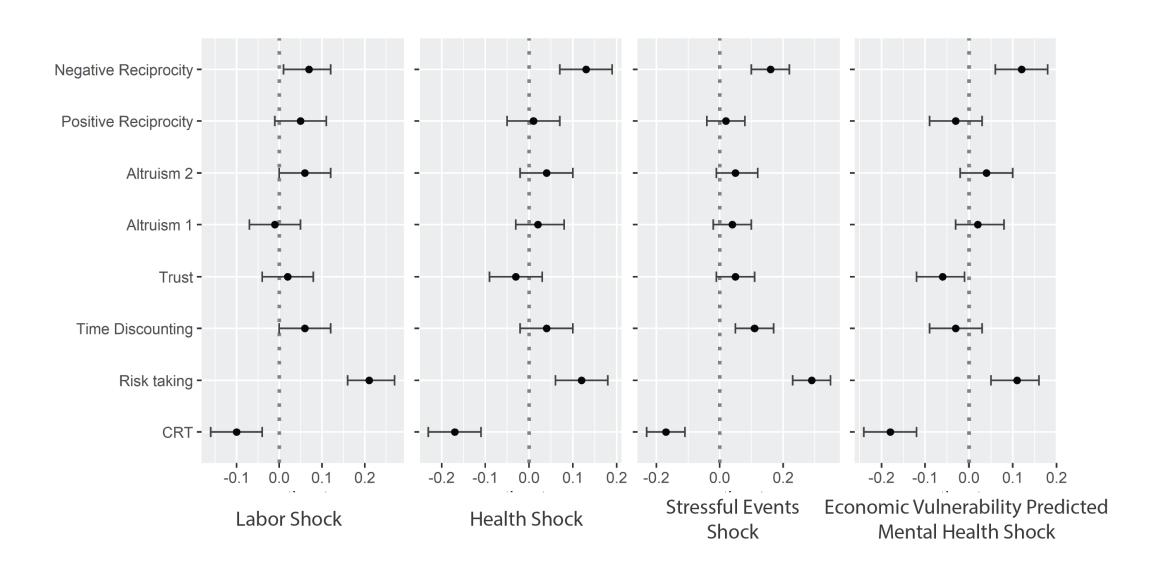
- Random assignment to one of four conditions:
 - Negative emotions recall.
 - Fearful and worrisome events (e.g. Family or friend hospitalized or passed away).
 - Stress recall.
 - Stress and worrisome events (e.g. Job loss, economic loss).
 - Neutral recall.
 - Recall anything.
 - Joy Recall.
 - Happy or Joyous (e.g. Birth of a child, marriage of a relative, professional success).

Control

Results



Results



$$Y_i = \beta_0 + \beta_1 D_i^{NES} + \beta_2 D_i^{REC} + \beta_3 D_i^{REC} D_i^{NES} + \mathbf{X}_i \gamma + \varepsilon_i$$

Variable CRT Risk Taking Discoun ting Trust Altruism Altruism Reciproc Reciproc ity ity

Shock (Labor) # Recall

Shock (Health) # Recall

Shock (Stressful) # Recall

Shock (Mental health) # Recall

Variable	CRT	Risk Taking	Time Discounti ng	Trust	Altruism 1	Altruism 2	Positive Reciproci ty	Negative Reciproci ty
Shock (Labor) # Recall	0.06	-0.15	-0.02	0.03	0.00	-0.03	0.04	-0.16
	(0.06)	(0.15)	(0.11)	(0.14)	(0.01)	(0.14)	(0.1)	(0.13)
Shock (Health) # Recall	-0.06	0.05	-0.21*	0.00	0.00	-0.09	-0.03	0.00
	(0.06)	(0.15)	(0.11)	(0.14)	(0.01)	(0.14)	(0.1)	(0.13)
Shock (Stressful) # Recall	0.04	-0.13	-0.12	-0.09	-0.01	-0.30**	-0.08	-0.23*
	(0.06)	(0.15)	(0.11)	(0.14)	(0.01)	(0.14)	(0.1)	(0.13)
Shock (Mental health) # Recall	-0.09	0.20	-0.11	0.24*	0.00	0.08	-0.08	0.05
	(0.06)	(0.15)	(0.11)	(0.14)	(0.01)	(0.14)	(0.1)	(0.13)