ColomboArts
Journal of Social Sciences and Humanities
Volume 5 | Issue I & II 2020

‘Systemic Risk’ of Globalization: Analyzing the Case of COVID-19

Fatema Tuj Juhra
Department of International Relations, Faculty of Security and Strategic Studies (FSSS), Bangladesh University of Professionals (BUP), Bangladesh
fatema.juhra@bup.edu.bd

Recommended Citation
Juhra, F.T. (2020). ‘Systemic Risk’ of Globalization: Analyzing the Case of COVID-19, *ColomboArts Journal of Social Sciences and Humanities, 5*(I&II).47-63
Available at: http://colomboarts.cmb.ac.lk/wp-content/uploads/2021/05/manuscript-4_In-Format.pdf

‘Systemic Risk’ of Globalization: Analyzing the Case of COVID-19

Juhra, F.T.
Bangladesh University of Professionals
fatema.juhra@bup.edu.bd

Abstract

Globalization, as a concept and practice, has been identified as double-edged sword with its positive and negative impacts. The history of human civilization has been experiencing the benefits of globalization in terms of global trade, connectivity, and integration. But the adverse effects of globalization are also concentrated within this increasing connectivity which can lead to increasing complexity. Globalization can affect the economy, environment, and health security and such a reality leads to the possibility of ‘breakdown’ in the entire system which is considered as a ‘systemic risk’. Ian Goldin and Mike Mariathasan have explained the concept of ‘systemic risk’ with regards to financial crises, business and trade, cyber-attacks, environmental degradation, fear of viruses and pandemics and increasing inequality. This paper aims to trace the relevance of the COVID-19 pandemic to the concept of systemic risk as a by-product of globalization. By using a qualitative methodology, this research has scrutinized COVID-19 as the outcome of the adversative effects of globalization through which extremism, protectionism, nationalism and xenophobia have increased and the word ‘foreign’ has become synonymous of danger. Through the experience of this massive health risk, within the concept of systemic risk, this paper will identify the significance of an interconnected world which will draw lessons from the COVID-19 pandemic caused by globalization.

Keywords: COVID-19, connectivity, globalization, pandemic, systemic risk

Introduction

> "Right now, a Masai warrior with a cell phone has access to better mobile phone capabilities than the President of the United States did twenty-five years ago. And if he's on a smart phone with access to Google, then he has better access to information than the President did just fifteen years ago." (Goldin and Mariathasan, 2014, p.7)

This quote reflects the impact of conscious or unconscious interconnectedness on every aspect of a human life. Globalization is defined as the 'extensive network of economic, cultural, social, and political interconnections and processes which goes beyond national boundaries' (Yalcin, 2005, p.2). It is a result of 'cross border flows of goods, services, money, people, information, technology and culture' (Goldin and Mariathasan, 2012, p.9).

Economic historians have identified three evolutionary phases in the modern timeline of globalization, starting from 1870. The world prior to the First World War is often considered the starting point of the modern world economy and the period between 1870 to 1914 is considered to have links to the modern world. The European colonial development and migration improved with the advancements in railroad construction, marine travel and communication via the telegraph. The second stage of globalization was at the end of Second World War. The economic development that occurred after the Bretton Woods Conference of 1944 accelerated the capital flow from the United States and reduced trade barriers. Though the Southern countries were not involved in this process, a structure of non-tariff barriers evolved in Western countries.

The third phase of globalization began in the 1970s with the emergence of newly industrialized countries in East Asia. Advancement in transportation reduced the transportation cost of goods and people. China's rise in the global world order at the end of the Cold War worked as a catalyst for integration (Goldin and Reinert, 2004, pp. 27-30).

The integration of the period has unique characteristics when compared to the other phases of globalization. Firstly, global connectivity had decreased the transaction cost of economic integration. Technological progress caused by the development of computing improved the opportunities for personal computing. Secondly, the political and ideological transformations also accelerated globalization. The fall of the Berlin Wall, the disintegration of the Soviet Union, improved relations of the West with China, the collapse of authoritarian

regimes in 65 countries in Asia, Africa, Latin America and Eastern Europe and the establishment of the democratic process were the factors that accelerated global trade and finance. Since the turn of new century, countries like China, Taiwan, Saudi Arabia, Ukraine, and Russia joined the World Trade Organization (WTO) which regulated major economies (Goldin and Reinert, 2004, pp. 30-31). This internationalization of trade is linked to the liberalization of financial transactions in the forms of deregulating interest rates, removing credit controls, and privatizing government owned banks which increased the agility among different segments in the financial industry. The emergence of the financial infrastructure has been identified as one of the most positive impacts of globalization (Steger,2003, pp.56-57). The flow of foreign capital or Foreign Direct Investment (FDI) into developing countries pushed the reserve of foreign exchange. Another visible impact of globalization is the improved quality of products in the global competitive market (UKEssays, 2018). However, globalization has a political dimension which refers to the ‘intensification and expansion of political interrelations across the globe’ (Steger,2003, pp.37-39). Because of this, a system to ensure state sovereignty has emerged. As a result, Gambia could file a case in the International Court of justice (ICJ) against Myanmar for committing the Rohingya genocide (Hunt, 2020). Moreover, a developing framework of global governance has also been emerging through the global civil society. Organizations like Amnesty International, Greenpeace representing the citizens have challenged the decisions of states and intergovernmental organizations (Steger, 2003, pp.56-57).

Additionally, connectivity through globalization has also been facilitated by the movement of people and goods via a complex process of roads, shipping routes and air travel. From the mid-1990s to 2014, the world air travel has doubled. Moreover, the recent phase of globalization has experienced distinct changes in technology. The technological revolution has produced Amazon, eBay, Google, Facebook, Twitter, and many other platforms. As a result, people from different cultures are interacting and this economic or social network will bring about new challenges. However, an erosion of responsibility in the face of urgency may emerge. In the case of a natural disaster or any other issue, the tightly linked supply chain may have disruptions. If there is a shortage of cars or machineries, this system will not be able to blame any authority. The increased integration has made the system and the consequences faced when it is disrupted more complex. Thus, globalization has become a double-edged sword and connectivity has intensified different complexities (Goldin and Mariathasan, 2014, pp.14-15).

The adverse effects of globalization are not being addressed for fear of causing a severe threat to the economy. But at the beginning of the new decade, the world faced an unprecedented challenge. Currently, people all over the world are suffering from the Coronavirus disease 2019 (COVID-19) which is the fifth most dangerous pandemic after the flu of 1918. The first reported cases of COVID-19 were recorded in Wuhan, China in December 2019. This epicenter of COVID-19, a midsize Chinese city, has a population of 11 million (the city's population was 2 million in 1989) (Goldin, 2020). Now, more than 188 countries have been affected by COVID-19, with 10.8 million infections and more than 521,000 deaths (Forde, 2020). States have adopted extreme measures including travel restrictions, closing of airports, and sealing borders to prevent the spread of the virus. Closing workplaces and educational institutions, prohibiting social and public gatherings, restricting internal movement, doing testing and contact tracing and providing financial support are the common measures taken to slow the spread of the disease.

In this context, many authors have focused on the economic, political, and social dimensions of the consequences of COVID-19. It should be noted that the risk of a pandemic is not surprising as, with the unprecedented growth in human movement, factors like trade, travel, cyber and other different networks also increase. Thus, the whole system becomes 'complex and unstable' (Goldin, 2020). Often, the negative impacts of globalization tend to be overshadowed by its positive impacts on trade, network, integration, and connectivity. But COVID-19 has questioned the challenges of increased interconnectedness. This paper analyses the research question- Is the COVID-19 pandemic a result of the adverse effects of globalization?

To answer this question, this paper will employ the concept of 'butterfly defect' through which the challenges of globalization will be identified. The paper will also attempt to simplify these challenges. This analysis of the COVID-19 pandemic will fill the gap in the literature of COVID-19 and globalization. The paper is divided into five sections: The methodology of the research is followed by a description of the conceptual framework of viewing the pandemic as a systemic risk of globalization. The next section will identify the relevance of COVID-19 to the concept of systemic risk. The last section presents possible recommendations to address the challenges of globalization followed by concluding remarks.

Methodology

This research is qualitative, and the following methods have been used in the study.

Primary data analysis

Reports of the World Health Organization (WHO): To understand the context and the timeline of the Novel Coronavirus (2019-nCoV), situation reports published since January are analysed. 165 reports of the WHO are used to outline the level of contagion of the virus.

KII (Key Informant Interview):

In this research, online interviews have been conducted with different academics who have expertise on globalization and human security. This is because the pandemic is related to human security.

Secondary data analysis:

The literature review is done using online books and journal articles on globalization. It explores how globalization has become a phenomenon of complex interconnectedness.

Overall, two methods have been employed to build the concept and to analyse the findings of this qualitative research.

Pandemic as ‘Systemic Risk’: conceptual framework

Chaos theorist Edward Lorenz explained how the flapping of the wings of a butterfly in Brazil could cause a tornado in Texas. This example elaborates the non-linear impact of trivial incidents in a complex system. On the other hand, the chaos theory has also discussed the ‘butterfly defect’ because ‘growing integration and complexity of the global economy [means] that, it too suffers from a butterfly defect” (Goldin, 2020).

Originated from the chaos theory, Ian Goldin and Mike Mariathasan have scrutinized how the dimension of globalization ‘inherently create global fragilities’. To understand the fragilities, the authors have identified ‘risk’ as ‘quantifiable and predictable’. On the other hand, risks can encompass unidentified or unexpected threats. But risk management states that ‘the causal connections between actions and events are or can be unknown’. Due to increased integration and connectivity, humans cannot always observe the individual action which may cause risk and vulnerability. In this context, the authors of the book *‘The*

Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about it' have pointed to the significance of modifying the definition of 'risk' in the context of global governance. The concept of 'systemic risk' comes from the context of increased connectivity which causes increased complexity. Systemic risk is defined as "the risk or probability of breakdowns in an entire system, as opposed to breakdowns in individual parts and components, and is evidenced by co-movements (correlation) amongst most or all of the parts." Derived from the definition of Kaufman and Scott, authors of the book explained the concept within these dimensions:

a. The large or 'macro shock' which may lead to the breaking point by hitting the threshold and it produces 'cascading failure'.
b. A common shock as an indirect effect and it can be also understood by 'hysteresis' where the effects can be less resilient to recovery. (Goldin and Mariathasan, 2014, pp.17-18).

The systemic risk of connectivity and interconnectedness is seen within 6 spheres: the financial sector, supply-chain risk, infrastructure risk, ecological risks, pandemics and health risks, inequality and social risks. This paper will focus on the component of pandemics and health risks as it uses COVID-19 as the case study.

Pandemic and the 'Systemic Risk' model

Characterization of a pandemics is a critical task as there is no specific, well established definition. The World Health Organization (WHO) explains the concept of a pandemic as follows:

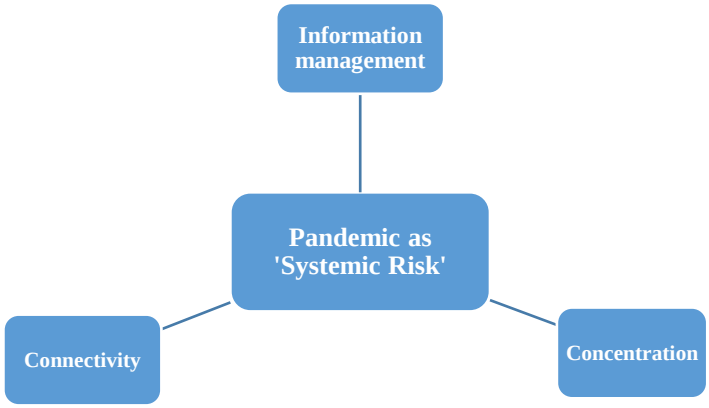
> "A pandemic is the worldwide spread of a new disease. An influenza pandemic occurs when a new influenza virus emerges and spreads around the world, and most people do not have immunity. Viruses that have caused past pandemics typically originated from animal influenza viruses." (World Health Organization, 2010).

Immunologists have conceptualized a pandemic as a disease 'exhibiting wide geographic extension, disease movement, high attack rates, minimal population immunity, novelty, infectiousness, contagiousness and severity' (Goldin and Mariathasan, 2014, pp.145). Authors of 'butterfly defect' have identified a pandemic as being related to a virus and having the ability to spread easily among humans while infecting people worldwide. The

term 'worldwide' differentiates a pandemic from an epidemic, as an epidemic is limited in terms of geographical distribution (Goldin and Mariathasan, 2014, pp.146).

Due to the population growth and urbanization, transmission of contagious and infectious diseases has increased. Medical experts have reported that more than 30 organisms which could cause contagious diseases have appeared in the last two decades. The 21st century has experienced deadly pathogens like Ebola, Hepatitis C, Human Immunodeficiency Virus (HIV) after the pandemics of Cholera, Malaria and the Plague of the previous century (Goldin and Mariathasan, 2014, pp.145).

Figure-1: Understanding pandemics according to the 'Systemic Risk' model



According to the authors, the health impact of a pandemic is systemic, and it will impact different sectors. They identify smallpox as the 'greatest killer in history' as it killed many world leaders. The disease could affect even the most protected person. Researchers point to three aspects of the 21st century as factors of globalization which can play a serious role in the spread of the pandemic: connectivity, concentration, and information management (Goldin and Mariathasan, 2014, pp.147-149). These three factors will be used to develop the conceptual framework of this paper and the case of COVID-19 will be discussed within these three points:

i. **Connectivity:** "The density and intensity of connections between humans, and also between humans and animals, are the primary determinants of the development and spread of pandemics". Previous authors have reflected on the level of global connectivity in today's world. Sending packages and deliveries

to random individuals all over the world may cause serious infectious diseases. Additionally, population growth, increased travel of humans as well as unintended movement of animals (rats or other insects) may cause contagious diseases. A pandemic situation may break out because of international transport (Goldin and Mariathasan, 2014, pp.150).

ii. **Concentration:** In case a disease originates from the metropolis, it would be impossible to prevent it from spreading. Overcrowded and unhygienic areas where people live close to animals and which have contaminated water are at a high risk of facing a pandemic (Goldin and Mariathasan, 2014, pp.150).

iii. **Information Management:** The authors record the importance of preventing the spread of rumours and misinformation through social media and the internet. The issue of 'social contagion' is serious and not managing the information stockpile may aggravate the effects of the pandemic (Goldin and Mariathasan, 2014, pp.151).

Overall, authors have identified a pandemic as a 'systemic risk' of globalization and these three factors can increase the threats of a pandemic. The next section of this paper describes the COVID-19 crisis within this conceptual perspective developed in 2014. It explains how this crisis has been reflecting the 'systemic risk' concept.

COVID-19 as a 'Systemic Risk' of globalization

This paper focuses on analysing the case of COVID-19 from the perspective of a systemic risk. Before starting the case study of this pandemic, it is important to understand the history of pandemics and how they have spread through human interaction. Firstly, this section will detail pandemics that had erupted throughout human civilization. Secondly, it discusses the case of COVID-19, its context and origin and finally, drawing on the analysis from the conceptual framework, it will argue if this disease can be identified as a systemic risk.

Historical pandemics

The first transnational epidemic was recorded in 430 BC. It started in the region of Ethiopia and transmitted to Egypt through the troops during the Peloponnesian War. It was known as the Athenian plague. With the development of trade and transportation, 'extensive epidemics' like the bubonic plague of 1347 (known as Black Death) (Goldin and

Mariathasan, 2014, p.160) spread in the world. With the expansion of European colonialism, local populations of different regions were exposed to viruses like influenza, smallpox and measles. In the twentieth century, trade and commerce reached almost every part of the world and transnational epidemics started to cross borders leading the way to pandemics (Kaul, Grunberg and Stern, 1999, pp. 205-215).

The Spanish Flu of 1918 is known as “the deadliest public health crisis in human history” (Goldin and Mariathasan, 2014, p.161). The virus did not originate in Spain but was named so since Spain had relatively open media which did not ban the reports on this crisis. This virus killed 17 million people in India and nearly 100 million worldwide. It became a pandemic due to the movement of troops during the World War I and poor sanitary facilities of the army (Goldin and Mariathasan, 2014, p.161).

After the World War II, the Asian Flu of 1957 and the Influenza of Hong Kong in 1968 were reported, and they are considered the pandemics of the twentieth century. After that, the epidemic of HIV/AIDS emerged, and it is considered one of the most devastating diseases faced by humans. The new century has experienced three pandemics from 2003 to 2014. The WHO reported the first case of SARS (Severe Acute Respiratory Syndrome) in February 2003. Dr. Karl Urbani wrote from China’s Guangdong province and addressed SARS as “the first severe infectious disease to emerge in the twenty-first century” (Goldin and Mariathasan, 2014, p.162). Within the first four months of its detection, reports of SARS cases came from 26 countries with a death toll of 774. In October, academics of the WHO argued that SARS is the outcome of negative trends of globalization and connectivity (WHO Scientific Research Advisory Committee on Severe Acute Respiratory Syndrome, 2004).

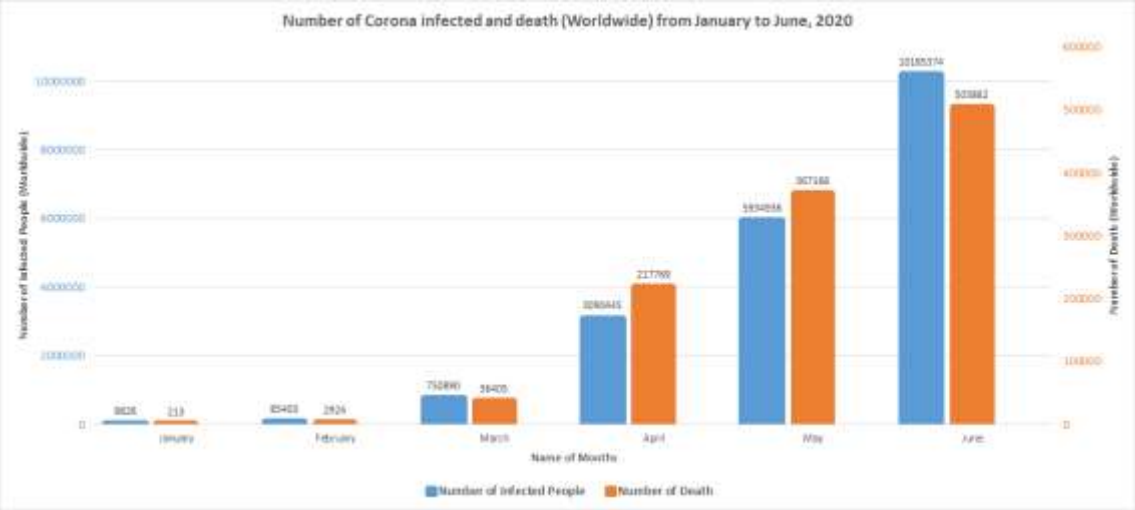
The second pandemic was the outbreak of the H5N1 virus, which was known as the Bird Flu virus. It was first detected from Hong Kong in 1997. By 2007, there were 167 reported fatalities and 277 cases of human infection. The close contact between humans and birds allowed the virus to mutate and the risk of infection was higher in megacities and slums (Goldin and Mariathasan, 2014, p.164).

The Swine Flu (H1N1 virus) outbreak is considered the third pandemic. It started in April 2009 in Mexico and New York and spread in 30 countries within a week because of human-to-human transmission. Air travel contributed greatly to the spread. Globally, 570000 people died due to the Swine Flu (Goldin and Mariathasan, 2014, p.164).

The Outbreak of the Novel Corona Virus in 2019

Pandemics are not a new phenomenon, but the development of communication and transportation can cause an epidemic to become a pandemic. During the Bird Flu or the Swine Flu, the world's megacities were not in lockdown and international travel and border seizing did not happen. But the novel corona virus, originated from the city of Wuhan, China disconnected the world. There was an outbreak of pneumonia from December 2019 in the Wuhan province linked to the Wuhan seafood market. By the end of December, the WHO notified Taiwan, Macau and Hong Kong to increase border surveillance (Azhar, Kock, Ippolito and Memish, 2020, pp. 264-265).

Table-1: Number of Corona infections from January to June 2020. The two vertical axes represent the number of infections and deaths



Note: The horizontal axis represents the moths from January to June.
Source: Compiled from World Health Organization's COVID-19 Situation Report from January to June, 2020

In January 2020, some Chinese tourists in Thailand were identified as Corona patients. By the end of January, 9826 cases were confirmed and among them, 9720 were from China. On 11th March of 2020, the WHO declared COVID-19 as a pandemic. By the first week of July, almost 11.3 million people were affected (WHO COVID-19 Situation Report, January 2020 and WHO COVID-19 Situation Report, June 2020). Table-1 provides the number of infections and the number of deaths. The number affected in January was 9,826 which became more than 10 million by the last week of June. The reason behind this massive contagion is close human contact. As there is no vaccine, cutting off international travel and

closing the borders was the main response from the states. Closing markets, educational institutions and tourist attractions, prohibiting public gatherings, contact tracing of the affected patients and locking down the areas of high risk were the general measures taken worldwide.

Had connectivity and integration not increased, the Corona pandemic would have been similar to the Spanish flu, Swine flu or SARS. In terms of the number of deaths and its spread, it is comparable to the Spanish flu. In 1918, the number of deaths was more than the pandemic of 2020. As the pandemic of 1918 broke out in the context of the First World War, hospitals were already occupied, and the medical teams could not follow standard hygiene procedures. The British military doctors conducted the autopsies of the soldiers who were killed by the Spanish flu and identified that the heavy damage caused to the lungs was also due to the impact of chemical warfare (Roos, 2020). The United States of America experienced a shortage of nurses as thousands of nurses were deployed in military camps. Moreover, the lack of scientific tools worsened the situation. Also, scientists were looking for the cure of ‘bacillus’ instead of the influenza virus. Overall, the high level of troops movement was the cause of the spread of the virus (Nelson,2020). Though the Spanish flu had a different context and caused more deaths than the Covid-19, the corona pandemic is not over yet. Comparing the cases would be improbable during a continuing pandemic. Covid-19 reflects the drawbacks of the globalized world despite its scientific development and healthcare facilities. The question is- does the pandemic imply the negative impacts of globalization? The next section will address this question using the framework of viewing the pandemic as a systemic risk.

COVID-19: Analysis of the pandemic as a ‘Systemic Risk’

Due to increased connectivity, different spheres become more complex, and it becomes difficult to control human activity. Goldin and Mariathasan predicted in 2014 that a new financial crisis will erupt due to a pandemic. At the same time, Goldin explained that “Systemic risks cannot be removed because it is endemic to globalization.” While describing the ideas presented by Kilpatrick, Goldin and Mariathasan have mentioned:

“Based on experience with the West Nile virus, Kilpatrick asserts that the world’s biota are ‘more connected than at any time in Earth’s history’ and that many ‘biogeographic barriers’ have been removed. This has resulted in the introduction of new species to unprepared habitats, sped by developments in transport and the growth of international trade. For

instance, Kilpatrick observes that air traffic into New York City is a 'likely pathway' for the introduction of foreign organisms to the United States. He concludes that continual introduction of pathogens to new regions is inevitable in our globally connected planet." (Goldin and Mariathasan, 2014, p. 155)

This means that air traffic, transportation and changes in biodiversity will lead to the inevitable emergence of new types of pathogens. Hence the question is how Corona Virus can be viewed as a systemic risk of globalization. To answer the question, this section will elaborate on three points given by the authors of the concept of 'butterfly defect'.

i. Connectivity

"A virulent pathogen often requires just brief contact to infect someone and spread. This turns airplanes and international journeys into disease vectors."- this statement written in 2014 reflects the reality of 2020 where human interaction has become dangerous. The Chinese doctor Liu Jianlun was the 'super spreader' of SARS as he treated patients in China and went to Japan. Within a few months, SARS became a serious problem in that region (Goldin and Mariathasan, 2014, pp. 145-147). One example of a super-spreader of COVID-19 is the case of patient 31 in South Korea. The first case of the Corona Virus in South Korea was detected in the first week of February. Till February 16, all the patients were restricted according to family and community guidelines. Then patient number 31, a 61-year-old lady from Shincheonji Church, was tested positive for Corona. Within a month, thousands of people connected to the church were found to be Corona positive (Kasulis, 2020).

In terms of the economy, the International Monetary Fund (IMF) has estimated that the global economy is going to shrink by 3% because of the pandemic. IMF's World Economic Outlook Update of June 2020 has projected the global growth of 2020 to be at 4.9%. It is 1.9% less than the month of April. The global growth of 2021 has been estimated to be 5.4% and the GDP would be 6.5% lower than the pre-COVID-19 projections (World Economic Outlook Update, 2020). Table 2 shows the difference of fiscal balance in advanced and emerging economies from 2018 to 2020. The amount of gross debt estimated by IMF in the year 2020 is also higher than in 2018.

Table-2: General Government Fiscal Balance and Gross Debt from 2018 to 2020. Data of 2020 is the estimate of IMF

Government Fiscal Balance (worldwide)	2018	2019	2020	Gross Debt (worldwide)	2018	2019	2020
	-3.1	-3.9	-13.9		81.2	82.8	101.5
Advanced economies	-2.7	-3.3	-16.6	Advanced economies	104.0	105.2	131.2
Emerging markets and developing economies	-3.8	-4.9	-10.6	Emerging markets and developing economies	48.9	52.4	63.1

Note: All country average is weighted by nominal GDP converted to US dollars at average market exchange rates

Source: World Economic Outlook Update, 2020

Due to the pandemic, travel has been affected and the demand for oil has lessened and the price dipped below $20 (Jones, Palumbo and Brown, 2020 and Key Informant Interview, 2020).

ii. Concentration

The population living in cities was expected to rise by 70% by the end of 2025. The population density of Tokyo was 5,847 persons per square kilometre in 2014 (Goldin and Mariathasan, 2014, pp. 145-147). Specially, the increase of megacities in developing countries has heightened the risk of hygiene and clean water. The urban conglomeration is one of the main reasons behind the spread of the virus (Goldin and Mariathasan, 2014, pp. 145-147). Due to the density of population, implementing quarantine measures in highly populated countries like India and Bangladesh is challenging. As a result, social infrastructure is facing a crisis, causing people in poverty to further lose their purchasing power (Key Informant Interview, 2020).

iii. Information Management

Information management during a pandemic was never a concern of the states or the international order. Social chaos, panic buying, and anxiety have become regular

phenomena which affect the mental wellbeing of people. Moreover, trolls and memes on the Chinese, conspiracy theories against China and outrage towards foreigners became common. Discrimination and mismanagement of this nature happened because states were not aware of the systemic risk of globalization.

Goldin and Mariathasan explained systemic risk as the 'the risk or probability of breakdowns in an entire system' due to the butterfly effect of globalization. The Corona Virus has created a fear of foreigners, a rise in nationalistic sentiment and an economic recession which would affect the status quo. In the 'new normal', economy, connectivity or integrity cannot operate as before. COVID-19 was a systemic risk, and it is 'shocking but not surprising' as systemic risks are the by-product of globalization (Goldin, 2020).

Way forward to address systemic risks

During a pandemic, which has been aggravated due to globalization, it is tough to identify the way forward. However, Goldin and Mariathasan's 'resilient globalization' could offer a solution to the issue. "The international coordination on HIV/AIDS, SARS, and other recent pandemics highlights the vital role of research, coordination, and global action"- In this statement, the authors of systemic risks present a way to address a pandemic like situation. It also explains why globalization is a double-edged sword (Goldin and Mariathasan, 2014, pp. 145-150). Globalization is the source of challenges and solutions. Intensifying rapid containment operations, strengthening early warning systems and coordinating global research could control a pandemic. A systemic response is required when facing a systemic risk which cannot be eradicated or avoided. Interconnectedness could assist in tackling the pandemic. Social media, for example, becomes a platform to collect plasma and spread consciousness. Formulating voluntary groups and assisting the families have become easier due to social media. In the United Kingdom, more than 1000 people have formulated voluntary groups to help the self-isolated patients. More than 10,000 people are assisting the home delivery of groceries and medicine (BBC, 2020). The United States of America, China, Germany, and the Netherlands are exporting medical products like test kits, PPE, and masks (Edwards, 2020). Overall, during a pandemic, cooperation among the states for the vaccination programme is critical. The World Health Organization (WHO) with other United Nations agencies has been working to provide worldwide access to vaccines in the past century (Daojion, 2020). The solution to this pandemic is advanced medical research

and proper health measures which can only be developed through the cooperation among states.

Conclusion

In the reality of the twenty-first century, “pandemics have no respect for national borders, and given the incubation period for all known threats, it is fanciful to imagine that the threat can be contained at a national border” (Goldin and Mariathasan, 2014, p. 166). This paper has attempted to focus on the adverse effects of globalization which is known as a ‘systemic risk’. Pandemics aggravate due to the interconnected world order and it is not a new reality in this century. But the increasing complexity of the world has made it more critical. The systemic risk of pandemics is inevitable, and it should be managed through a systemic response. Humans have evolved through expansion, industrialization, war, cooperation and through the experience of facing pandemics. The learning from COVID-19 will always be significant for humankind and it will enable us to lessen the complexity of globalization.

References

BBC News. (2020, March 23). *Coronavirus: How are people helping each other during the outbreak?* https://www.bbc.com/news/uk-england-51995089

Daojiong, Z. (2020). *Vaccines for COVID-19: ways for international cooperation*. Global Times. https://www.globaltimes.cn/content/1198315.shtml

Goldin, I. (2020, March 3). *Coronavirus shows how globalisation spreads contagion of all kinds*. Financial Times. https://www.ft.com/content/70300682-5d33-11ea-ac5e-df00963c20e6

Goldin, I., & Mariathasan, M. (2015). *The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It* (Reprint ed.). Princeton University Press.

Goldin, I., & Reinert, K. (2006). *Globalization for Development*. St. Martin’s Press: World Bank and Palgrave Mcmillan.

Hui, D. S., I Azhar, E., Madani, T. A., Ntoumi, F., Kock, R., Dar, O., Ippolito, G., Mchugh, T. D., Memish, Z. A., Drosten, C., Zumla, A., & Petersen, E. (2020). The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health — The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*, *91*, 264–266. https://doi.org/10.1016/j.ijid.2020.01.009

International Monetary Fund. (2020, June 24). *World Economic Outlook Update, June 2020: A Crisis Like No Other, An Uncertain Recovery*. IMF.

https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020

Jones, L., Palumbo, D., & Brown, D. (2021, January 24). *Coronavirus: How the pandemic has changed the world economy*. BBC News. https://www.bbc.com/news/business-51706225

Kasulis, K. (2020, March 3). *'Patient 31' and South Korea's sudden spike in coronavirus cases*. Coronavirus Pandemic News | Al Jazeera. https://www.aljazeera.com/news/2020/03/03/patient-31-and-south-koreas-sudden-spike-in-coronavirus-cases/

Kaul, I., Grunberg, I., & Stern, M. (1999). *Global Public Goods: International Cooperation in the 21st Century* (1st ed.). Oxford University Press.

Kinch, M., Chambers, B., Dierickx, L., Longo, F., Curbelo, L., & Salvá, A. (2020, March 27). *Gambia's genocide case against Myanmar shows that smaller countries can also help balance the scales of international justice*. Equal Times. https://www.equaltimes.org/gambia-s-genocide-case-against?lang=en#.YJxbxrUzY2y

Nelson, A. (2020, October 1). *Spanish flu vs Covid-19: how the global pandemics compare including death toll, number of cases and symptoms*. The Scotsman. https://www.scotsman.com/health/spanish-flu-vs-covid-19-how-global-pandemics-compare-including-death-toll-number-cases-and-symptoms-2988416

Roos, D. (2020, December 22). *Why the Second Wave of the 1918 Flu Pandemic Was So Deadly*. HISTORY. https://www.history.com/news/spanish-flu-second-wave-resurgence

Steger, M. B. (2003). *Globalization: A Very Short Introduction (Very Short Introductions)*. Oxford University Press.

UK Essays. (2018). *Positive and negative effects of Globalization*. UKEssays.Com. https://www.ukessays.com/essays/economics/positive-and-negative-effects-of-globalisation-for-business-economics-essay.php?vref=1

World Health Organization. (2020). *Situation reports*. WHO. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

Yalcin, B. (2018, April 9). *What is globalisation?* ResearchGate. https://www.researchgate.net/publication/324331543_what_is_globalization