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The Covid-19 pandemic lockdown: Curtailing the negative economic impacts

Abstract

This paper traces the history of pandemics over the last 2,000 years and determines the adverse economic effects of the current Covid-19 on the ten largest economies in the world today, bringing out an association between economic development and the spread of the virus by using GDP, manufacturing exports and deaths as percentage of reported cases. Public and private sector policy measures to resolve the crisis and return to a new normalcy are the hallmarks of the recommendations for governments and firms. It is concluded that the genetic instincts of homo sapiens to survive would help in the battle to rescue the world economy from the doldrums.

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1 Introduction

The coronavirus disease 2019 (Covid-19) is a plague, a medical condition or health shock that had become pandemic with widespread economic consequences across the globe, which made the WHO (World Health Organisation) to declare an emergency on 30 January 2020 (Sohrabi et al, 2020). A plague arises from an infestation which results in pestilence, bringing calamity that spread quickly, taking people's lives. The rapid spread is due to globalisation - the inter-connectedness and integration amongst countries worldwide. The virus that broke out in Wuhan, in China, in December 2019 had spread across the globe affecting European and American countries even more than China itself. It appears that the world economy is now on a journey to disruption because of the attendant adverse economic implications. There are massive travel cancelations;

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tourists could not travel because of the lockdown; public gathering is restricted; there are capital and consumer goods production stoppages; farmers are sitting at home; and there is a huge pressure on health facilities, diagnostic tools and medicines.

Table 1. History of Pandemics

S/N	NAME	YEAR	ORIGIN	SPREAD	DEATHS
1	Antonine Plague	165	Rome	Roman Empire	5,000,000
2	Plague of Justinian (bubonic plague)	541	Byzantine Empire	Global	10% of World
3	The Black Death	1346	Asia	Global	50% of Europe
4	Cocoliztli - Viral Haemorrhagic Fever	1545	Mexico	America	15,000,000
5	Flu Pandemic	1889	Russia	Global	1,000,000
6	Spanish Flu	1918	World War I	Global	100,000,000
7	Asian Flu (H2N2)	1957	China	Global	1,100,000
8	AIDS Pandemic	1981	Chimpanzee	Global	35,000,000
9	Hong Kong Flu (H3N2)	1968	Hong Kong	Global	1,000,000
10	Avian (Swine) Flu (N1H1)	2009	USA	Global	500,000
11	Severe Acute Respiratory Syndrome (SARS)	2002	China	China, Taiwan, Canada	Uncoordinated figures.
12	Middle East Respiratory Syndrome (MERS-CoV)	2012	Saudi Arabia	Global	35% of all cases
13	Ebola Virus Disease (EVD)	1976	DR Congo	West Africa	11,325
14	Coronavirus Disease 2019 (Covid-19)	2020	China	Global	134,000 Still counting

Source: Baldwin & Mauro (2020); Livescience (2020).

A plague is an epidemic when it is restricted to a geographical area or country, as it happened in Egypt 3,500 years ago in which the mortality and morbidity rates were high among men and cattle (Holy Bible). But immediately a plague spreads across to other geographical areas or nations, it becomes a pandemic. As shown in Table 1, Covid-19 is the fourteenth major pandemic in the last 2,000 years. From the Antonine Plague of 165 AD (that exterminated 5 million people) to the ongoing Covid-19, the world had lost people and resources. The Spanish flu killed about 100 million people; AIDS has taken 35 million lives; Cocoliztli took 15 million lives; and the other plagues took many lives ranging from tens of thousands to a million people. As at the 15th of April 2020, the mortality rate of covid-19 had gone up in spite of governmental efforts at curtailment. The objective of this paper is to jolt households, firms and governments to identify the negative economic impacts of the pandemic

lockdown, and take positive measures to mitigate the effects on their finances. By doing this, the world economy would quickly return to normal after the anticipated restart.

2 The Link between Economic Powers and Covid-19 Cases

Table 2 shows the Covid-19 pandemic cases and the death tolls in the ten largest economies in the world. The pandemic data used is at 15 April 2020.

Table 2. Ten Largest Economies & Effect of Covid-19

S/N	Country	GDP	Mfg.	Exports	Mfg. Exports	Covid-19 Cases	Covid-19 Deaths	Death in 1m Pop	Deaths per Cases
1	USA	24%	16%	8%	8%	644,089	28,529	86.00	4%
2	China	16%	29%	13%	18%	82,295	3,342	2.00	4%
3	Japan	6%	8%	4%	5%	8,626	178	1.00	2%
4	Germany	5%	6%	8%	10%	134,753	3,804	45.00	3%
5	UK	3%	2%	2%	3%	98,476	12,868	190.00	13%
6	France	3%	2%	3%	4%	147,863	17,167	263.00	12%
7	India	3%	3%	2%	2%	12,370	422	0.30	3%
8	Italy	2%	2%	3%	3%	165,155	21,645	358.00	13%
9	Brazil	2%	1%	1%	1%	28,610	1,757	8.00	6%
10	Canada	2%	0%	2%	2%	28,379	1,010	27.00	4%
	Total	66%	69%	46%	56%	1,350,616	90,722		
	TOTAL	66%	69%	46%	56%	65%	67%		
	World	100%	100%	100%	100%	2,082,372	134,560	17.30	6%

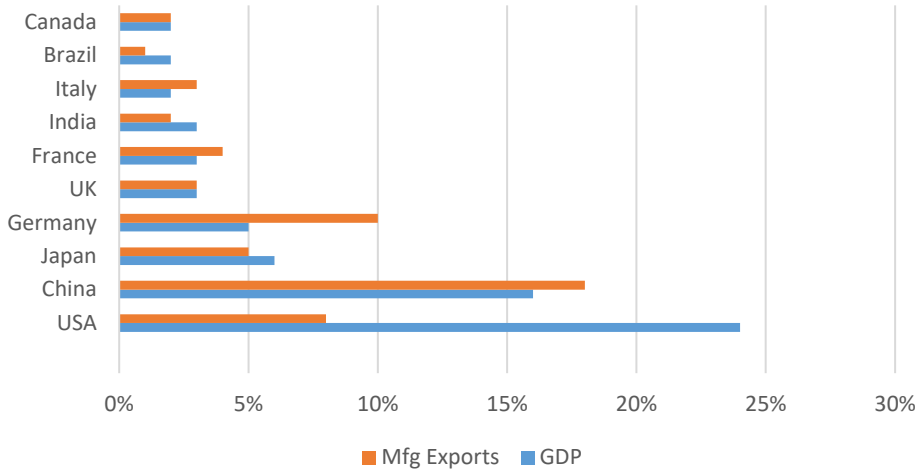
Source: Baldwin & Mauro (2020); Worldometer (2020).

The ten largest economies comprising USA, China, Japan, Germany, UK, France, India, Italy, Brazil, and Canada contribute 66 percent of world GDP, 69 percent of global manufacturing, 46 percent of world exports and 56 percent of global exports of manufacturing goods (Baldwin & Mauro, 2020). Data extracts from Worldometer (2020) show that the ten largest economies that produce 66 percent of global GDP are also experiencing 65 percent of the recent pandemic cases and 64 percent of the deaths. There appears to be a direct correlation between the economic and pandemic statistics. Because of the linkage amongst the large economies with China, being a direct source of capital inputs in the form of spare parts for other economies, the movement of persons also flow along the same path with the movement of goods. And since Covid-19 is transmitted from person to person, the virus then followed the flow of capital goods. However, there are marked differences in the capacity of health systems in each economy and the speed at which actions were taken to curtail the spread and treat the confirmed cases.

Figure 1 shows the relationship between manufacturing exports and GDP in the ten largest economies. While USA, Japan, India and Brazil show a

GDP higher manufacturing exports, China, Germany, France and Italy exhibits manufacturing exports that are higher GDP. In the UK and Canada, the GDP and manufacturing exports are at par.

Figure 1. GDP Vs Manufacturing Exports

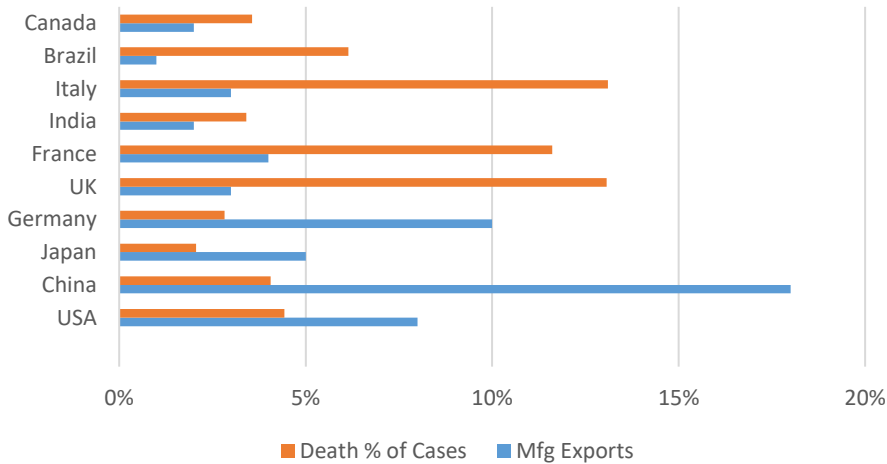


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Source: Prepared by Author

Figure 2 shows the relationship between manufacturing exports and Covid-19 death rates per cases in the ten largest economies. The ratio of manufacturing exports is higher than the ratio of deaths in China, Germany, USA and Japan. The reverse is recorded in Italy, UK, France, Brazil, Canada and India. The four most advanced nations tend to do better in managing the crisis than the others. This means, by extrapolation, that if they do better in manufacturing exports, then they could quickly produce medical equipment and materials needed to manage crisis. UK (13%), Italy (13%) and France (12%) are doing particularly badly, in that they have doubled the world average death rate of 6 percent.

Figure 2. Manufacturing Exports Vs Covid-19 Deaths



Source: Prepared by Author using Covid-19 data as of 15 April 2020

Table 3. Covid-19 Cases & Deaths in Other Countries

S/N	Country	Total Cases	Total Deaths	Deaths/ 1M pop	Deaths/ Cases	Global S/N
1	Spain	180,659	18,812	402.00	10%	2
2	Iran	76,389	4,777	57.00	6%	8
3	Belgium	33,573	4,440	383.00	13%	10
4	Israel	12,501	130	15.00	1%	19
5	Chile	8,273	94	5.00	1%	25
6	Ecuador	7,858	388	22.00	5%	26
7	Australia	6,447	63	2.00	1%	31
8	Mexico	5,399	406	3.00	8%	36
9	Malaysia	5,072	83	3.00	2%	39
10	Singapore	3,699	10	2.00	0%	45
11	South Africa	2,506	34	0.60	1%	52
12	Iceland	1,727	8	23.00	0%	59
13	Madagascar	110	0	0	NA	133
14	Nigeria	407	12	0.06	3%	99

Source: Worldometer (2020)

Taking some thirteen other countries across the continents and ranking them in order of incidence of Covid-19 cases resulted in Table 3. Belgium, though third in number of cases, recorded the highest in death rate per cases being 13 percent while Spain which recorded the highest number of cases has the second death rate being 10 percent. Nigeria is thirteenth on the list but has three percent death rate whilst Israel is fourth on the list with only one percent death rate. While Spain has 402 deaths per 1 million population and coming second in total number of cases (after USA), Nigeria has 0.06 death per 1 million population and comes to position 99 out of 212 countries. Interestingly, Madagascar recorded 110 cases but no deaths. According to Worldometer, Covid-19 case occurrence covers ages two to 74 with a median of 45 years, with 71 per cent of cases being males. People with pre-existing medical conditions appear more vulnerable, and death toll per day reached its peak of 7,959 on 15 April 2020.

3 Economic consequences

The concomitant economic consequences of the lockdown, the morbidity and mortality rates led to negative economic consequences. These include the loss to families, firms and governments in countries all over the world. Financial services, real estate, education, tourism, transportation, entertainment, hospitality and capital goods (especially automobile) sales felt the pangs more. But lesser impact fell on businesses that do not depend on physical presence, retailers using online apps or vending machines, and community stores opening to sell food items. China News Asia reported that the 6.3 million Chinese tourists that travelled abroad during the 2019 Lunar New Year holiday, generating travel revenue of around \$73 billion,

but the figures have reduced drastically in 2020 (Ayittey et al, 2020). In the same vein, Bouey (2020) reported a revenue loss of \$142 billion during the Chinese New Year in 2020. Globally, the chilling effect on tourism is as high as 70 percent (OECD, 2020). By mid-February, the Chinese Central Bank reflat the economy with a monetary stimulus package of \$174 billion. China went back to work on 21 February 2020 but the rest of the world are still in a lockdown. Baldwin and Mauro (2020) projected aviation industry passenger revenues losses to exceed \$29 billion. In India, where 75 percent of the 400 million workforce are either casual workers or self-employed, and firms are announcing salary cuts and layoffs, with aggregate demand falling drastically after the lockdown (India Times, 2020). The Indian economy, before the pandemic, was expressing a slowdown, expecting a GDP growth of 5% in 2019-2020, being the lowest in 11 years.

Whenever there is an epidemic or a pandemic, families lose bread winners leading to reduction or loss of income sources (Evans, 2020); children become orphans; parents lose children; investment opportunities are lost and assets are disposed to treat cases. Lockdown leads to lost work-hours in factories, closure of schools, postponement of events, travel cancelations, delayed investments, run on banks, shortfall in supply of spare-parts for factories and absence of socials. Governments expend resources to enforce lockdown, overstretch medicals personnel and sometimes exhaust medical facilities. All these lead to a fall in demand and supply (Maital & Barzani, 2020).

The interrelationship between national economies implies that Covid-19 pandemic lockdown in one country will affect economic activities in another country. For example, sales in China account for up to 40% of the German car industry's revenues (Baldwin & Mauro, 2020). This interconnectedness is spiral, linking countries in a web-like pattern, such that production stoppages in one affects raw materials availability in another in a chain that produces a multiplier effect on other areas of each economy worldwide. The lockdown is total in most countries. It signifies disintegration and disconnection between nations. The disruption, if prolonged, would lead to a major global recession. The Asian Development Bank traced the global economic impact to several main channels, in disease-affected countries, to loss of between 0.1 and 0.4 percent of global GDP (that is, between \$77 billion and \$347 billion (The Diplomat, 2020). According to Khan (2020), the containment and mortality costs will decrease EU GDP by two percent, US GDP by one and a half percent and Chinese GDP by several percent. He extrapolated that the direct and indirect negative economic consequences of Covid-19 will worsen the economic downturn the declining oil prices had affected the oil

producing countries. Real GDP experienced negative growth in the first quarter of 2020 with China, USA, EU and the entire world recording -2.7, -8.4, -9.7 and -4.7 percent respectively and it might take most countries up to two years to rebound to the pre-pandemic GDP levels (McKinsey, 2020).

4 Curtailing the Negative Economic Consequences

Governments, firms and households must tackle the negative economic impacts of the Covid-19 pandemic with wartime action, urgency and speed. The initial predisposition is to research into the remedial actions taken in earlier pandemics, and craft a Marshall Plan to bail out factories that may find it difficult getting out of the doldrums. Workers are currently receiving salaries but the employers are not earning revenues, leading a possible depletion of reserves. Nations are doling out to the vulnerable and spending much on medicals to curtail the spread of Covid-19, where will the stimulus package flow from when the crisis is over? The entire scenario spells a major global recession. As food becomes scarce, their prices will skyrocket and this will ignite inflation. What then are ways to prepare ahead to counter a looming financial crisis?

Public policy action should focus on producing testing kits, face masks, alcohol wipes, protective clothing, hospital beds, and life-support machines at home to reduce dependence on import and dropping pressure on foreign exchange reserves and the need to borrow. Government should make available rapid emergency support to firms, banks and financial institutions, and workers. Bailing out firms will immediately mitigate the supply disruptions and the shortages created by the lockdown.

Stimulus packages given to workers should include temporary suspension of tax and interest payments, direct financial support, free healthcare programmes, free transport to work and free lunch in the first month of resumption to work, and school in the air programmes for primary and secondary school children in the first month after lockdown. Temporary financial assistance should be provided to needy households. These measures will boost domestic demand which would encourage producers to turn on their machines, thus stimulating the supply chain.

The use of technology to add more value to production and information flow is an area demanding more focus. Fintech should be empowered by regulators to assist the banks and financial institutions in financial inclusion. Online shopping coupled with home delivery services will reduce pressure on available facilities and reduce employment, especially among the graduates.

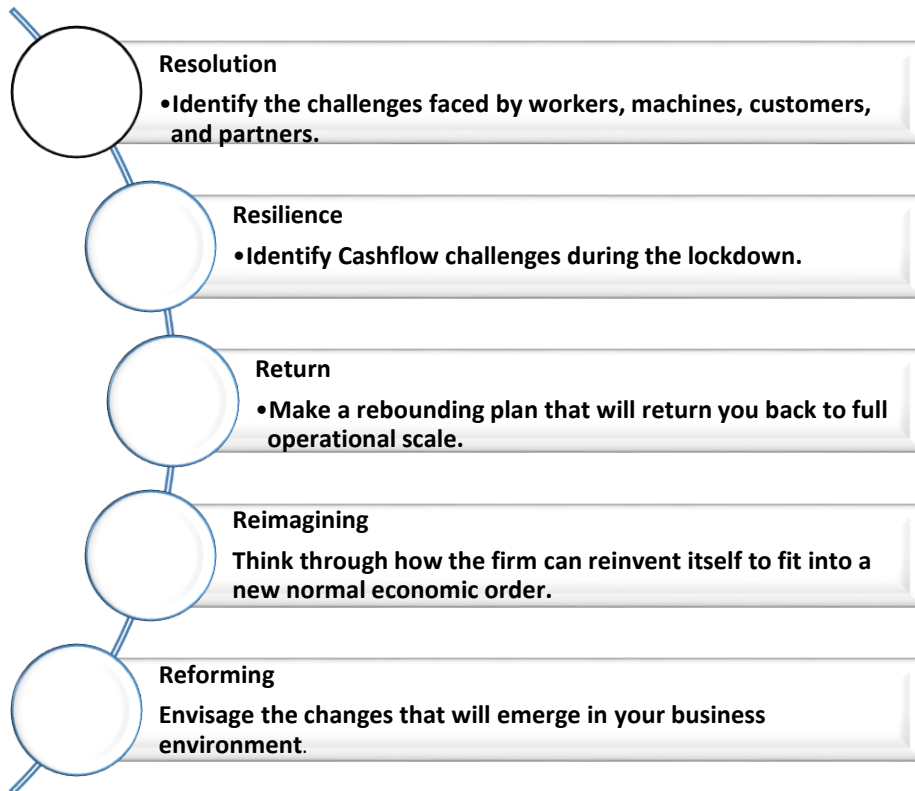
Other devisable antidotes include tax and interest rates cuts, direct government expenditure in target sectors, and encouraging trading networks across borders. Nevertheless, there is need for a global synchronization of the trade, fiscal, exchange rate and monetary policies to avoid placement of trade barriers, competitive devaluation, and a sinking vicious cycle in the world economy. Global cooperation and coordination under the aegis of the World Bank, IMF and the UN is required at this time if the world is to be salvaged from the negative consequences of the Covid-19 pandemic. More importantly, an early restart of the economic activities by the private and public sectors in countries is needed when the pandemic retracts.

McKinsey (2020) initiated 5Rs which can be used by corporate and national leaders to revamp the global economy. Figure 1 shows the five levels, which involve resolution, resilience, returning, reimagining and reforming. The first step is to resolve the direct challenges that Covid-19 placed on the firms'/nation's workers, technology, customers/consumers and business partners. The second stage concerns the management of cash flows during the lockdown while the third deals with the creation of a detailed plan of action that would quickly return the firm/economy to its pre-pandemic scale. The fourth step anchors the reinventing of the corporate or national institutions to the next normal economic order. Finally, reforming recommends that the firm/nation should work on the expected shift in its regulatory and business environment as the world may not remain the same after the crisis is gone. China is currently prospecting for ailing companies to buy in Europe while the European nations are drafting regulations to stop the move. The management of the 5Rs requires a new business architecture that is anchored on squadron-of-squadrons methodology, if the world economy is to bounce back within the medium term.

A continuous public health surveillance and private hygiene moderation practices will keep disease at a distance, even after the pandemic is over. While the pandemic lasts, some supplies can be delivered by means of drones, and continuing this will help restart the economies at a faster rate. This is the time to push forward in pursuing a green environment strategy: making use of solar power, stoppage of fossil fuel vehicles, and enforcing no smoking rule. A clean environment boosts the immune system, to assist people to become more disease-resistant. The use of agent banks and fintech companies will reduce conurbation and overcrowding in certain city centres. Educational institutions should continue to employ edutech facilities, even after the pandemic, in reaching out to students to reduce crowding time. Firms should allow telecommuting to take root by making

non-customer relations staff to work from home. These efforts will reduce crowding in cities and some community centres thereby making the world more copious in handling and accommodating the existing population. And these will change the way we do business, globally.

Figure 1. The Five Horizons for a Rebound



Source: Adapted from McKinsey (2020)

However, the human instincts to survive cannot be ignored in the rebound expectations. Our hard-wired human instincts help to keep us alive. The fight-or-flight reaction, invented by Walter Cannon (a Harvard University professor) in 1915, says that when *Homo sapiens* are faced with a threat or crisis, a genetic prompt helps them to elect whether to stay to fight or run to safety (flight). Since the world is involved in this crisis there is no other world beckoning us a welcome. The only available option is to fight for survival. Families, firms and nations should fight for survival – this is the way to quickly rebound from the Covid-19 pandemic.

5 Conclusion

As the body is built to fight the attack of diseases, so are human instincts there to fight whatever threatens their survival. Covid-19 came attacking humans, humans rose to the challenge by secluding victims to treat them in isolation centres. To prevent a spread, there is a lockdown of all activities bringing untold adverse economic consequences. To limit the negative economic impacts, this paper recommends taking measures that identify and limit the adverse fallouts. There is need to boost aggregate demand in

order to stimulate the supply chain in restarting the economies. If all countries follow this path, and there is a booster plan to bail out poor nations, then the world will come out of the impending global recession in the medium term.

Further research could go into how to assist nations in getting enhanced results through better policymaking by developing optimization models that select the most efficient and cost-effective alternative among existing risk management approaches (Yu & Aviso, 2020). It could also focus on employing current economic modelling techniques, network analysis and big data to simulate economic impact ahead of the spread of a pandemic. Another possible area could be the deployment of assessment frameworks that will account for human movements across countries and offer appropriate estimates of contagion, ahead of occurrence. This will mirror the medical SIR (Susceptibility-Infection-Recovered) model which measures the trade-off between curtailment and contagion (Atkeson, 2020). Lastly, medical research could look into why there are no deaths in Madagascar.

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