

# COVID-19 Crisis Economic

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**ABSTRACT:** The currently ongoing novel Coronavirus-crisis is an external shock coming down on society with direct impact on societal moods and subsequently connected economic changes. With growing digitalization and quickening of transfer speed, information exchange in the individual involvement to break trends online on a global scale may impose unknown systemic risks in causing social volatility in international economics. Research may explore how human beings' communication and interaction results in socially constructed volatility that echoes in economic correlates. This paper theoretically covers the history of heterodox economic cycles in order to then propose to explore the role of communication and temporal foci in pandemic communication to create social volatility underlying economic downturns.

**KEYWORDS:** Affect, Collective moods, Communication, Consumption, Coronavirus, COVID-19, Digitalization, Economic fundamentals, External shock, Information, Lockdown, News, Pandemic, Social volatility, Socio-Economics, Socio-Psychological Foundations, 2008/09 World Financial Crisis

## Introduction

Globalization led to an intricate set of interactions between individuals, organizations and states (Centeno & Cohen 2010). Unprecedented global interaction possibilities have made communication more complex than ever before as the whole has different properties than the sum of its increasing diversified, global and instantly offered information parts (Centeno et al. 2013). In the recent decade, data transfer and exchange online to create news increased qualitatively and quantitatively (Puaschunder 2017f). The reaping of surplus value from big data analyses and targeted online advertisement skyrocketed (Puaschunder 2017c, d). With growing digitalization and quickening of transfer speed, information exchange in the individual involvement to break trends online on a global scale may impose unknown systemic risks in causing social volatility in international economics (Beerbaum & Puaschunder 2019e, f).

In a socially-distanced COVID-19 world, we have become virtually closer and digitally more connected than ever before. But today's digital collective interaction effects may at the same time lead to hard-to-foreseeable fallacy of composition downfalls. Historical time perceptions of capitalism vary. A quantification of the qualitative use of time in language may help objectify the structure of capitalism (Lee 1997). Emergent risks in emotional reactions to information and collective moods triggered by online media news races appear to imbue social volatility into global economic systems (Centeno et al. 2013). The indexal flow of time created in constant instant communication online now is faster than ever before due to constantly overlapping contents and that are formed truly global. Online communication also appears to feature less accuracy checks than previous media forms. Governments seem to have lost their privilege of censorship control, which adds complexity and vulnerability to the building of a collective soul of booms and busts in the digital age (Puaschunder, forthcoming). In all these features of the nature of online communication, new technology advancements may hold public reactions that may underlie the upswing or downturn of crisis dynamics.

In the light of growing data transfer and internet connectivity globalization, the demand for an in-depth understanding of how information echoes in socio-economic correlates gained unprecedented momentum. Social psychology may aid in explaining how social pressures

materialize in economic fallouts. The following paper draws on heterodox economic cycle theories and adds socio-psychological foundations to explain the collective reaction to the current technical communication about economic dynamics. Media information may cause collective moods fueled by redundant and self-reinforcing processes that lack control or censorship in the digital space. Affect and collective moods – in particular anxiety, fear and Angst but also euphoria and hysteresis – may play fundamental roles in consumer-spending and investment decisions. Forward-looking as one is always thinking ahead of oneself or ruminating in fear over the past may shape our economics of choice (Heidegger 1929/63; Setterfield 2020a).

While we have information on the economic fundamentals and physical environment's impact on choices, the role of media information shaping people's economic outlook is missing. Contemporary writings address political, institutional and social processes as makers of crises, yet the role of information for the building of economic moods is completely neglected. Media-driven information races may steer emotions and collective moods that cause systemic behavioral interpretation of an uncertain future that may lead to delayed consumption and spending decisions of individuals, households and firms further exacerbating in collective governmental investment and spending preferences. All these socio-economic impacts of affects and mass communication potentially underlying economic cycles, however, have hardly been described or empirically validated before. New media developments are among those technology innovations that are centered on speed, motion and communication (Lee 2020; Martin 2019).

At the same time, different groups in society may have different outlooks on the same information. While financially skilled parts of the population may experience the COVID-19 economic fallout as an opportunity – given modern finance tools and methods such as shorting, derivatives and diversification – the real economy may hit stronger feelings in the eye of uncertainty given the lower levels of degrees of freedom fueled by low interest rates that incentivized debt cycles for consumer credits (Lee & LiPuma 2004; Lee & Martin 2016).

In seeking to shed light on communication causing implicit system failures but also the potential socio-economic consequences of cumulative moods triggering mass movements that cause economic turmoil; the following paper uncover unexpected dangers and insufficiently described shadows of the invisible hand. The paper thereby adds to heterodox economic theories and behavioral-social psychology aspects of financial crises and economic meltdowns. Most timely capturing the currently ongoing novel Coronavirus pandemic's contemporary *Zeitgeist*, the paper will also address digital technologies' role in the representation and transmission of information creating social volatility (Beerbaum & Puauschunder 2019b; Lee forthcoming). In explaining how communication during times of crises shapes economic fallouts, information transfer's unique impetus in the digital age will be unraveled in order to elucidate how strategic communication can serve as a novel and easily-implementable nudging economic stabilizer.

The following paper thus aims at innovatively painting a novel picture of the mass psychological underpinnings of business cycles based on information flows with particular attention to digital communication. This article will integrate in the contemporary literature on behavioral human decision making the influence of emotions in economic market decisions to then propose how to use targeted media communication to favorable impact economic market choices providing clear communication strategies as clear leadership and followership directives on nudging in the 21<sup>st</sup> century.

## Theory

The theoretical part makes the case of a narrow technical focus on economic fundamentals and mathematical formalizations in classic economics to explain the mechanisms causing economic cycles. Standard heterodox economic cycle theories will be addressed and missing socio-psychological and behavioral group aspects of collective over- and underreaction in markets proposed (Puauschunder 2017b, e). While some information on euphoria is found in the animal spirits

and behavioral finance literature describing overconfidence in markets leading to an overvaluation of assets, overleveraging and underestimation of risk; hardly any empirical studies explain collective panics from a socio-economic or social psychology angle with particular attention to collective moods and affects in the eye of instant communication; indexal flow of time prospects and the group differences of financially skilled and monetary savvy individuals versus real economy employees.

After a thorough literature review on financial market theory with special attention to heterodox viewpoints, the history of economic cycle theories will lead to the analysis of the role of information in creating economic booms and busts. Addressing problems of the neoclassical assumption of perfect information markets through the lens of real competition, the paper will specifically unravel how contemporary media communication produces certain types of expectations that form collective moods and how these change consumption patterns result in systemic global economic outcomes. The concept of social volatility will be introduced and depicted in light of COVID-19. Social volatility adds to quantitative volatility any social aspects that influence and shape economic markets offering an innovative way to explain how and what information represented in the media creates economic ups and downs.

The theoretical part will also highlight the uniqueness and differences of the 2019 COVID pandemic economic fallout from the 2008/09 World Financial Recession. While the previous recession was inherent in the system of capitalism and largely played out in financial constraints affecting almost all industries, the novel 2019 COVID pandemic imposes an external shock of time that was fueled by communication and interaction, which differed throughout the world (Martin, 2019). The currently ongoing market communication about the pandemic serves as historic trace, whose conservation offers important insights about how the socio-psychological interpretation of an external shock echoes in economic fundamentals (Puaschunder 2017e).

### **Heterodox Economic Cycle Theories**

Heterodox Economic Cycle theories include Behavioral Economics. Since the end of the 1970ies, Behavioral Economics revolutionized mainstream neo-classical economics and revolutionized decision-making theory. A wide range of psychological, economic and sociological laboratory and field experiments proved human beings deviating from rational choices and standard neo-classical profit maximization axioms to fail to explain how human actually behave (Kahneman & Thaler 1991; Puaschunder 2017a, b). Human beings were found to use heuristics in the day-today decision making (Kahneman & Tversky 1974, 1979).

These mental short cuts enable to cope with information overload in a complex world (Thaler & Sunstein 2008). Bounded rationality stems from uncertainty and information deficiencies in the way we collect, process and use information in our decision making. Decisions are made using only part of the perceivable information (*bounded awareness*) due to mental capacity limitations and biased cognitions (*ethical fading*) (Rawls 1971 in Luf 2008, p. 91; Tversky & Kahneman 1974). While standard microeconomic theory captures exponential temporal discounting to explain rational decision making; behavioral economics finds human time perception biased by heuristics, analogical thinking, and minimized effort (Puaschunder 2020a).

Mental Temporal Accounting is the behavioral economics application of mental accounting in the time domain. One of the most novel implications of heuristics, biases and nudges addresses behavioral finance – a growing field concerned with how to improve financial well-being through the sound understanding of how people actually behave in markets (Puaschunder 2020a). In markets behavioral economics and the behavioral insights extension account for a novel application of political economy. Building on a line of impressive laboratory and field experiment results, what followed in the powerful extension of these behavioral insights in the domains of public administration and public policy making (Puaschunder 2020a). Behavioral economists proposed to nudge and wink citizens to make better choices for them and the community.

Behavioral economists have recently started to nudge people into favorable decision outcomes, offering promising avenues to steer social responsibility in very many different domains, ranging from marketing, corporate governance to public affairs and most recently leadership. Nudges are verbal cues that propose positive reinforcement and indirect suggestions as ways to influence the behavior and decision making of groups or individuals. Most recently, winks were added as nonverbal cues that try to elicit certain acts and choices of humans. Winks are nonverbal cues that try to elicit certain acts and choices of humans. Many different applications of rational and efficient coordination followed ranging from improved organ donations, health, wealth and time management, to name a few (Puaschunder 2020a).

From a political economy perspective, the behavioral insights approach appears to be limited and hold unforeseen risks of social class division in the so-called ‘nudgital’ society (Puaschunder 2020a). Asymmetry of information access but also different affects arising from market communication may fuel economic booms and downturns for various societal groups. While the motivation behind nudging appears as a noble endeavor to foster peoples’ lives around the world with very many different applications (Marglin 1974), the nudging approach raises questions of social hierarchy and class division. The motivating force of the nudgital society may open a gate of exploitation of the populace and – based on privacy infringements – stripping them involuntarily from their own decision power in the shadow of legally-permitted libertarian paternalism and under the cloak of the noble goal of welfare-improving global governance. Nudging enables nudgers to plunder the simple uneducated citizen, who is neither aware of the nudging strategies nor able to oversee the tactics used by the nudgers (Puaschunder 2019a). The nudgers are thereby legally protected by democratically assigned positions they hold or by outsourcing strategies used, in which social media plays a crucial rule (Puaschunder 2020a).

In the digital age, social media revolutionized human communication around the globe, yet also opened opportunities to unprecedentedly reap benefits from information sharing and big data generation. The law of motion of the nudging societies holds an unequal concentration of power of those who have access to compiled data and who abuse their position under the cloak of hidden persuasion and in the shadow of paternalism. In the nudgital society, information, education and differing social classes determine who the nudgers and who the nudged are. Humans end in different silos or bubbles that determine who has power and control and who is deceived and being ruled. The owners of the means of governance are able to reap a surplus value in a hidden persuasion, protected by the legal vacuum to curb libertarian paternalism, in the moral shadow of the unnoticeable guidance and under the cloak of the presumption that some know what is more rational than others (Camerer, Issacharoff, Loewenstein, O’Donoghue & Rabin 2003). All these features lead to an unprecedented contemporary class struggle between the nudgers (those who nudge) and the nudged (those who are nudged), who are divided by the implicit means of governance in the digital scenery. Behavioral economists give credit to the unplanned, uncoordinated and competitive nature of capitalist production as well as the problem of aggregates deviating from the individual’s choice predictions.

Through capturing the interplay of communication about prospects and the fundamentals of the economy; there is an unprecedentedly described role of information in building and fueling economic booms and downturns. Theoretically, the notion of expectations in classical writings is introduced to then draw on historical foundations in economic analysis as outlined in Anwar Shaikh’s *Theory of Real Competition* (2016) as well as Shaikh’s (2013) formalization of George Soros’ (1994) *Theory of Reflexivity*. Boom and bust patterns will be theoretically described and be argued to have the expected outcomes deviate from the actual path and that the actual path in turn deviates from the underlying fundamentals in reflection of past performances’ prediction corrections (Shaikh, 2013). The impact of central bank forecasting and backtesting is hypothesized to change the actual performance in shaping economic ups and downs.

Puaschunder (2020a) started with representing connections of expectation corrections in backtesting and actual market performance. Opening the black box of deliberately future-oriented

market prospect reporting and the stylized linear time scale in neoclassical economics, challenged economic theory in capturing markets to be disrupted by information shocks. Ptaschunder (2020a) outlined problems with the neoclassical assumption of perfect information and feature inconsistent representations of information by shedding light on imperfections that produce certain types of outcomes in consumption, equilibrium and price. In empirically showing how the market responds to central bank market communications and how market corrections are related to actual market performance in the near future but also backlash to cyclical tendencies in the more distant future, Ptaschunder (2020a) paid attention to temporal heterogeneity, the information blast moment differing from a linear time scale. On a wider scale, Ptaschunder (2020a) painted a picture of markets behaving in line with corrected market predictions. In order to test for the relation of information and expectations on markets shaping prices, information about market projections of a central European central bank was retrieved online.<sup>1</sup> This central bank bi-annually publishes the real Gross National Product (GNP) in percentage changes to the previous year (GNP, *Bruttoinlandsprodukt Veränderung zum Vorjahr in % (real)* in the original) of a central European country for four years – 1 year retroactively, the year in which the report is issued and the prospect of the following year and the 2-year prospect. Ptaschunder (2020a) found retroactive backtesting market corrections are highly significantly positively correlated with the following market performance. Corrections of past periods are positively correlated with current performances in the near future but negatively correlated with future performances in the more distant future. Current period announcements are associated with positive trends in the subsequent period up to half a year after the announcement and negative trends in the period following more than half a year later to a year later. Past market performance shapes the future prospect and expectations about markets. Overall, the history of past predictions and necessary corrections are positively correlated with future market performance for a half year and negatively associated for the period from half a year to a year after the announcement of a market prediction correction.

## Research Question

While the 2008/09 World Financial Recession offered some data on the collective souls of economic crunches, the crisis emerged as inherent feature in capitalism with the banking sector downfalls becoming the endogenous crunch factor. But how external influences can come down on society and materialize in an exogenous shock with drastic fallouts in the real economy due to new media coverage, we hardly have any economic model or empirical validation for. The paper will therefore discuss the contemporary divide between economic fundamentals, financial market performance versus the real economy fallout. This analysis will also target at highlighting winning and losing industries only to follow the mandate to find creative strategies how to redistribute the gains of the crisis in order to offset the economic fallout losses in proposed inequality alleviation strategies.

No data existed prior to COVID-19 that was so rich in terms of instant communication, global interconnectivity and computational power to make sense of unprecedentedly big data capacity generated instantaneously and globally. At the same time, the constant informational bombardment of multi-faceted new media tools requires to conserve the fluidly growing ‘now’-driven information overload immediately (Center for Disease Control and Prevention 2020a, b; International Monetary Fund 2020a, b; Sachs et al. 2020; United Nations 2020a, b). The paper will therefore also address the different time prospects and indexal time flow moments financial managers are currently benefiting from at the expense of real economy in combination with positive interest rate advantages the finance world can profit from.

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<sup>1</sup> <https://www.oenb.at/Geldpolitik/Konjunktur/prognosen-fuer-oesterreich/gesamtwirtschaftliche-prognose.html>

In the contemporary nudigital society (Puaschunder 2017c, d) big data compilers can also reap a surplus value from selling compiled information (The New York Times, November 14, 2017)<sup>2</sup> or manipulate vulnerable population segments based on their previously shared information (The Economist, November 4, 2017).<sup>3</sup> The subjective additive utility of information-shared tranche-by-tranche over time may underestimate the big data holder's advantage to reap benefits from information shared. Implications lead to open questions about ethics in the information age and recommendations for a reclaiming of the common good of shared knowledge in education about information sharing in the digital age as well as the democratization of information. Challenging contemporary behavioral insights theory aims at fostering a more informed, self-determined and protected digital society in the wish to uphold ethics in the 21<sup>st</sup> century big data social media era (Beerbaum & Puaschunder 2019b).

Attention will be paid to the concept of time and how temporal prospects elicited in mass media shape individual decision-making. Contrary to standard neoclassical ideas of time in discounting, a behavioral economic approach will be applied dividing time in past, present and future prospects. Present as the moment of 'now' attention will be captured to be highly fluid as for constantly being melted into the past by its future dependent on the past. This fungibility of dependent moments add temporal volatility. The highly fickle 'now' present moment unmasked as a slippery reference point will be addressed in the theory of subjectivity and reflected upon behavioral economics' hyperbolic discounting present bias. Media fetishizing breaking news waves of concurrently presented similar information missing out on diversification potential but also the crucial role of the media in perpetuating human present biases will be thematized. The media's untapped potential in setting potentially favorable or unfavorable anchors and building unknown economic choice architectures will be introduced.

As for social volatility, fat tail phenomena and robustness literature will be coupled by social systems' ideas. Affect Theory, Believes and Desires Theory will become the theoretical backbone to describe fallible likelihood estimations when the pains and joys over markets are felt collectively and social volatility waves break. How integrating indexicality, modality and subjectivity is related to intentionality will be explored. Reference point dependence on age and the 'now' will be investigated in light of Prospect theory to see how losses and gains represented in the past or future may lead to biased decision-making patterns. The present bias potentially overinflating social volatility risks based on emotionality will be thematized.

## Discussion

The discussion will offer an empirical research prospect. The current COVID-19 pandemic serves as an external shock coming down on society with direct impact on societal moods and subsequently connected economic changes (Puaschunder & Beerbaum, forthcoming; Puaschunder, Gelter & Sharma 2020). Four studies will be proposed in the discussion to explore the role of communication and temporal foci in news (Study 1) to create social volatility underlying economic downturns (Study 2) with attention to international differences (Study 3). The economic consequence of the endogenous crunch of the 2008 World Financial Recession will be compared to the external economic shock of the COVID-19 pandemic in order to retrieve crisis-specific recovery recommendations (Study 4). The research will acknowledge that human beings' communication and interaction result in socially constructed volatility that echoes in economic correlates. In this, the article plays an important role in the evaluation of nudging and its influence on the stability of economic markets and societal systems. Depicting nudging during this unprecedented time of economic change and regulatory reform holds

<sup>2</sup> [https://www.nytimes.com/2017/11/14/business/dealbook/taxing-companies-for-using-our-personal-data.html?ref=collection%2Fsectioncollection%2Fbusiness&action=click&contentCollection=business&region=stream&module=stream\\_unit&version=latest&contentPlacement=8&pgtype=sectionfront](https://www.nytimes.com/2017/11/14/business/dealbook/taxing-companies-for-using-our-personal-data.html?ref=collection%2Fsectioncollection%2Fbusiness&action=click&contentCollection=business&region=stream&module=stream_unit&version=latest&contentPlacement=8&pgtype=sectionfront)

<sup>3</sup> <https://www.economist.com/news/leaders/21730871-facebook-google-and-twitter-were-supposed-save-politics-good-information-drove-out>

invaluable historic opportunities for leaders on how to strengthen society by nudges but also overcome unknown emergent risks within globalized markets.

In its entirety, this research targets at bestowing market actors with key qualifications to lead and to follow strategically in a complex and digitalizing world. Understanding how the social compound forms economic outcomes promises to explain how market outcomes are developed in society and can be shaped by strategic communication with special attention to new media technologies. Implications will stress how communication can counterweight and alleviate the building of collective moods bleeding into disastrous mass movements causing turmoil in financial market and steering economic fallouts with negative implications for societies' weakest segments. Recommendations how to build stable economic systems by avoiding emergent risks and communicating market prospects favorably may aid envision the fundamental architecture of future more stable markets to be crafted by heterodox economists and off-mainstream public policy experts. A prospective future research outlook and implications will be offered aimed at improving the economic future of society based on strategic communication and emotional assets but also favorable time prospects in our post-COVID-19 world and a transfer of crisis gains to crisis struck parts of the economy.

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