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2023

COVID-19

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COLLECTED ESSAYS

Series editor: Donald J. Boudreaux



Essay Four: Why Did Jurisdictions Repeatedly Use Inefficient Lockdowns During the COVID-19 Pandemic?

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Date of Issue

January 2023

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Acknowledgments

The author wishes to thank Don Boudreaux and Jens Zimmermann for comments. Any remaining errors are the sole responsibility of the author. As the researcher has worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.




Why Did Jurisdictions Repeatedly Use Inefficient Lockdowns During the COVID-19 Pandemic?

Douglas W. Allen

Executive summary

During the COVID-19 pandemic, economy-wide lockdowns, though never part of any pandemic strategy endorsed by the World Health Organization (WHO) or the Centers for Disease Control (CDC), were immediately applied, almost universally around the world, and repeated throughout the first five waves of the disease. During this time politicians, policy analysts, scientists, and public health officials learned a considerable amount about the nature of the virus and the efficacy of lockdown policies. They understood very early on that the virus would not be as lethal as predicted, and by the fall of 2020 they knew that the lockdown policy had only marginal and short-run benefits for public health.

Despite the surge of COVID-19 information, including the knowledge that generally speaking only a particular small subset of the population was especially vulnerable, government officials and politicians made no significant change to the lockdown policy. The same ineffective but extremely costly policies were repeated over and over. Furthermore, the enforcement of lockdown policies increased over time despite the overall decline in the lethality of the virus and the increased abilities to treat it.



“The same ineffective but extremely costly policies were repeated over and over.”

I argue that this behaviour was the result of a “double down” political equilibrium. For various reasons, governments around the world panicked in February and March of 2020 and concluded that only a severe lockdown could isolate the virus and stop it from spreading. They quickly became aware of the failure and cost of this action and were faced with a choice: they could admit their terrible mistake or double down, continue with the policy, and hope that an endemic state would



come soon. When a second wave of the virus returned in the fall of 2020, the dominant strategy of those jurisdictions that had earlier locked down was to repeat their lockdown policy. This strategy continued until the widespread infections caused by the Omicron variant led to an endemic state and allowed for a declaration of lockdown victory.

The double-down strategy required political support, and this came mostly from two sources: the “laptop class” and other winners from the lockdown; and those terrified enough by the virus that they believed lockdowns were justified. This explains three observations over the first two years of the pandemic. First, the response to COVID-19 has led to large increases in economic inequality. Increased inequality means that the relative positions of those at the top have increased, giving this group more power in the competition for goods and services. Second, there was, from the beginning, a massive campaign of fear-mongering that created false assessments of the actual risk of the virus by the general population. Third, the enforcement of lockdowns and other mandates increased over time.

The Omicron variant did two things. First, it entered the homes of a large fraction of the population and demonstrated the actual risk of the virus at that stage of the pandemic. This led to protests and rebellions as the truth became disseminated. Second, by infecting so many it allowed States to declare that the virus had become endemic. Thus, despite a sixth wave from the BA.2 variant lockdowns came to an end.

As a dog returns to his vomit, so a fool repeats his folly.
—Proverbs 26:11

Introduction

On January 5, 2020 the World Health Organization (WHO) published its first notification of a new virus.¹ China was the first country to put a lockdown in place, which it did on January 23, and by April that year, half of the world’s population was under some form of lockdown (Sandford, April 2, 2020).² Canada began closures and restrictions of borders, Parliament, social gatherings, schools, restaurants, playgrounds, salons, spas, fitness centers, and care facilities throughout March of

2020, and remained under some form of lockdown until the late spring of 2022. From January 5, 2021 onwards, according to the Our World in Data “Stringency Index,” Canada had stronger lockdowns than the United States.

The use of lockdowns was not part of any existing WHO or CDC recommendation for dealing with pandemics.³ Indeed, within the literature on cost effective responses



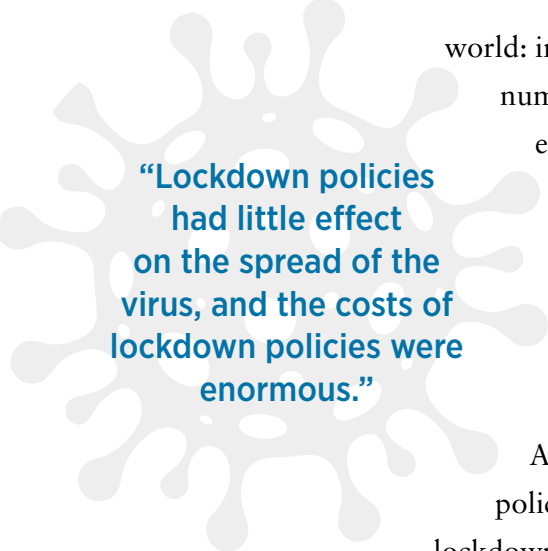
to pandemics one finds no recommendation for lockdowns. For example, Madhav (2017) surveys the pandemic response literature and finds evidence for mitigation through communication, education, isolation of infected individuals, social distancing, vaccines, and various treatments; however, there is no consideration that lockdowns should be applied to healthy and non-symptomatic people.

The rush to apply an untested, unrecommended, and obviously costly policy tool to entire populations was undoubtedly fueled by two factors. First, many mistakenly thought that COVID-19 could be eradicated using a comprehensive track/trace/isolate strategy in the way SARS had been dealt with in 2004.⁴ Second, groups of applied mathematicians immediately called for lockdowns,⁵ and their apocalyptic predictions heavily influenced policymakers.⁶ Taken together, these factors caused public health officials and politicians to panic.

The immediate massive death toll did not happen; indeed, after five waves it still had not happened. The epidemiological SIR models used throughout the pandemic repeatedly failed to accurately estimate cases, hospitalizations, and deaths.⁷ This failure is not surprising given that the models have been found wanting: their assumed key parameter values were too high, and they failed to include endogenous human responses to viral threats.⁸

Much was learned about COVID-19 throughout the first wave of the virus in 2020. An analysis of over 44,000 cases in China as of February 11, 2020 showed all of the basic epidemiological characteristics of the virus (Feng, Li, and Zhang, et al., 2020).⁹ Early findings were confirmed multiple times as the virus spread around the

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world: infection fatality rates were lower than assumed, the reproduction number settled around 1 (an endemic state) 20 days after the virus entered a population, and COVID-19 deaths followed an age gradient resembling natural age-related mortality. This last finding, that the mortality risk from COVID-19 heavily depended on age, was known since the beginning, and should have been paramount for any lockdown policy. COVID-19 was *never* a serious threat for healthy people under age 60.

Analysts realized two other things by the fall of 2020: lockdown policies had little effect on the spread of the virus, and the costs of lockdown policies were enormous. The ineffectiveness of lockdowns was dramatically shown in the summer of 2020 by Atkeson et al., and by the following spring a survey of evidence concluded that “lockdowns have had, at best, a marginal effect on the number of COVID-19 deaths” (Allen, 2022: 21). Recently, Herby et al. conducted a meta-analysis on all lockdown studies related to mortality and concluded,¹⁰

While... lockdowns have had little to no public health effects, they have imposed enormous economic and social costs where they have been adopted. In consequence, lockdown policies are ill-founded and should be rejected as a pandemic policy instrument. (2022: 2)¹¹

The mystery

Thus, within months of the initial panic several facts were clear: the models were wrong; COVID-19 could not be contained; the disease threatened only a particular segment of the population; those who died had four comorbidities on average¹²; lockdown restrictions were ineffective; and the restrictions were detrimental for commercial activity, mental health, and educational opportunities, and had other health consequences. All of these facts pointed towards a change in approach by the fall of 2020.¹³

And therein lies the mystery. There was no fundamental change in approach. In Canada, for example, restrictions and policies remained relatively constant for two years. Late in the Omicron wave BC was still under public health orders restricting gatherings in homes, closing fitness centres, requiring vaccine passports for non-essential activities (like attending church when the numbers were over 50 percent capacity), prohibiting weddings and funerals, and mandating indoor masks everywhere, to name a few.¹⁴ Other provinces had curfews and threatened to withhold health services to the unvaccinated or charge for the service. Not only did the policies remain the same, but enforcement increased. On February 22, 2022, the federal government infamously invoked the Emergencies Act,

bringing into effect extraordinary federal powers to shut down a gathering by a group of truckers in Ottawa protesting the government's COVID-19 policy.¹⁵ Why did governments persist in using failed policies that were extremely costly and increase the enforcement of those policies over time?



The perfect COVID storm that arrived in March 2020 led politicians to panic, but as the truths of

the pandemic were quickly revealed in the late spring and early summer of 2020 it became obvious that they had made an enormous policy mistake. By April it was clear that death counts were going to be only 3 to 6 percent of what had been predicted, while the fiscal costs of lockdown were already enormous.¹⁶

To admit such a mistake would be exceptionally costly to a government, and this led to a bad “double down” political equilibrium across most of the globe.¹⁷ The double-down strategy comes from the card game Blackjack, and refers to continuously doubling one's bet after a loss in the hopes of ultimately winning and thereby breaking even. Once the game starts there is only one equilibrium: keep doubling down until victory. After every loss, the bet is doubled and the stakes get higher; nothing can get in the way of another bet, and the gambler who doubles down must stop at nothing to carry on. To quit halfway is to incur enormous personal losses to no effect.

“Why did governments persist in using failed policies that were extremely costly and increase the enforcement of those policies over time?”


Thus, “two weeks to bend the curve” became a string of “circuit breakers” and other insidious euphemisms for curtailed liberties that ultimately culminated in the imposition of the Emergencies Act in Canada, all in the hope that an endemic state was always around the corner and victory could be declared.

Such a destructive game, however, can be sustained only with political support. This support came from two sources. First, there were many winners from the lockdowns. For many in the “laptop class,” the lockdown was the “great vacation,” the “great excuse,” and the “great opportunity.”

Lockdowns transferred wealth to this group, and the recipients gladly joined the state in promoting them.¹⁸ Second, the equilibrium was supported by a campaign of fear that repeatedly told average citizens that death was “at the door,” “now is not the time to let our guard down,” “we are all in this together,” and “let’s not lose what we have gained so far.” The absurd goal of “zero-COVID” became a belief among many ordinary people who, despite suffering from the consequences of lockdown, supported the policies and actually helped enforce state regulations through social stigma and shaming of those who objected.

Inequality everywhere

Aside from the Jeff Bezos of the world whose cumulative wealth increased by \$86 billion over the first year of the pandemic (Peterson-Withorn, 2020), many others were winners due to the pandemic’s effect on the level of socio-economic inequality. As inequality increases, those in the top of the distribution are more successful in competing than those at the bottom for goods and services, even if average outcomes deteriorate.



“The negative effects of lockdowns have fallen disproportionately on the young, the poor, people of colour,... and many others at the bottom of the socio-economic ladder.”

Early research into the lockdowns examined the overall negative effects, but since the summer of 2021 research has shown that these negative outcomes did not fall evenly across populations. Rather, the negative effects of lockdowns have fallen disproportionately on the young, the poor, people of colour, those with health problems other than COVID-19, the least educated, blue collar workers, single parents, and many others at the bottom of the socio-economic ladder. The result has been a massive increase in economic inequality.¹⁹

Stantcheva reviews the evidence on inequality across many countries. On income inequality she notes that “the direct impact of the pandemic has been regressive ...” (2022: 2) because low-income workers face longer unemployment spells and an inability to work remotely. Remote work induced wage premiums that were unavailable to low-wage workers. Higher wage workers were able to save more, and exploit digital opportunities for both income and consumption.

Stantcheva also notes wide differences in the performance of a number of economic sectors. Some firms were able to stay open, exploit online opportunities, and grow during lockdown, while others had the opposite experience. Urban regions were much more able than rural regions to adapt to lockdown protocols. Women experienced higher levels of unemployment and reduced work hours because they were more likely to work in occupations hit hardest by lockdowns and because school closures

imposed child care commitments disproportionately on them. And, as 90 percent of the world's students experienced some type of school closures, young people experienced all sorts of negative outcomes that were not evenly distributed.



Studies on inequality abound: Deryugina et al. (2022) and Garcia and Cowan (2022) found that parents with limited access to child care suffered more career

interruptions and that those effects fell mostly on low-educated parents; Autor et al. (2022) found that about 70 percent of the US Paycheck Protection Program was regressively captured by business owners and shareholders, not workers; Halloran et al. (2021) found that school closures led to reduced standardized test scores for all students, but also that the variance in performance increased, with larger effects for Black and Hispanic students; Brouillette et al. (2021) found that Black welfare fell by more than White welfare over the past two years due to higher mortality. And on and on. Some groups were winners (e.g., the “laptop class” (Althoff et al. 2021)), while other groups were losers (e.g., those with school-age children (Fairlie et al. (2021)), or young workers (Chatterji and Li, 2021)).

Winners clearly support lockdowns, and this may explain one of the puzzling behaviours over the past two years: a minority of parents strongly supported school closures. If school closures harm all students, why would some parents support them? The answer: some students were harmed much less than others and their relative standing improved. Public school is a socio-economic leveler. If a wealthy parent has an average child, that child competes with children who receive public support in the schools. If that support is removed and the wealthy parent is working from home, has multiple home computers with fast internet, and has private tutor support, that average child might end up in the top of the class. If relative standing matters, some parents will support a policy that harms everyone unequally.

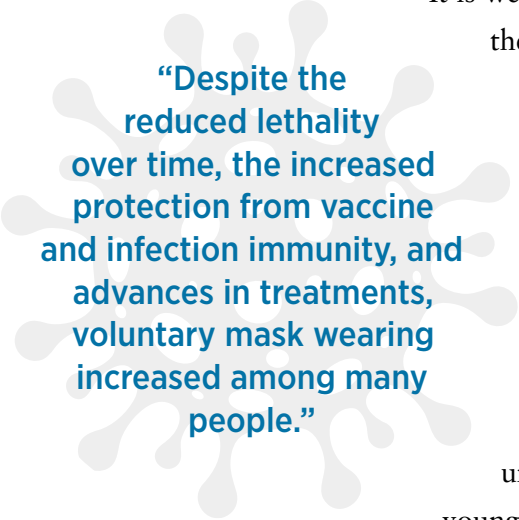
The promotion of fear

The lockdown policy will likely go down in history as one of the greatest peacetime policy disasters made by a non-authoritarian government, and it would not have been possible for a minority of winners to sustain such destruction for two years without support from large segments of the population. One of the most deceitful aspects of lockdown policy has been the promotion of fear, guilt, and unrealistic negative consequences—especially among children and young adults.

Throughout the entire pandemic, information regarding COVID risks has been presented in ways that exaggerated risks. Health officials made everyday announcements regarding deaths as if *from* COVID, rather than deaths *with* COVID. When death rates fell with the Delta variant, health officers reported cases rather than deaths. When death rates fell by even more with Omicron, health officials reported total death levels rather than death rates. When the Omicron variant first appeared, health officers emphasized the high rate of transmissibility but downplayed the reported reduced lethality. If there was a dark side to any information, it was reported to the exclusion of positive news.²⁰

Worse, officials dismissed past general understanding of coronaviruses. They led the public to believe that the virus could be eliminated if the population was vaccinated and followed mandates despite knowing that the virus coexists in humans and animals, constantly mutates, and despite the fact that there was no strong evidence that social distancing and masking could stop the spread of the virus. They led the general public to believe that “zero-COVID” was actually possible and necessary since “no one is safe, until everyone is safe.”²¹ This “great forgetting” extended to the previously well understood concept of natural immunity, which was not accepted as a legitimate public protection despite evidence to the contrary.²² Therefore, those who did not obey and become vaccinated were labelled “selfish” or worse, prevented from various forms of travel and denied access to services that required them to present a vaccine passport.

A factor that gets in the way of promoting fear in the general population is that eventually too many become infected and learn the truth. Such an understanding has to be delayed to support the political equilibrium. This explains three lockdown features: universal masking, vaccine passports, and accelerated enforcement.²³



“Despite the reduced lethality over time, the increased protection from vaccine and infection immunity, and advances in treatments, voluntary mask wearing increased among many people.”

It is well known that masks were not recommended at the beginning of the pandemic based on standard medical practice. It was also well known throughout the pandemic that cloth and surgical masks had little to no effect on virus transmission, and this was particularly true for the Delta and Omicron variants. And yet mask mandates became *stronger* over time. This is consistent with the double-down strategy: masks promote fear and anxiety, and they are a constant reminder that a threat is near. Despite the reduced lethality over time, the increased protection from vaccine and infection immunity, and advances in treatments, voluntary mask wearing increased among many people, especially the young. Many people wore them outside, while riding bikes, or driving alone in their cars. Such was the success of masking propaganda.

The Omicron variant bypassed the Alpha-based vaccines, and vaccinated people became infected with COVID-19. The rate of infection is unknown, but it seems likely that it was not different from that of the unvaccinated.²⁴ It is known that conditional on infection, both the vaccinated and unvaccinated transmit the virus at the same rate (Riemersma et al., 2021). The major



difference is that the vaccinated are more likely to be asymptomatic. This turns the logic of vaccine passports on its head. Those with passports become “more dangerous” because no one can tell if a vaccinated asymptomatic person is infected. And yet, passports remained throughout the Delta and Omicron waves. Once again, the answer is that “showing one’s papers” is a reminder that death is around the corner and obeisance to the state is necessary.

All pandemics end either through eradication, or more likely, with the virus becoming endemic in the population. This certainty is critical for the double-down strategy. If the state can hold out long enough, it knows that one day it can claim victory. What gets in the way is any evidence that counters the state narrative. Sweden was an outlier from the beginning, and for the first year was vilified and held up as a cautionary tale.²⁵ Once it became clear that Sweden performed better than the European Union over the course of the pandemic, that fact was simply ignored. In Canada, a protest against vaccine mandates put on by a group of truckers resulted in the imposition of the Emergencies Act—at the end of the Omicron wave and *after* the protesters were arrested and removed. The lesson was clear: no protests allowed. Having reached the finish line, the prime minister was not about to let another narrative be heard.

Together, all of these efforts led the majority of the population to believe that the COVID-19 threat was on par with smallpox, and that its elimination was possible only with a complete adherence to government-imposed mandates. The government’s actions matched and justified the fear instilled.

Conclusion

Despite the aphorism from Proverbs, I do not believe politicians and public health officers are fools—they only appear so. Those in political power have interests in public health, but also interests in staying in power. The terrible actions of the state in response to COVID-19 were the only political way out after the blatant mistake public officials made in March 2020.

“We must learn about the pathetic and ineffective performance of lockdown mandates and the catastrophic consequences that resulted from them.”

All viruses reach a biological endemic state eventually. This truth was always the glimmer of hope in the double-down strategy because an endemic state ends the game and allows for the declaration of victory.²⁶ As 2022 marched on, and the costs of the various lockdown mandates continued to be revealed, and as various court challenges arose over potential human rights violations caused by lockdowns, political leaders, public health officials, and others who supported lockdowns have been cautious in claiming too much. There have even been calls for a general “amnesty.”²⁷ Still, even on morning talk shows one hears much cheap talk that the victory over COVID-19 would not have been possible had the general public not followed the political advice.²⁸

Those who have suffered from the consequences of the lockdowns might choose to accept the politicians’ faint praise; after all, it will be better than nothing. But to accept it is to open the door to future restrictions and eliminations of human rights. The population will become vulnerable to the line “remember how we defeated COVID?”

Rather, as hard as it is, we must come to understand the truth about what happened. We must learn about the pathetic and ineffective performance of lockdown mandates and the catastrophic consequences that resulted from them. We must understand that information was fed to us in a specific way for a specific purpose. We must not allow these policies to be “put in the back pocket” for future use. Otherwise, it is we who will return to our vomit.



Endnotes

- 1 See <https://www.who.int/emergencies/disease-outbreak-news/item/2020-DON229>. The WHO declared a world-wide pandemic on March 11.
- 2 “Lockdown” generically refers to state actions that imposed various forms of non-pharmaceutical interventions: mandatory state-enforced closings of business, education, recreation, and spiritual facilities; mask and social distancing orders; stay-in-place orders; and restrictions on private social gatherings.
- 3 See, for example, the CDC (2014) response framework for pandemics, which does not include any reference to mandated lockdowns. The closest it comes is to encourage community mitigation through “voluntary isolation by staying home when ill” (p. 12). A search of the National Library of Medicine finds no articles on lockdown as a pandemic response prior to 2020.
- 4 There was sufficient information by April of 2020 to know this could not be accomplished. The first known case in Wuhan was in November 2019. In all likelihood the virus had already been circulating outside of China by December 2019, making eradication impossible by even March of 2020. Incredibly, governments clung to this strategy for over two years. Lockdown required governments to track and trace infections, and this may explain why governments also discouraged the use of rapid home tests (DePillis, 2021).
- 5 Ferguson et al. (2020, p. 16): “We therefore conclude that epidemic suppression is the only viable strategy at the current time. The social and economic effects of the measures which are needed to achieve this policy goal will be profound.”
- 6 In March, Ferguson et al. (2020), predicted that Canada would experience 266,741 COVID deaths by July of 2020 without a lockdown. Under a full lockdown they predicted 132,687 deaths. By July 2020 9,019 Canadians had died with COVID-19.
- 7 “SIR” stands for the number of people susceptible (S), infectious (I), or recovered (R). It is a mechanical model used to predict how a virus progresses through a population. Amazingly, these refuted models continued to be used throughout the pandemic. The BC COVID-19 Modelling Group (2021) claimed in their December 22 report that British Columbia faced an “Omicron tidal wave” and that there would be “extreme” pressure on hospitals in January 2022. Neither happened.
- 8 See Allen (2022) for a full discussion of problems with SIR model estimates and for early cost/benefit studies on lockdowns.
- 9 Indeed, Dr. David Katz, president of True Health Initiative, laid out all of the basic COVID-19 characteristics and the optimal policy response in an article in the *New York Times* on March 20, 2020!
- 10 Using the average lockdown effect estimated by this study suggests that all of Canada’s lockdown efforts saved only 70 lives over the first year of the pandemic. This study has come under some criticism. Some, like Banholzer et al. (2022) are critical of meta-analysis. Chernozhukov et al. (2022) complain that the meta-analysis places too much weight on a particular study. Both miss the broader issue. A properly done meta-analysis provides a more precise point estimate, and depends on a number of conditions. Whether the Herby et al. study meets these conditions is one matter, but it remains true that the studies it examined all find that the benefits of lockdowns were minimal.
- 11 Kerpen et al. echo this conclusion when they conclude that “... states that withdrew the most from economic activity [i.e., employed lockdowns] did not significantly improve health by doing so” (2022: 3).
- 12 See https://www.cdc.gov/nchs/nvss/vsrr/COVID_weekly/index.htm#Comorbidities.
- 13 From the beginning many people cautioned against overreacting to the virus threat. This included four courageous epidemiologists: Stanford University’s John Ioannidis, who warned that the estimated IFR of COVID-19 did not justify the costs; and Jayanta Bhattacharya (Stanford), Martin Kulldorff (Harvard), and Sunetra Gupta (Oxford) who published the Great Barrington Declaration on October 4, 2020, which argued scarce resources to fight COVID-19 should be directed where their marginal product is highest.
- 14 BC did not remove vaccine passports until April 8, 2022, despite the fact these were ineffective after the arrival of the Delta variant in the fall of 2021.
- 15 The Emergencies Act (1988) states that it is to be invoked under “urgent and critical” circumstances that “seriously endangers” lives or “seriously threatens the ... sovereignty, security and territorial integrity of Canada.” The Act was invoked, but never confirmed by the Senate. The prime minister revoked it when it became clear it would not pass the second chamber.
- 16 According to Fontaine, Leblanc, and Shotlander (2022), “The S&P/TSX Composite index dropped by 37 percent between February 19 and March 23, 2020... a drop of around \$1 trillion in the value of those firms... about half of the annual Canadian domestic output the previous year.” Of course, the lost GDP is likely the minor cost; from the first lockdown it was clear that the non-market costs were enormous

- (Allen, 2022). Bardosh *et al.* (2022) argue that government policies have only gotten worse with vaccine mandates, which they claim not only entrench opposition, create disunity, and erode civil liberties, but also reduce hospital capacity and erode trust in the public health system and in government in general. The lack of social trust will likely hinder future health policy.
- 17 By “equilibrium” I mean that a self-enforced spontaneous order arose out of the private decisions of the policy decisionmakers, such that none had an incentive to deviate from their decisions. Lockdown was not an international conspiracy.
 - 18 See Abay *et al.* (2020), which identified industries that were major winners of lockdown policies including those that performed remotely, resolved problems with personal contact, or made deliveries. Owners of large technology firms like Amazon, Apple, Facebook, Google, Zoom, and Netflix saw large increases in their net worth. According to *Forbes*, US billionaires increased their wealth by \$1.2 trillion during the first year of the pandemic (Peterson-Withorn, 2021).
 - 19 I will ignore the effect of rent seeking on inequality, but this was likely significant. It is common in the news to hear of organizations receiving questionable funding—such as the exclusive Georgian Peaks Ski Club posting a \$1.54 million surplus while also receiving a \$1.37 million federal COVID relief package (Gatehouse and Wesley, 2022, March 7). See also Autor *et al.* (2022).
 - 20 Sacerdote *et al.* (2020) found that 91 percent of US news stories were negative in tone, even when the content of the news item was positive.
 - 21 This was the mantra of the World Health Organization (WHO): <https://www.who.int/initiatives/act-accelerator/covax>.
 - 22 Gazit *et al.* (2021) found “natural immunity conferred longer lasting and stronger protection against infection, symptomatic disease and hospitalization caused by the Delta variant... compared to... two-dose vaccine-induced immunity.”
 - 23 It also explains the attacks many people faced when challenging the narrative. Such people were labelled “spreaders of misinformation” even if, or especially because, they were credentialed scientists. The most infamous case of this was the exchange of emails between Dr. Fauci and Dr. Collins, in which they conspired to dismiss the writers of the Great Barrington Declaration (see Wall Street Journal Editorial Board, 2021, December 21).
 - 24 Wilder-Smith (2021: 153) found that “... the vaccine effect on reducing transmission is minimal in the context of delta variant circulation.”
 - 25 As were Florida, Texas, and other jurisdictions that fell out of line and demonstrated the possibility that lockdowns were not necessary.
 - 26 It was also the glimmer of hope for all of the opposition political parties. Normally, the opposition would hold a government accountable for policy blunders; however, with COVID lockdowns this did not happen. It could not happen because the opposition parties also panicked early on and supported the first lockdowns.
 - 27 Oster (2022), even though she did significant work on the damages caused by school closures, argues for a general amnesty to those who made the wrong decisions.
 - 28 Some congratulations may have happened too soon. Dr. Bonnie Henry, BC’s public health officer, was given the Order of B.C. in August of 2021, even before the Delta variant had passed through.

References

- Abay, Kibrom, Kibrom Tafere, and Andinet Woldemichael (2020). *Winners and Losers from COVID-19: Global Evidence from Google Search*. Policy Research Working Paper number 9268. World Bank. <<https://openknowledge.worldbank.org/bitstream/handle/10986/33852/Winners-and-Losers-from-COVID-19-Global-Evidence-from-Google-Search.pdf>>, as of December 12, 2022.
- Allen, Douglas W. (2022). COVID-19 Lockdown Cost/Benefits: A Critical Assessment of the Literature. *International Journal of the Economics of Business* 29, 1: 1-32. <<https://www.tandfonline.com/doi/abs/10.1080/13571516.2021.1976051>>, as of December 12, 2022 [paywall].
- Althoff, Lukas, Fabian Eckert, Sharat Ganapati, and Conor Walsh (2022). *The Geography of Remote Work*. Working Paper 29181. National Bureau of Economic Research. <https://www.nber.org/system/files/working_papers/w29181/w29181.pdf>, as of December 12, 2022.

Atkeson, Andrew, Karen Kopecky, and Tao Zha (2020). *Four Stylized Facts about COVID-19*. Working Paper 27719. National Bureau of Economic Research. <https://www.nber.org/system/files/working_papers/w27719/w27719.pdf>, as of December 12, 2022.

Autor, David, David Cho, Leland Crane, et al. (2022). *The \$800 Billion Paycheck Protection Program: Where Did the Money Go and Why Did It Go There?* Working Paper 29669. National Bureau of Economic Research. <https://www.nber.org/system/files/working_papers/w29669/w29669.pdf>, as of December 12, 2022.

Banholzer, Nicolas, Adrian Lison, and Werner Vach (2022). *Comment on “A Literature Review and Meta-Analysis of the Effects of Lockdowns On COVID-19 Mortality.”* Working Paper (March). ETH Zurich. <<https://doi.org/10.3929/ethz-b-000537522>>, as of December 12, 2022.

Bardosh, Kevin, Alexandre de Figueiredo, Rachel Gur-Arie, et al. (2022). The Unintended Consequences of COVID-19 Vaccine Policy: Why Mandates, Passports, and Segregated Lockdowns May Cause more Harm than Good. *BMJ Global Health*. <<https://ssrn.com/abstract=4022798>>, as of December 12, 2022.

BC COVID-19 Modelling Group (2021). *COVID Model Projections, December 22, 2021*. BC COVID-19 Modelling Group. <<https://bccovid-19group.ca/post/2021-12-22-report/COVID19group-2021-12-22.pdf>>, as of December 20, 2022.

Brouillette, Jean-Felix, Charles I. Jones, and Peter J. Klenow (2021). *Race and Economic Well-Being in the United States*. Working Paper 29539. National Bureau of Economic Research. <<https://www.nber.org/papers/w29539>>, as of December 12, 2022.

Centers for Disease Control and Prevention (CDC) (2014). *Updated Preparedness and Response Framework for Influenza Pandemics*. Morbidity and Mortality Weekly Report (September 26). CDC. <<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6306a1.htm>>, as of December 12, 2022.

Chatterji, Pinka, and Yue Li (2022). *Recovery from the COVID-19 Recession: Uneven Effects among Young Workers?* Working Paper 29307. National Bureau of Economic Research. <<https://www.nber.org/papers/w29307>>, as of December 12, 2022.

Chernozhukov, Victor, Hiroyuki Kasahara, and Paul Schrimpf (2022). *Comments on the “John Hopkins” Meta Study (Herby et al., 2022) and Chisadza et al. (2021)*. [No publisher]. <<https://cdn.factcheck.org/UploadedFiles/Chernozhukov-Kasahara-Schrimpf-comments-on-meta-analysis-and-Chisadza-et-al.pdf>>, as of December 12, 2022.

DePillis, Lydia (Dec 21, 2021). This Scientist Created a Rapid Test Just Weeks Into the Pandemic. Here’s Why You Still Can’t get it. *ProPublica*. <<https://www.propublica.org/article/this-scientist-created-a-rapid-test-just-weeks-into-the-pandemic-heres-why-you-still-cant-get-it>>, as of December 21, 2022.

Deryugina, Tatyana, Olga Shurchkov, and Jenna Stearns (2022). *Public School Access or Stay-at-Home Partner: Factors Mitigating the Adverse Effects of the COVID-19 Pandemic on Academic Parents*. AEA, American Economic Association Papers and Proceedings 112 (May): 267-271. <<https://www.aeaweb.org/articles?id=10.1257/pandp.20221012>>, as of December 12, 2022.

Fairlie, Robert, Kenneth Couch, and Huanan Xu (2021). *The Evolving Impacts of the COVID-19 Pandemic on Gender Inequality in the U.S. Labor Market: The COVID Motherhood Penalty*. Working Paper 29426. National Bureau of Economic Research. <<https://www.nber.org/papers/w29426>>, as of December 12, 2022.

Feng, Zijian, Qun Li, Yanping Zhang, et al. (2020). Vital Surveillances: The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) — China, 2020. *China CDC Weekly* 2, 8: 113-122. <<https://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51>>, as of December 12, 2022.

Ferguson, Neil M., Daniel Laydon, Gemma Nedjati-Gilani, et al. (2020). *Impact of Non-Pharmaceutical Interventions (NPIs) to Reduce COVID-19 Mortality and Healthcare Demand*. Imperial College London, COVID-19 Response Team (March). <<https://spiral.imperial.ac.uk/handle/10044/1/77482>>, as of December 12, 2022.

Fontaine, Jean-Sébastien, Guillaume Ouellet Leblanc, and Ryan Shotlander (2022). *Canadian Stock Market Since COVID-19: Why a V-Shaped Price Recovery?* Staff Analytical Note 2020-22 (October). Bank of Canada. <<https://www.bankofcanada.ca/2020/10/staff-analytical-note-2020-22>>, as of December 12, 2022.

Garcia, Kairon Shayne, and Benjamin W. Cowan (2022). *The Impact of U.S. School Closures on Labor Market Outcomes during the COVID-19 Pandemic*. NBER Working Paper 29641. National Bureau of Economic Research. <<https://www.nber.org/papers/w29641>>, as of December 12, 2022.

Gatehouse, Jonathon, and Andreas Wesley (2022, March 7). Exclusive Ski Club Received \$1.4M in Federal COVID Relief Amid ‘Record’ Year. *CBC News*. <<https://www.cbc.ca/news/investigates/georgian-peaks-covid-relief-surplus-1.6367204>>, as of December 12, 2022.

Gazit, Sivan, Roei Shlezinger, Galit Perez, et al. (2021). Comparing SARS-CoV-2 Natural Immunity to Vaccine-Induced Immunity: Reinfections Versus Breakthrough Infections. *medRxiv* (August). <<https://www.medrxiv.org/content/10.1101/2021.08.24.21262415v1>>, as of December 12, 2022.

Halloran, Clare, Rebecca Jack, James C. Okun, and Emily Oster (2021). *Pandemic Schooling Mode and Student Test Scores: Evidence from US States*. NBER Working Paper 29497 (November). National Bureau of Economic Research. <<https://www.nber.org/papers/w29497>>, as of December 12, 2022.

Herby, Jonas, Lars Jonung, and Steve H. Hanke (2022). *A Literature Review and Meta-Analysis of the Effects of Lockdowns on COVID-19 Mortality*. Studies in Applied Economics number 200 (January). John Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise. <<https://sites.krieger.jhu.edu/iae/files/2022/01/A-Literature-Review-and-Meta-Analysis-of-the-Effects-of-Lockdowns-on-COVID-19-Mortality.pdf>>, as of December 12, 2022.

Katz, David L. (2020, March 20). Is Our Fight Against Coronavirus Worse Than the Disease?” *New York Times*. <<https://www.nytimes.com/2020/03/20/opinion/coronavirus-pandemic-social-distancing.html>>, as of December 12, 2022.

Kerpen, Phil, Stephen Moore, and Casey B. Mulligan. (2022). *A Final Report Card on the States’ Response to COVID-19*. NBER Working Paper 29928 (April). National Bureau of Economic Research. <<https://www.nber.org/papers/w29928>>, as of December 12, 2022.

Madhav, Nita, Ben Oppenheim, Mark Gallivan, et al. (2017). Chapter 17: Pandemics: Risks, Impacts, and Mitigation. In D.T. Jamison, H. Gelband, S. Horton, et al. (eds.), *Disease Control Priorities: Improving Health and Reducing Poverty*, 3rd ed. (The International Bank for Reconstruction and Development / The World Bank): 315-358. <<https://www.ncbi.nlm.nih.gov/books/NBK525302/>>, as of December 12, 2022.

Oster, Emily (2022, October 31). Let’s Declare a Pandemic Amnesty. *The Atlantic*. <<https://www.theatlantic.com/ideas/archive/2022/10/covid-response-forgiveness/671879/>>, as of December 21, 2022.

Peterson-Withorn, Chase (2021, April 30). How Much Money America’s Billionaires Have Made During the COVID-19 Pandemic. *Forbes*. <<https://www.forbes.com/sites/chasewithorn/2021/04/30/american-billionaires-have-gotten-12-trillion-richer-during-the-pandemic/?sh=71f4b2f6f557>>, as of December 12, 2022.

Riemersma, Kasen, Brittany Grogan, Amanda Kita-Yarbro, et al. (2021). Shedding of Infectious SARS-CoV-2 Despite Vaccination when the Delta Variant is Prevalent – Wisconsin, July 2021. *medRxiv* (August 11). <<https://www.medrxiv.org/content/10.1101/2021.07.31.21261387v3>>, as of December 12, 2022.

Sacerdote, Bruce, Ranjan Sehgal, and Molly Cook (2020). *Why is All COVID-19 News Bad News?* NBER Working Paper 28110. National Bureau of Economic Research. <<https://www.nber.org/papers/w28110>>, as of December 12, 2022.

Sandford, Alasdair (2020, April 3). Coronavirus: Half of Humanity Now on Lockdown as 90 Countries Call for Confinement. *Euronews*. <<https://www.euronews.com/2020/04/02/coronavirus-in-europe-spain-s-death-toll-hits-10-000-after-record-950-new-deaths-in-24-hou>>, as of December 12, 2022.

Stantcheva, Stefanie (2022). *Inequalities in the Times of a Pandemic*. Working Paper 29657 (January). National Bureau of Economic Research. <<https://www.nber.org/papers/w29657>>, as of December 12, 2022.

Wall Street Journal Editorial Board (2021, December 21). How Fauci and Collins Shut Down COVID Debate. *Wall Street Journal*. <<https://www.wsj.com/articles/fauci-collins-emails-great-barrington-declaration-covid-pandemic-lockdown-11640129116>>, as of December 12, 2022 [paywall].

Wilder-Smith, Annelies (2022). What is the Vaccine Effect on Reducing Transmission in the Context of the SARS-CoV-2 Delta Variant? *Lancet* 22, 2: 152-153. <[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(21\)00690-3/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00690-3/fulltext)>, as of December 12, 2022.

Acknowledgments

The author wishes to thank Don Boudreaux and Jens Zimmermann for comments. Any remaining errors are the sole responsibility of the author. As the researcher has worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.

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