

COVID-19 – THE MOST FATAL PANDEMIC OUTBREAK: AN ANALYSIS OF ECONOMIC CONSEQUENCES

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How to cite: MOHAJAN, H.K. (2020). “COVID-19 – The Most Fatal Pandemic Outbreak: An Analysis of Economic Consequences.” *Annals of Spiru Haret University. Economic Series*, 20(2), 127-146, doi: <https://doi.org/10.26458/2026>

Abstract

The novel (new) coronavirus (CoV) fatal disease (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-COV-2 or 2019-nCoV). It has been identified as the causative agent of the viral pneumonia outbreak in Wuhan, China, at the end of 2019. It is now becoming a major concern for global public health, as well as the cause of a possible global economic crisis. The International Monetary Fund (IMF) estimates that the outbreak of COVID-19 has cost the world economy up to \$ 9 trillion. After COVID-19 outbreak, home quarantines, lockdown, widespread restrictions on labour mobility and travel, border closings and closing of economic activities has affected the global supply chains, oil prices, travel and tourism, restaurants, conferences, sporting events, government budget, etc. The amount of the global economic damage is very uncertain at present, but it is estimated that it will be larger depending on the length of COVID-19. The paper discusses the social, economic, and health impacts on the world's poorest countries. The purpose of this study is to examine the economic impacts due to COVID-19 pandemic outbreak. An attempt has been made here to discuss the current economic situation of the world and analyses the potential consequences on global economy in future.



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Keywords: *SARS-CoV-2; COVID-19 outbreak; pandemic; lockdown; economic consequences.*

JEL Classification: I100, I120, I150, I180

1. *Introduction*

The 2019 novel coronavirus (SARS-CoV-2) is a new human coronavirus which emerged at the end of December 2019 in Wuhan, Hubei Province, China. The disease spread outward from Hubei Province at the late December 2019 [Li *et al.*, 2020]. The outbreak of COVID-19 has spread quickly all over the world [Zhu *et al.*, 2020]. It affects lungs, with severe acute respiratory illness that develops fever, dry cough, fatigue, and shortness of breath. The epidemic has spread very quickly taking only 30 days to expand from Hubei to the rest of Mainland China [WHO, 2020a]. On 30th of January, WHO declared the outbreak a “*Public-Health Emergency of International Concern (PHEIC)*” as the outbreak could spread to countries with fragile health systems. [Callaway, 2020] On 11th of March 2020, WHO declared the global outbreak as a pandemic to minimize the infection and mortality rate. The COVID-19 has become a significant global public health threat. [WHO, 2020b] On 8th of April 2020, a total of 209 countries and territories around the world were affected; globally, the total number of infections reached 1,455,987; a total of 310,108 have recovered, and 83,687 have died. The infections are moving to new locations and new countries of the world. As of June 2, 2020, the total death toll in the world reached 377,000 and the total number of infected people exceeded 6.2 million, of which 2.6 million have recovered [Worldometer, 2020]. The public health responses to SARS-CoV-2 are isolation, quarantine, travel restriction, cessation of work at the workplace and the closure of educational institutions and ultimately lockdown [Rothan & Byrareddy, 2020].

The outbreak of COVID-19 has significant short- and long-term economic consequences. But there is a great uncertainty about what economic effects it will have due to many unknown factors, such as the severity of the virus, lockdown, closing of education institutions, length of the pandemic and economic disruption, government monetary and fiscal policies to combat the economic consequences of the health crisis, etc. [McKibbin & Fernando, 2020].

From February 2020, manufacturing and service sector activities declined dramatically in China, which is the start of the global financial crisis [Gopinath,



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2020]. The COVID-19 outbreak creates macroeconomic impacts on investments, growth, production, prices, supply chain, travel, trade, finances, banking, exchange rates, and cross-border cooperation. It also creates a shortage of medicines and healthcare equipments [Baldwin & di Mauro, 2020].

The COVID-19 has attacked the industrial giants or economically developed countries, such as the USA, the UK, Brazil, Spain, Italy, France, Japan, Germany, China, Russia, India, etc. These countries supply raw materials and as well as final products globally. China exports an enormous amount of industrial goods worldwide. Global supply has reduced due to closing borders, but demand has remained unchanged. Demand of some newly essential items, such as hand sanitizers, soap, bleaching powder, mask, gloves, personal protection equipments (PPEs) have increased; consequently, the prices of various commodities have increased. As a result, the global economy becomes sloth. Economies are connected globally by cross-border flows of goods, services, financial capital, foreign direct investment, international banking, and exchange rates. Some of these face severe economic shocks [Baldwin & di Mauro, 2020]. African countries will need additional \$10.6 billion health spending on the pandemic [African Economy, 2020].

As the epidemic situation is evolving by the day, it is more difficult to project the economic outlook. China is a major source of demand in the world economy and many core European industries are highly dependent on the Chinese market. China accounts for 17% of the global GDP, 11% of the world trade, 9% of the global tourism, and more than 40% of the global demand for some commodities. The International Air Transport Association (IATA) estimates that the aviation industry could face a loss of 29 billion of passenger revenues and cause a loss of about \$113 billion. The average global GDP decline is expected to be somewhere around 1.5 % [Boone *et al.*, 2020; di Mauro, 2020].

After the COVID-19 outbreak, significant disruptions in the global supply chain, factory closures, cutbacks in many service sector activities, a decline in business travel and tourism, declines in education services, a decline in entertainment and leisure services occurred. Global trade has declined by 1.4% in the first half of 2020 and by 0.9% in the whole year [Boone *et al.*, 2020].

The International Energy Agency (IEA) expects the global demand for oil to fall by 435,000 barrels per day in the first quarter of 2020 and by 365,000 barrels per day in the whole year. OPEC countries decided to reduce the production of 600,000 barrels a day as an emergency measure on top of the 1.7 million barrels a day



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already pledged [IEA, 2020]. The price of Brent oil dropped from \$68.90 a barrel on 1st of January to \$50.5 a barrel as of 28th of February 2020 for the negative impact on oil demand from COVID-19 [Arezki & Nguyen, 2020]. Most severely COVID-19 hit countries' exports will fall if supply shock extends, and imports will fall if demand shock extends [Baldwin & Tomiura, 2020].

During the FY 2019, in Illinois, Medicaid expenditures of the USA crested to \$19 billion. The COVID-19 emergency annual Medicaid expenditures could easily increase by \$4 to \$5 billion (21% to 26%); state public health expenditures jump to \$450 million in FY 2020-21; human services for needy, disabled, and vulnerable populations, such as assistance with child care, employment, daily life, housing, and food expect to reach \$5.5 billion in FY 2020-21 [Kass *et al.*, 2020].

2. Literature Review

Muhammad Adnan Shereen, Suliman Khan, Abeer Kazmi, Nadia Bashir, and Rabeea Siddique have discussed origin, transmission, and characteristics of the COVID-19 disease. They state that SARS-CoV-2 is phylogenetically related to SARS-like bat viruses; therefore bats could be the possible primary reservoir. There is no clinically approved antiviral drug or vaccine to cure COVID-19 [Shereen *et al.*, 2020]. Stefan E. Pambuccian provides an assessment of the current state of knowledge about the COVID-19 disease and its pathology, and the potential presence of the virus in cytology specimens. He also discusses the measures that cytology laboratories can take to function during the pandemic, and minimize the risk to their personnel, trainees, and pathologists [Pambuccian, 2020]. Hussin A. Rothan and Siddappa N. Byrareddy highlight the symptoms, epidemiology, transmission, pathogenesis, phylogenetic analysis and future directions to control the spread of COVID-19 [Rothan & Byrareddy, 2020].

Richard Baldwin and Beatrice Weder di Mauro, in their editorial report, indicate that global supply chains have been disrupted when the COVID-19 outbreak was triggered in December 2019 in the city of Wuhan, Hubei province of China. The COVID-19 is most definitely spreading economic suffering worldwide and global economic activities have slowed down. Every country of the world will face both short-term and long-term economic impacts; global GDP will decrease remarkably. They estimate that the USA, China, Japan, Germany, Britain, France and Italy together account for 60% of world GDP, 65% of world manufacturing, and 41% of world manufacturing exports will be affected by the COVID-19 outbreak [Baldwin



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& di Mauro, 2020]. International Labour Organization (ILO) shows the COVID-19 will affect the global labour markets. It indicates the vulnerabilities and key policies to mitigate the impacts [ILO, 2020].

Joseph B. Sobieralski analyzes the effects of uncertainty shocks on airline employees caused by travel restrictions during the global COVID-19 pandemic. The estimated job loss is about 7% of the airline workforce with an upper bound of over 13%. The recovery from the uncertainty shocks is estimated to take 4 to 6 years [Sobieralski, 2020]. The African Economy indicates that COVID-19 is disrupting an interconnected world economy through the global value chains. After the COVID-19 attack, abrupt falls in global commodity prices, fiscal revenues, foreign exchange receipts, foreign financial flows, travel restrictions, declines of tourism and hotels, frozen labour market, etc. have occurred [African Economy, 2020]. Oxfam estimates that more than half a billion people worldwide (most of them living in Africa and Asia) who were above the poverty line before COVID-19 pandemic outbreak will be poor. Oxfam hopes Governments and international organizations would take four actions to form powerful economies, a safe society and reduce the global poverty due to COVID-19: 1) immediate debt cancellation, 2) the creation of new international reserves by the IMF, 3) the adoption of emergency progressive taxes, and 4) a massive injection of aid funds [Oxfam, 2020b].

Stephen G. Cecchetti and Kermit L. Schoenholtz argue that banks are highly vulnerable to the economic shocks and they compare the challenge with that of stemming a bank run [Cecchetti & Schoenholtz, 2020]. Stefano Ramelli and Alexander Wagner show the stock returns, by industry, in China and the USA from January to February 2020 after the COVID-19 outbreak. They have observed that the semiconductor sector gained sharply in China, but lost in the USA; utilities lost in China, but gained strongly in the USA [Ramelli & Wagner, 2020b]. Joseph B. Sobieralski analyzes the effects of uncertainty shocks on airline employment in the light of the current global COVID-19 pandemic outbreak. He shows that the airline industry has faced many threats throughout history, but none quite as rapid and severe as the spread of COVID-19 [Sobieralski, 2020].

Inoue Hiroyasu and Todo Yasuyuki try to quantify the economic effect of a possible lockdown of Tokyo to prevent the spread of COVID-19. The negative effect of such a lockdown leads to supply and demand shortages. They discovered that Tokyo's locked down for a month lead to a total production loss of 27 trillion yen in Japan, which is 5.3% of its annual GDP (after the earthquake or tsunamis from 2011,



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the production loss was 11 trillion yen, or 2.3% of GDP of Japan) [Hiroyasu & Yasuyuki, 2020]. Warwick J. McKibbin and Roshen Fernando estimate that the spread of COVID-19 would reduce GDP of China, Japan, UK, and USA by 6.2%, 9.9%, 6.0%, and 8.4%, respectively [McKibbin & Fernando, 2020]. Amanda Kass, Kenneth Kriz, and David Merriman stated that the COVID-19 pandemic has caused disorder in the US economy but there is great uncertainty about the depth and duration of the disruption. The COVID-19 pandemic will increase the need for state expenditures to protect vulnerable populations from the health and economic consequences. They estimate that tax revenue will drop, local tax collections will shortfalls, Medicaid expenditures will increase, etc. [Kass *et al.*, 2020].

3. *Methodology of the Study*

Research indicates a careful, systematic, patient study and investigation in some fields of knowledge, undertaken to establish facts or principles [Grinnell, 1993]. So ‘research’ means a systematic investigation or activity to gain new knowledge of the already existing facts. Research is also considered as the application of scientific method in solving the problems efficiently. Therefore, research is an essential and powerful tool in leading a researcher towards progress [Pandey & Pandey, 2015]. In research, ‘method’ is a strategy and technique employed to acquire knowledge and categorizes to study, and manipulates data. Therefore, a research method is a way of conducting and implementing research efficiently [Punch, 2013].

Methodology is the guidelines to approach and perform activities. Research methodology provides us the principles for organizing, planning, designing and conducting a good research. Therefore, we consider that it is the science and philosophy behind all researches [Legesse, 2014]. The methodology of this article is to discuss the global economic consequences due to pandemic outbreak of COVID-19. In the study, we have observed that the disease is spreading in every country, and both infection and deaths are increasing in a geometrical rate. This study is of descriptive nature having quantitative as well as qualitative merits. We tried to discuss the global pandemic COVID-19, along with the impact on global economy. Reliability and validity are essential parts for a good research. In this study, reliability and validity are maintained in a concise, but precise manner [Mohajan, 2017; 2018]. This study is a review work. In this study we have used the secondary data. The data are collected from books of famous authors, published, submitted and preprint articles, websites, theses, conference papers, case studies, and various research reports.



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Since December 2019 to 8th of May 2020, more than 3.85 million people worldwide are infected from this disease, more than 1.28 million have recovered, and more than 270,000 have died. On 2th of June 2020, the total death toll in the world reached 377,000 and the total number of infected people reached over 6.2 million, 2.6 million of them recovering. Both the infection and deaths are fluctuating every day and there is no sign of control of the disease [Worldometer, 2020]. In this study we have tried to enrich the research of global pandemic of disease COVID-19.

4. *Objective of the Study*

The main objective of this study is to discuss the global economic consequences of ongoing pandemic outbreak of the COVID-19 virus. The other specific objectives due to the effects of COVID-19 are as follows:

- to highlight the fatality of this disease;
- to show the global economic losses; and
- to analyze the economic recovery.

5. *Economic Consequences*

The COVID-19 has already brought considerable human suffering and jeopardized global economies. According to the International Monetary Fund (IMF), the COVID-19 pandemic will cost the world economy up to \$9 trillion, which is the combined GDP of Japan and Germany, or roughly half that of the USA. It is estimated that global lose could be up to 18% of the usual output. Small and medium sized enterprises (SMEs) are completely closed during COVID-19 infections. China deals more than 18 million SMEs. About 80% of enterprise jobs and 50% of private companies' exports are partially or completely closed. It has affected workplaces throughout the world. It affects both the supply and demand for goods and services that have an effect on the economy [Yang *et al.*, 2020]. The EU, the USA and Japan account for half of the world's GDP, the Chinese economy accounts for about 16% of global GDP, and these economies are based on trade, services and industries. Closing borders, lockdown, and home quarantine drastically reduce global economic activities [African Economy, 2020].

The COVID-19 will create both short-term and long-term global economic losses. Home quarantine, lockdown, widespread restrictions on labour mobility and travel, border closings and closing of economic activities, such as closing of shops, business companies and industries make the global economy shamble and less healthy [Haider



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et al., 2020]. The lockdown and home quarantine have stuck production and service supply chains both nationally and internationally, which cause significant job losses [Organisation for Economic Co-operation and Development, or OECD, 2020].

5.1. Tourism and Travel Sector

The top tourism destinations in the World are France with about 89 million tourist arrivals per annum, Spain with about 83 million; the USA (80 million), China (63 million), Italy (62 million), Turkey (46 million), Mexico (41 million), Germany (39 million), Thailand (38 million), the UK (36 million), etc. Tourism together with travel supports one in 10 jobs (319 million) in the world and generates 10.4% of world GDP [African Economy, 2020].

The airline industry always faces many threats, such as oil embargo, airline deregulation, terrorist attacks, storm, and rough weather. For example, the attacks on 9/11 caused a significant reduction in air travel [Franke & John, 2011]. But none quite as rapid and severe as the one posed by the pandemic outbreak of COVID-19. Since the spread of COVID-19 to May 2020, about 7-13% workers lost their jobs in the airline workforce. Air travel restrictions have created negative impacts to numerous industries [Sobieralski, 2020]. Reduction of international tourism and travels is, of course, an economic implication of the infectious COVID-19 pandemics. About 20-80% of international flights are remaining closed due to this pandemic [Wanjala, 2020].

From the spread of COVID-19 national and international airlines remain partially or fully closed. Global tourism and travel are reduced for the COVID-19 outbreak. The airline industry has experienced a decrease in capacity of roughly 60–80% at major carriers. The International Air Transport Association (IATA) estimated \$30 billion loss of revenue for airline and tourist companies [Josephs, 2020].

According to the United Nations World Tourism Organization (UNWTO) latest estimate, there will be a decline in international tourism exports of \$300-450 billion. The international tourist arrivals will fall by 20% to 30% in 2020 when compared with 2019 figures. The Hotel and Hospitality Industry would lose 20% of its turnover and this percentage can be as high as 40% to 60% [African Economy, 2020].

The top five African economies (Nigeria, South Africa, Egypt, Algeria, and Morocco) account more than 60% of Africa's GDP. The tourism and petroleum sectors represent on average a quarter (25%) of the economy of these countries. Top tourism destinations in Africa include Morocco with around 11 million tourist



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arrivals per annum, Egypt (11.35 million), South Africa (10.47 million), Tunisia (8.3 million) and Zimbabwe (2.57 million). IATA estimates the economic contribution of the air transport industry in Africa at \$55.8 billion, supporting 6.2 million jobs and contributing 2.6% to the African GDP. African airlines have already lost \$4.4 billion in revenue by 11 March 2020 and expect more loss in rest of the year [IATA, 2020].

5.2. Business Sector

Business disruptions have lowered both production and consumption that create economic shocks in nations. Disruptions increase business costs and create a negative productivity shock that reduce economic activity. Lockdowns and quarantines drop in capacity of utilization. Domestic and international companies which rely on supply chains may be unable to get the parts they need. For example, China is an important supplier of intermediate goods, mainly electronics, automobiles, and machinery and equipment, to the rest of the world [Gopinath, 2020].

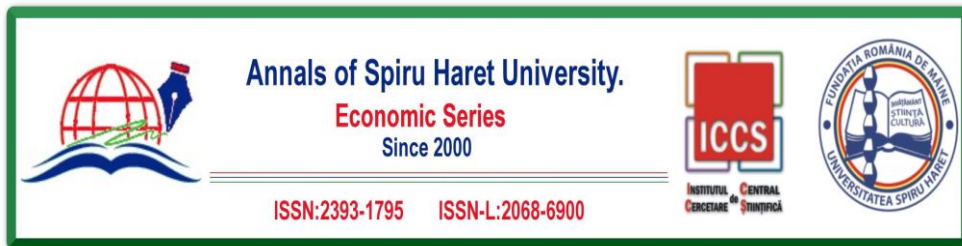
Companies are unable to pay their salaries to the jobless workers for loss of income which affects severely some sectors, such as tourism and hospitality. Commercial companies that are burdened with debt due to Covid-19 go bankrupt. These companies compel to reduce the cash flows. The bankruptcy of one company can place other companies in danger [Baldwin & di Mauro, 2020].

5.3. Stock Markets

COVID-19 creates a substantial adverse impact on financial stock markets globally. Major stock market indexes have fallen by an average of 10% in most of the countries. The IMF has announced that investors have withdrawn \$83 billion from emerging markets since the start of the crisis [African Economy, 2020].

The stock markets are tumbling, central banks are slashing interest rate, and industrial production is almost zero resulting into massive job loss and a financial crisis; a clear sign that disaster for the poor will be extreme [Haider *et al.*, 2020]. After the Black Monday episode (March 9), the main stock markets indices have just experienced one of the worst developments in their history in decades. The Dow Jones lost almost 3,000 points in one day. FTSE plunged by about 5% and losses are estimated at over \$90 billion [African Economy, 2020].

In the USA, the stock markets revolve 5 to 10% a day, sometimes up but mostly down. For example, airline stock prices have been hit disproportionately in the USA [Gopinath, 2020]. Investors in stock market have started to discount the liquidity risk



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in stock prices. Since the COVID-19 outbreak to April about \$23 trillion value has been destroyed in global stock market [Ramelli & Wagner, 2020a].

6. *Global Economic Effects*

After COVID-19 attack, economy of China shrinks to 6.8%, Eurozone economies shrink to 14.8%, and the US economy shrinks to 4.8%. As transport and production in the most countries are postponed, demand of oil decreased and global oil prices have declined sharply. The shortage of production will result into the shortage of supply and consequently will end as loss of jobs and employment for millions of people around the world. Short-term economic impacts fall on the most sensitive sectors, such as manufacturing supply chains; transportation, tourism and services relationships; retail and entertainment; and energy and commodity demand and prices [Barrero *et al.*, 2020]. Disruptions to production have now spread to supply chains across the world. Some affected economic sectors are rail system, e-commerce industry, automobile sector, restaurants industry, information technology and software services, travels and tourism industry, etc. All businesses, regardless of size, are facing serious challenges that lead to a potential global economic recession [OECD, 2020]. Any state gets most of its tax revenue from three sources: i) individual income tax, ii) corporate income tax, and iii) sales tax; account for over three-fourths of total tax revenues and almost half of all state revenues. In every nation, tax revenues will decrease dramatically. The size of the loss will depend on the severity and length of the pandemic and economic disruption [McKibbin & Fernando, 2020].

Because of COVID-19, a nation on average will experience a 6% decline in consumption and an 8% decline in GDP [Barro *et al.*, 2020]. ILO estimates that global unemployment may increase from 5.3 million (low scenario) to 24.7 million (high scenario) people; with mid scenario of 13 million. Global GDP may drop 2-8%. Overall losses in labour sector are expected around \$860-3,440 billion depending on the length of lockdown [ILO, 2020]. More than 1.2 billion people worldwide will be extremely poor, with a per capita income of \$ 1.90 a day or less. The number of people living below poverty line on \$5.50 a day or less will be 4 billion. The situation will worsen if the pandemic situation will be longer [Oxfam, 2020a].

Experts and pundits estimated that in 2020 the US GDP will decrease 3.8-6.3% (\$0.81-1.45 trillion) from 2019 depending on the length of lockdown. The US



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Senate passes \$2.2 trillion aid package to fight COVID-19 to meet the liquidity needs of the credit market and to support markets [McKibbin & Fernando, 2020]. It is expected that the USA, the EU and China would see GDP shrink by 2.6%, 3.2% and 0.9%, respectively in 2020 [Oxford Economics, 2020].

The direct economic impacts of COVID-19 can be seen as increase in the unemployment rate, decline of the future economic growth, investment fall, fall of consumption, decline foreign direct investment (DFI), and decline in the assets price. It affected supply chains, oil prices, travel and tourism, restaurants, conferences, sporting events, and government budget. About \$23 trillion in global market value has been destroyed since the outbreak [Morath, 2020]. United Nations Conference on Trade and Development (UNCTAD) suggests that DFI flows could fall 30-40% during 2020-2021 [UNCTAD, 2020]. Saudi Arabia suspended entry of pilgrims to the holy sites due to severely infection of COVID-19 in the country [Arezki & Nguyen, 2020].

In the US, the federal deficit is projected to remain at \$1 trillion in fiscal year (FY) 2021 (short-term) and steadily increase to \$1.7 trillion in FY 2030 (long-term). Within 10 years, the US debt owed to the public is projected to increase by 76% [CBO, 2020]. It is estimated that the US GDP will decline up to 6% in 2020 and quick recovery and returning to trend growth of 2% per year by 2022 [McKibbin & Fernando, 2020]. Just in three weeks of lockdown, the statistics on 4 April shows that the USA unemployment increased to 6.6 million and total unemployment reached 17 million. But about 28 million persons filed new claims for unemployment benefits over the six-week period ending 25th of April 2020 [US Department of Labor, 2020]. Due to the global nature and severity of the shock of COVID-19, it is estimated that the airline workforce may suffer a reduction of over 13% [Sobieralski, 2020].

The COVID-19 imposes long-term impacts in school and university closures. It also imposes long-term impacts in the society, such as infant and maternal mortality, under-nutrition and malnourishment, and in school and university closures will create restriction on educational development. The World Food Programme (WFP) has warned that 265 million people could be pushed into acute food insecurity due to Covid-19. As a result, the number of undernourished people in net food importing countries, majority in low-income countries, would increase by 14.4 million reaching 80.3 million [FAO, 2020]. The World Trade Organization (WTO) expects world merchandise trade to drop by 13-32% in 2020 [WTO, 2020].



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7. *Economic Recovery Steps*

The economic loss globally is estimated to be \$3-6 trillion [World Bank, 2020a]. The UN is calling for \$500 billion in aid to help low- and middle-income countries to face the pandemic. This aid must be used for supporting prevention measures, health systems, social protection, and food security [UN, 2020]. Oxfam calculates that OECD countries' fair share of this response would be closed to \$300 billion, which is also less than the combined wealth of the world's three richest men. Donors must urgently respond to food insecurity caused by coronavirus and provide food directly to low- and middle-income countries mostly in Africa and Asia. Donors must uphold humanitarian principles; provide feminist humanitarian assistance; protect refugees, migrants and internally displaced persons; and work towards protecting civic space for the vulnerable people. They must continue humanitarian aid to protect future famine; help to keep gender equality and women's rights in the low- and middle-income countries [Oxfam, 2020b]. The Food Crisis Prevention Network (RPCA) expects that, between June and August 2020, food insecurity and malnutrition will affect 17 to 50 million people in West Africa alone [RPCA, 2020].

In March, the European Central Bank, added €120 billion and later €750 billion to its bond-buying program. EU leaders proposed for a possible European recovery fund for transfers of €1.5 trillion. In the USA, real consumer spending drops by 20% and household labour income falls by 16%. In response to the crisis, the US Government declared \$2.2 trillion stimulus package under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, and signed it into law on 27th of March 2020 [Muellbauer, 2020]. In March, the United States Federal Reserve System also announced a similar \$700 billion program. In the second week of April, it announced new loan facilities of \$2.3 trillion to deliver credit to small businesses and municipalities [FAO, 2020]. In March 2020, the Spanish Government has announced a €200 billion package, which is equivalent to about 20% of GDP [Baldwin & di Mauro, 2020]. On 27th of March 2020, the G20 countries pledged \$5 trillion to defend the global economy against COVID-19 [G20, 2020].

8. *Financing for SARS-CoV-2*

There are some major sources of money for the epidemic response activities. These could be used to support pandemic outbreak. UN releases \$15 million from the Central Emergency Response Fund (CERF) to help fund global efforts to contain the



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COVID-19 virus. The WHO has called for \$675 million to fund the fight against COVID-19. Some such sources of funding are as follows [Centre for Health Security, 2020b]:

8.1. The World Bank

The World Bank Group's Pandemic Emergency Financing Facility (PEF) has a fund to respond during pandemics. It has a cash window and an insurance window. The cash window provided about \$50 million for Ebola epidemic in the Democratic Republic of the Congo (DRC) [World Bank, 2019]. The COVID-19 pandemic that killed more than 21,500 people would trigger a full payout of the Class B notes, raising \$95 million. It would also trigger a 16.67% payout of the Class A notes, raising an additional \$37.5 million [IBRD, 2017]. The World Bank has announced \$160 billion in long-term financial support over the next 15 months [World Bank, 2020b].

8.2. IDA Crisis Response Windows

The International Development Association (IDA) is the part of the World Bank that gives loans (credits) to low resource countries for development. For IDA credits, a country must have a per capita annual income of less than \$1,145. IDA meets every 3 years to raise money and decide how the funds will be spent; these are called Replenishment meetings. The 18th Replenishment (IDA18) finances projects from 1st of July 2017 to 30th of June 2020. Most IDA money is used for long-term development projects [IDA, 2017]. The Crisis Response Window (CRW) is a special pool of money devoted to help countries respond to disasters. It spent \$420 million to fight the 2014-2016 West Africa Ebola outbreaks. The IDA18 replenishment raised \$3 billion for crisis response, and as of early 2020, \$2 billion was still unspent and available for immediate use. The IDA19 allocated \$2.5 billion to the CRW, to become available on 1st of July 2020 [IDA, 2019].

8.3. IMF

The International Monetary Fund (IMF) has about \$1 trillion fund to lend, which are not for aid. If any country borrows any amount from this fund with negotiation, after a stipulated period must be repaid with interest [IMF, 2019].



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8.4. Private Charity

The total endowment of the top forty wealthiest charitable foundations is currently about \$500 billion but many of these are not involved in health. In certain circumstances, part of this fund might be used for pandemic [Wikipedia, 2020b].

8.5. National Governments

Total international development aid from governments is about \$200 billion per year. A partial amount of it could be used for a pandemic. But with a sufficient global coordination, the total amount might be used for a pandemic [Wikipedia, 2020a].

9. *Conclusions and Recommendations*

In this study we have tried to discuss aspects of economic consequences of the COVID-19 pandemic outbreak. On 25th of May 2020, the total number of deaths in the world reached 344,760, and the total number of infected people is over 5,400,608, of which 2,165,782 have totally recovered. On 2nd of June 2020, the total number of infected people reached over 6.2 million, the total number of deaths reached 377,000, and the total number of people cured is 2.6 million. It is uncertain when the infections and deaths due to COVID-19 will stop. New locations and countries are severely infected. Timely diagnosis, isolation, quarantine, reduced travelling, etc. can reduce both infections and deaths. Hand washing, maintaining healthy habits, masks use, and supportive treatments can reduce the fatality of this disease. Distribution of more PCR-fluorescent probe kits and PPEs among healthcare providers can control the outbreak. Invention of COVID-19 vaccine can prevent the disease in the future and the developed countries in medicine can take bold steps in this regard.

The outbreak of the COVID-19 is spreading fear around the globe and is severely disrupting the global economy. It creates many serious challenges at national, regional, and global levels. Global economics decline remarkably during the pandemic COVID-19. Most people are under quarantine and isolation, and much of the rest of the populace has been told not to go to work and to stay in their homes. Most business companies and industries of the world remain closed for months. Closing of the aviation, tourism and hospitality industries, and Small and Medium Enterprises (SMEs) create threat of significant declines in revenue. Some countries



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are in fully or partially lockdown. It is estimated that global GDP will decrease significantly. Also, the public tax will be decreasing and the foreign exchange reserves will be negatively affected. The developing and lower developing countries will suffer greatly from this. As a result, global economic loss will become a large amount. It is estimated that more than 2 billion people (addition of new half a billion) of the world will be extremely poor (whose income is \$1.90 a day) due to the COVID-19 pandemic. The governments, civil societies and employers must take necessary actions to minimize the economic losses and mitigate the economic damages caused by the COVID-19 outbreak.

References

- [1] African Economy (2020). Impact of the Coronavirus (COVID-19) on the African Economy, pp. 1-35.
- [2] Arezki, R. & Nguyen, H. (2020). "Novel Coronavirus Hurts the Middle East and North Africa through Many Channels." In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Economics in the Time of COVID-19*, pp. 37-43. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [3] Baldwin, R., & di Mauro, B.W. (Eds.) (2020). *Economics in the Time of COVID-19*. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [4] Baldwin, R., & Tomiura, E. (2020). "Thinking Ahead about the Trade Impact of COVID-19." In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Economics in the Time of COVID-19*, pp. 37-43. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [5] Barrero, J.M., Bloom, N., & Davis, S.J. (2020). *COVID-19 is Also a Reallocation Shock*. Working Paper No. 2020-59, Becker Friedman Institute.
- [6] Barro, R., Ursua, J., & Weng, J. (2020). *The Coronavirus and the Great Influenza Pandemic: Lessons from the "Spanish Flu" for the Coronavirus's Potential Effects on Mortality and Economic Activity* (No. w26866). National Bureau of Economic Research. <https://doi.org/10.3386/w26866>
- [7] Boone, L., Haugh, D., Pain, N., & Salins, V. (2020). "Tackling the Fallout from COVID-19." In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Economics in the Time of COVID-19*, pp. 37-43. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [8] Callaway, E. (2020). "Coronavirus: Labs Worldwide Scramble to Analyse Samples." *Nature*, 578, 16.



Issue 2/2020

- [9] CBO (2020). Baseline Budget Projections by Category in Congressional Budget Office (CBO). *The Budget and Economic Outlook: 2020 to 2030*, January 2020. <https://www.cbo.gov/system/files/2020-01/56020-CBO-Outlook.pdf>
- [10] Cecchetti, S.G., & Schoenholtz, K.L. (2020). “Contagion: Bank Runs and COVID-19.” In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Economics in the Time of COVID-19*. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [11] Center for Health Security (2020b). *Financing for Epidemic Response Activities*. Johns Hopkins Bloomberg School of Public Health.
- [12] di Mauro, B.W. (2020). “Macroeconomics of the Flu.” In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Economics in the Time of COVID-19*, pp. 30-35. Centre for Economic Policy Research (CEPR), VoxEU.org eBook, CEPR Press, London, UK.
- [13] FAO, (2020). COVID-19 Global Economic Recession: Avoiding Hunger Must Be at the Centre of the Economic Stimulus. Food and Agriculture Organization of the United Nations.
- [14] Franke, M., & John, F. (2011). “What Comes Next after Recession?—Airline industry scenarios and potential end games.” *Journal of Air Transportation Management*, 17 (1), 19–26. <https://doi.org/10.1016/j.jairtraman.2010.10.005>
- [15] G20 (2020). Extraordinary G20 Leaders’ Summit Statement. 27 March 2020.
- [16] Gopinath, G. (2020). “Limiting the Economic Fallout of the Coronavirus with Large Targeted Policies.” In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever It Takes*, pp. 41-47. Centre for Economic Policy Research (CEPR) Press, VoxEU.org eBook, London, UK.
- [17] Grinnell, R. Jr. (Eds.) (1993). *Social Work Research and Evaluation* (4th Ed.). Itasca, IL, F.E. Peacock.
- [18] Haider, M., Khan, S., Rabbani, M.R., & Thalassinou, Y.E. (2020). “An Artificial Intelligence and NLP Based Islamic Fin Tech Model Combining Zakat and Qardh-Al-Hasan for Countering the Adverse Impact of COVID 19 on SMEs and Individuals.” *International Journal of Economics and Business Administration*, VIII(2), 351-364.
- [19] Hiroyasu, I., & Yasuyuki, T. (2020). The Propagation of Economic Impacts through Supply Chains: The Case of a Mega-City Lockdown to Prevent the Spread of COVID-19. The Research Institute of Economy, Trade and Industry (RIETI) Discussion Paper Series 20-E-037. <https://www.rieti.go.jp/en/>
- [20] IATA (2020). *Economics Chart of the Week*. International Air Transport Association, 13 March 2020, Havana, Cuba.
- [21] IDA (2017). Crisis Response Window. <http://ida.worldbank.org/financing/crisis-response-window>



Issue 2/2020

- [22] IDA (2019). *The Demand for IDA 19 Resources and the Strategy for Their Effective Use*. May 31, 2019. <http://documents.worldbank.org/curated/en/516081563780169222/pdf/IDA19-Second-Replenishment-Meeting-The-Demand-for-IDA19-Resources-and-the-Strategy-for-their-Effective-Use-Compendium.pdf>
- [23] IEA (2020). *Oil Market Report February 2020*. The International Energy Agency (IEA).
- [24] ILO (2020). COVID-19 and the World of Work: Impact and Policy Responses. International Labour Organization (ILO) Monitor 1st Edition, 18 March 2020, Genève.
- [25] IMF (2019). Where the IMF Gets its Money. International Monetary Fund. March 8, 2019. <https://www.imf.org/en/About/Factsheets/Where-the-IMF-Gets-Its-Money>
- [26] Josephs, L., (2020). American Airlines Cutting International Summer Schedule by 60% as Coronavirus Drives Down Demand. CNBC News, 2 April. <https://www.cnn.com/2020/04/02/coronavirus-update-american-airlines-cuts-summer-internationalflights-by-60percent-as-demand-suffers.html>
- [27] Kass, A., Kriz, K. & Merriman, D. (2020). *What Policymakers Should Know About the Fiscal Impact of COVID-19 on Illinois?* Economic and Fiscal Health Impact Group. Institute of Government and Public Affairs. University of Illinois System.
- [28] Legesse, B. (2014). *Research Methods in Agribusiness and Value Chains*. School of Agricultural Economics and Agribusiness, Haramaya University.
- [29] Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., & Tong, Y. et al., (2020). “Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia.” *The New England Journal of Medicine*, 1-8. <https://doi.org/10.1056/NEJMoa2001316>
- [30] McKibbin, W.J., & Fernando, R. (2020). “The Global Macroeconomic Impacts of COVID-19, Seven Scenarios.” *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3547729>
- [31] Mohajan, H.K. (2017). “Two Criteria for Good Measurements in Research: Validity and Reliability.” *Annals of Spiru Haret University Economic Series*, 17(3), 58-82.
- [32] Mohajan, H.K. (2018). “Qualitative Research Methodology in Social Sciences and Theoretical Economics.” *Journal of Economic Development, Environment and People*, 7(1), 23-48.
- [33] Morath, E. (2020). “Coronavirus Risk Rises for US, Global Economies.” *The Wall Street Journal*, March 6, 2020. <https://www.wsj.com/articles/coronavirus-risk-rises-for-u-s-global-economies-11583528339>
- [34] Muellbauer, J. (2020). “The Coronavirus Pandemic and US Consumption.” *VOX CEPR Policy Portal*, April 11, 2020. <https://voxeu.org/article/coronavirus-pandemic-and-usconsumption>
- [35] OECD (2020). *OECD Economic Outlook – Interim Report March 2020*. OECD Publishing, Paris.
- [36] Oxfam (2020a). *Coronavirus Impact: COVID-19 may Push Half Million People into Poverty*, Oxfam. <https://www.oxfam.org/en/oxfams-response-covid-19>.



Issue 2/2020

- [37] Oxfam (2020b). *Oxfam Briefing Paper*. Development and Humanitarian Policy Issues. Oxfam International. www.oxfam.org
- [38] Oxford Economics (2020). Global Economic Prospects: World GDP to Fall 2.8% in 2020, Exceeding Financial Crisis Toll [online]. http://resources.oxfordeconomics.com/world-economic-prospects-executivesummary?interests_economic_topics=macroeconomics&interests_trending_topics=coronavirus
- [39] Pambuccian, S.E. (2020). "The COVID-19 Pandemic: Implications for the Cytology Laboratory." *Journal of the American Society of Cytopathology*, Article in Press, 1-10.
- [40] Pandey, P., & Pandey, M.M. (2015). *Research Methodology: Tools and Techniques*. Bridge Center, Romania, European Union.
- [41] Punch, K.F. (2013). *Introduction to Social Research: Quantitative and qualitative Approaches*. SAGE Publications.
- [42] Ramelli, S., & Wagner, A. (2020a). *Feverish Stock Price Reactions to COVID-19*. SSRN Working Paper.
- [43] Ramelli, S., & Wagner, A. (2020b). "What the Stock Market Tells Us about the Consequences of COVID-19." In Richard Baldwin & Beatrice Weder di Mauro (Eds.), *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever It Takes*, pp. 63-70. Centre for Economic Policy Research (CEPR) Press, VoxEU.org eBook, London, UK.
- [44] Rothan, H.A., & Byrareddy, S.N. (2020). "The Epidemiology and Pathogenesis of Coronavirus Dieses (COVID-19) Outbreak." *Journal of Autoimmunity*, Preprint. <https://doi.org/10.1016/j.jaut.2020.102433>
- [45] RPCA (2020). *Restricted Meeting: Summary of Conclusions*. http://www.food-security.net/wp-content/uploads/2020/04/RPCA2020_summary-of-conclusions_EN.pdf
- [46] Shereen, M.A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). "COVID-19 Infection: Origin, Transmission, and Characteristics of Human Coronaviruses." *Journal of Advanced Research*, 24, 91-98.
- [47] Sobieralski, J.B. (2020). "COVID-19 and Airline Employment: Insights from Historical Uncertainty Shocks to the Industry." *Transportation Research Interdisciplinary Perspectives*, 5, 100123. <http://dx.doi.org/10.1016/j.trip.2020.100123>
- [48] UN (2020). *UN Calls for \$2.5 Trillion Coronavirus Crisis Package for Developing Countries*. Conference on Trade and Development (UNCTAD). <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2315>
- [49] UNCTAD (2020). *Coronavirus Could Cut Global Investment by 40%, New Estimates Show* [online]. Geneva. <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2313>
- [50] US Department of Labor (2020). US Department of Labor, April 9, 2020. <https://www.dol.gov/ui/data.pdf>



Issue 2/2020

- [51] Wanjala, K. (2020). “Economic Impact Assessment of the Novel Coronavirus on Tourism and Trade in Kenya: Lessons from Preceding Epidemics.” *Finance & Economics Review*, 2(1), 1-10. <https://doi.org/10.38157/finance-economics-review.v2i1.57>
- [52] WHO (2020a). *Novel Coronavirus–China*. Geneva, Switzerland: World Health Organization.
- [53] WHO (2020b). *WHO Characterizes COVID-19 as a Pandemic*. World Health Organization (WHO).
- [54] Wikipedia (2020a). List of Development Aid Country Donors. https://en.wikipedia.org/wiki/List_of_development_aid_country_donors
- [55] Wikipedia (2020b). List of Wealthiest Charitable Foundations. https://en.wikipedia.org/wiki/List_of_wealthiest_charitable_foundations
- [56] World Bank (2019). Pandemic Emergency Financing Facility. Updated May 7, 2019. <https://www.worldbank.org/en/topic/pandemics/brief/pandemic-emergency-financing-facility>
- [57] World Bank (2020a). Poverty and Distributional Impacts of COVID-19: Potential Channels of Impact and Mitigating Policies. The World Bank.
- [58] World Bank (2020b). *How the World Bank Group Is Helping Countries with COVID-19 (Coronavirus)* [online]. Washington, DC. www.worldbank.org/en/news/factsheet/2020/02/11/how-the-world-bank-group-is-helpingcountries-with-covid-19-coronavirus
- [59] Worldometer (2020). COVID-19 Coronavirus Pandemic.
- [60] WTO (2020). *Trade Set to Plunge as COVID-19 Pandemic Upends Global Economy* [online]. Geneva. www.wto.org/english/news_e/pres20_e/pr855_e.htm
- [61] Yang, C., Wang, R., Gao, F., Sun, D., Tang, J. & Abdelzaher, T. (2020). “Quantifying Projected Impact of Social Distancing Policies on COVID-19 Outcomes in the US”. 11 May 2020. <https://covid19predictions.csl.illinois.edu/>
- [62] Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., George, F., & Tan, W. (2020). “A Novel Coronavirus from Patients with Pneumonia in China, 2019.” *The New England Journal of Medicine*, 382(8), 727-733.

