



Paradigm Shift Caused by COVID Pandemic

Savita Mandan¹, Nikita Kumawat¹

¹R. C. Patel Institute of Pharmaceutical Education and Research, Shirpur, India

ABSTRACT

The coronavirus pandemic was widely thought to be the biggest worldwide health crisis of the 20th century. The most difficult medical emergency that humanity has faced have occurred since the start of World War II. By December 2019 end, the newer respiratory illness (SARS-CoV-2) first arrived in city of China (Wuhan). More than 200 territories and countries have more than 51.949 million confirmed COVID-19 patients, according to WHO. Unique problems in the areas of personal and social life have been presented by the COVID-19. The COVID-19 virus has produced the worst disturbance in education policies in recorded history, affecting around 1.6 billion pupils in more than 200 countries. Around the world, closures of schools, institutions, and other learning environments have impacted over 94% of pupils. After the COVID-19 breakout, scientists have expressed their works on numerous teaching / learning strategies. Many institutions, colleges, and universities are no longer providing face to face education. The SARS-CoV-2 pandemic, which have affected at least 215 countries, regions, and territories, has affected the Chinese economy and spread rapidly to the rest of the world. Customers are the sources of market expansion, competition, and financial integration in every market. Economic instability is causing changes in consumer behaviour, though it is unknown how much of the change that occurred during the crisis will endure.

ARTICLE HISTORY

Received 8 October 2022

Revised 18 December 2022

Accepted 26 December 2022

KEYWORDS

Consumer Behaviour, Covid Pandemic, Education, Financial consequences, Global Economy, Trade and development

CONTACT Savita Mandan, Email: a.mandan@rediffmail.com

COVID PANDEMIC

Almost all world has been impacted by the COVID-19 pandemic epidemic. In December 2019, the outbreak was first identified in Wuhan. Nations from all over the world issued cautionary statements to the general population. Hand

washing, wearing face masks, maintaining physical distance, and avoiding large groups and gatherings have all been precautions for public health. To put a halt to Lockdown and residence staying methods have been employed to limit the

disease's transmission and slow the curve (Pokhrel & Chhetri, 2021; Sintema, 2020).

As of May 11th, 2020, the viral disease had effectively spread to 215 nations, regions, or territories since its inception. A particular vaccination for the new virus was still being researched, but many factors must be taken into account, such as the target population of vaccine administration, the virus rate of mutation, etc. On knowledge from the last two epidemics brought on by viruses belonging to a similar family, non-specific medicines are currently used. (Asad Ullah et al., 2020; Islam et al., 2020). The overwhelming number of infected cases has overburdened the healthcare systems in the impacted nations. Severe containment measures implemented globally in an effort to stop further virus transmission have contributed significantly to the slowing of the economy in a number of ways, starting with the negative effects of as a result of the concurrent supply and demand shock, mortality and morbidity restricted travel and closed borders (McKibbin & Fernando, 2021). The current economic decline may even be more severe than the 2008–2009 economic crisis, in which the rate of global commerce decreased more quickly than the rate of world growth (Baldwin et al., 2020a). It is anticipated that a period of stagnation will come after the decline in employment and economic activity, eventually leading to a recession (Sułkowski, 2020). The disease first appeared in China before spreading to other economically prominent countries. A global economic shock was sparked by those countries' economic importance and the outbreak in those countries. These six countries are dealing with major effects of the outbreak that account

for, respectively, 60%, 65%, and 41% of global supply and demand, manufacturing, and manufacturing export. These nations are also at the epicentre of numerous supply networks, which causes a domino effect of supply shock in other countries connected to their network (Baldwin et al., 2020a)

In terms of biology, the COVID-19 pandemic may resemble the SARS outbreak in 2003, although the two situations have different economic ramifications. For instance, China now makes up 16% of the global economy, compared to just 3% in 2003. It also leads the globe in terms of import and export, which has an indirect impact on all related businesses, such as Apple and Nike. In addition to the supply and demand crises it created, the COVID-19 pandemic caused significant slowdowns in employment and productivity growth, which shocked the labour market. Businesses all across the world are experiencing a terrifying decline in revenue, which is therefore causing insolvencies and job losses. According to a report by the International Labor Organization, as of April 29, 68% of all workers worldwide, including those in Africa, Europe, the Americas, and Central Asia with proposed workplace closures, are in turmoil, with 81% of those workers being employers and 66% being own-account workers (ILO). According to previous crises, the shock is expected to result in a reduction in working hours and wages, which will lead to an increase in informal employment. Unfortunately, this strategy may also be hindered by aggressive containment measures, which affect 1.6 billion workers in the informal economy. The most susceptible groups of

workers include those who work in the aviation, tourist, and hospitality sectors as well as informal and/or migrant workers. According to the ILO, measures must be implemented to assure worker, employer, and family health protection in order to address this rising problem. Suitable remedies for the small company and informal economy sectors should include financial aid and loan guarantees in addition to income support policies to boost the economy and labour demand (Zaman et al., 2020a).

THE IMPACT OF THE COVID-19 ON THE PUBLIC HEALTH CARE SYSTEM

This pandemic has resulted in both short- and long-term health issues, such as mental stress, elevated anxiety, and post-traumatic stress disorder (COVID-19) (PTSD). Even before the COVID-19 epidemic, Pakistan's already-fragile healthcare system was overburdened. A doctor sees 963 individuals, and there is room in a hospital for 1608 patients who need inpatient care, according to the UNDP's data. The IMF gave Pakistan a bailout during this crisis totalling \$6 billion USD to end the financial crisis and boost the Pakistani economy. The public health system is being supported by the Pakistani government in the fight against the coronavirus pandemic. When the coronavirus outbreak severely affected all sectors of the economy in Pakistan, the country's economy was just beginning to stabilise and recover from the financial crisis (Maqsood et al., 2021).

PARADIGM FACTORS

Education

Bhutan initially announced the closing of schools and other institutions and a reduction in business hours in the of March 2020 second week. The whole nation was placed under lockdown on August 1, 2020. People were allowed to move around freely, offices reopened, and some levels of schools and universities resumed operations while others carried on with online lessons at this time. Above 170,000 kids in grades PP through XII will be impacted by today's school closure in Bhutan. The repercussions are wide-ranging and will probably only get worse for learning in the days to come. Many schools, universities, and other higher education institutions no longer offer in-person education training. It is vital to implement novel and creative teaching and evaluation strategies. We now have the opportunity to prepare for the arrival of digital learning thanks to the COVID-19 outbreak. Research has identified a number of issues, including knowledge barriers, poor learning environments at home, equity issues, and academic success in higher learning. Other drawbacks include the inadequate online teaching infrastructure, the insufficient exposure of teachers to online instruction, and the absence of prior online teaching experience (Pokhrel & Chhetri, 2021).

Market

Significance of Market

In economics, a market is a common physical or virtual platform where willing consumers and sellers trade products and services. Retailers or companies that sell to other markets are examples

of market participants. Based on a variety of variables, including the size and kind of the product, the client base, legality, etc., there are several sorts of marketplaces. The impact of COVID-19 on the world market has been significant, shattering predictions for an 11-year bull market in 2020. According to a report by the International Monetary Fund, investors have pulled out a total of US\$83 billion from a number of emerging market companies, which has ultimately reduced their revenue. In the worst-case scenario, numerous investors seek liquidity (Relations, 2008).

Types of markets include:

Financial market

is used to describe a place where buyers and sellers can trade securities, bonds, and currencies. Stock markets, foreign exchange markets, bond markets, etc. are a few examples. It is one of the industries that has been most severely impacted by changes in the price of oil on the worldwide market. Due to this, the value of financial assets has decreased, which has affected currency exchange rates as well. There have been disruptions to stock markets worldwide, including those in New York, Frankfurt, Tokyo, and London. For a number of businesses, the supply chain collapse has resulted in cash flow issues.

Auction market

refers to a website that brings together potential customers for the purchase of a specific batch of goods. The item is offered for sale to the highest bidder. In these markets, goods like animals, houses, etc. are typically exchanged.

Black market

Describes black markets that are not monitored by the government or other regulatory organisations. Some are done to circumvent tax restrictions, while others might offer goods and services when those are in low supply. Some underworld industries, like the one in Cuba, have benefited from the current health crisis by meeting the rising demand for medical goods. Along with medical supplies, consumer products and food are also stolen inside Cuba and sold again at exorbitant costs.

Markets are in charge of distributing commodities among people. By facilitating trade, they trigger a chain reaction of favourable economic developments, beginning with increased production and employment that raises the nation's GDP. Given the current circumstances, many business owners are forced to work from home as not all companies offer this option and many people are being let go from their positions. As a result, the declining employment rate is a global phenomena. If the lockdown and closed borders continue, there may be a cascading effect that causes firms to be unwilling to hire people, which would result in very little demand for their goods. However, because the labour market will be competitive and we can anticipate potential inflation, workers will be willing to accept a lower wage rate. The poor workers may have no choice but to take any job they can find, even if it pays less, as the cost of living is on the rise.

Factors Affecting Economies

Demand, supply, prices, wages, output, cost, and labour are a few of the elements that are typically closely linked to economic growth. In the wake of this pandemic, they are all impacted. Due to the pandemic's disruption of supply networks and worldwide trade, the global economy could contract by as much as 1% . Increased mortality and morbidity rates have decreased productivity and production capacity, which eventually caused a supply shock. Meanwhile, changing consumption patterns and investments as a result of the current situation's looming uncertainty and limited income and wealth have caused a supply shock. This is not all, as a significant portion of economic shocks are dispersed from one country to another through mechanisms associated with globalisation, such as links in finance, trade, and migration. The use of drastic measures to contain the virus has been both a blessing and a curse. Individual businesses and organisations that depend on gathering and physical presence have been forced by social distance to cut back on their production or, in the worst case scenario, to cease operations . The severity of the economic repercussions will mostly be determined by two variables.

- The duration of the repression of the main economies' economic activity.
- The effectiveness of the budgetary policies implemented by the governments in response to the Changes in Labour Supply

A balanced pattern of wages, income, and employment is ensured by labour economics,

which deals with both employers and employees. When the labour supply changes, the pattern is disturbed. According to various sources, COVID-19 now takes 14 days to incubate. As a result, if a worker is infected with COVID-19 or exhibits several signs of the disease, he or she must miss 14 days of work. Reduced productivity is a major consequence of being absent from work. It has a big effect on households as well as businesses because more health services and products are being consumed. As a result, household health spending has significantly grown. Both the individual and his or her family are mentally impacted. So, the opportunity of working online is eliminated due to illness, stress, and total isolation. Additionally, it may have a long-lasting financial impact on both the person and the business. The specific business or organisation may experience difficulties as a result of the absence of employees, and as a result, they may adopt various action plans, such as a new furlough policy or a reduction in employee compensation.

Crisis in Manufacturing Companies

As a result of COVID-19, manufacturing businesses are currently experiencing a crisis. Plans for production are delayed, and this undoubtedly has ripple consequences. European automakers are halting manufacturing, including Ferrari and Volkswagen. Due to a closure of the industry and a shortage of parts, they are ceasing operations. Additionally, the effect can be seen in high-end products like Swiss timepieces. The scarcity of parts and components is causing issues for the makers. The disruption of the supply chain will undoubtedly have a significant impact on the

costs of doing business for industrial enterprises in the near future. Hasbro, a toy manufacturer, is likewise struggling because 70% of its supplies come from China. Hasbro has had a very tough time marketing its products as a result of the closure of numerous factories in China and the disruption of the delivery route.

Revenue Decline in Media Industry

The COVID-19 outbreak has also had a significant impact on the media sector. The amount of advertising revenue being received by various media organisations and television networks has significantly decreased. For instance, it's possible that Facebook's ad revenue would decline by \$15.7 billion in 2020. The current estimate for Google's net income is \$127.5 billion, a decrease of \$28.6 billion. According to estimates, the COVID-19 phenomena might cause Google and Facebook to lose over US\$44 billion in advertising income by 2020.

Due to the outbreak, several multimedia companies are experiencing financial difficulties and record-low TV ratings because the venues are vacant and people cannot physically attend events to enjoy them. Due to the coronavirus outbreak, numerous employees of WWE, an American media and entertainment corporation, have been let go. The company's flagship programme recently had its lowest viewership ever. Only 1.68 million people watched the programme, which is the fewest since 2018. Several sporting events, including the Tokyo Olympics and UEFA Euro 2020, that were scheduled to be aired by the media have been moved to 2021. Various TV

programmes' production is either halted or delayed. Due to the lockout, award shows and concerts are also cancelled. Due to the COVID-19 epidemic, Japan's animation industry is likewise experiencing a crisis with an uncertain future.

Impacts on Tourism Industries

Due to the desertification of popular tourist locations like Paris, Venice, Madrid, and Rome, the tourism sector is suffering tremendous losses. Lockdowns and travel restrictions have already dealt this business serious blows. To maintain their operations, German tourist behemoths like Touristik Union International (TUI) have applied for public assistance. Disneyland and other popular tourist destinations have been declared permanently closed. Even Southeast Asian nations like Malaysia are experiencing severe losses in the travel and tourist sector. In 2020, the nation anticipated receiving over 30 million visitors and generating €20 billion in income. However, because the COVID-19 pandemic is seriously affecting about 3.5 million individuals who work in the tourism industry, the predicted revenue may decline significantly. Additionally, spillover impacts can be seen because companies that depend on tourists are also about to suffer a significant financial loss.

Global GDP Decline

The pandemic has dealt the world economy a serious blow, but its long-term effects are still unknown. To calculate the overall economic contraction, economists are considering all factors. GDP has consistently been a significant role in macroeconomics. While it is impossible to

say with certainty how much the GDP will contract in the coming year, financial analysts have estimated that the US would see a 2.4% GDP loss in the event of a global pandemic. The worst-case scenario is estimated to result in a monetary GDP loss of US\$76.69 billion. Additionally, the real world GDP could fall by 0.5% (from 2.9% to 2.4%). While the GDP loss in Italy has been predicted to be 3%, the projected GDP loss in China is 2.4%.

Disruption of Global Supply Chain and Global Trade

The production interruption has caused a disruption in the global supply chain. As a result, the state of worldwide trade is in danger, and negative spillover effects have hurt suppliers at all levels of the supply chain. It has been predicted that global trade may decline in 2020, having an impact on every sector of the economy. It won't just have an impact on the powerful exporters; it will also hurt the importers. The COVID-19 phenomena may cause a 32% decrease in global trade, according to the World Trade Organization (WTO). As international tourist, travel, and hospitality businesses cease operations, the "domino effect" will start to take effect, affecting SMEs all over the world. Additionally, stock indices have plummeted and financial markets have crashed. The Dow Jones Index has already experienced its greatest drop in a single day. Markets all over the world are sharply declining.

Unemployment, Poverty and Other Issues

The unemployment rate has dramatically increased as a result of COVID-19. The self-

employed and those with lower incomes are particularly impacted by the domino effect. In addition, a number of small enterprises are closing as a result of the pandemic. As a result, there is a possibility that unemployment will spread throughout the world. In the United States, more than 10 million people have already lost their work. 6.7% of all working hours in the globe are thought to be at risk of disappearing, or 195 million full-time jobs. According to the International National Organization, countries with upper-middle incomes are more likely to suffer the greatest loss. Due to both full-time and partial workplace closures, the COVID-19 pandemic has had a significant negative impact on about 81% of the world's workforce. In America, 43% of workers are at risk of losing their jobs, compared to 26% in Africa. Around 2 billion people worldwide who operate in unregulated industries (mostly in emerging economies) are at danger. Additionally, it has been predicted that for the first time since 1998, worldwide poverty may increase. According to current projections, the COVID-19 phenomena will push 49 million people into extreme poverty worldwide by 2020. The region with the greatest potential for impact is Sub-Saharan Africa, where an estimated 23 million people may be forced into poverty. The figures are also rather high for India, where it has been estimated that 12 million people may live in poverty by the end of 2020. Due to the epidemic, numerous international trade shows have been postponed. For instance, the Austrian "Auto Emotion - Automobile Exhibition" has been cancelled. The "Antiquities and Contemporary Art Exhibition" has been postponed in France. International Fair "Venus

Berlin" has been postponed. Numerous more shows and fairs suffered the same fate. As a result, the harm has already been done.

Oil Prices Down Worldwide

The oil markets have suffered considerable losses as a result of the collapse in the global demand and supply chains. Since there is now significantly less demand for oil and oil-derived products, imbalances are getting worse as more supply is introduced into the market. Oil lost 70% of its value when it fell under \$20 per barrel. As the supply during the COVID-19 epidemic is far more than the demand, the storage capacity is also approaching its limitations. The demand shock, though, might allow lower-cost producers to reclaim some market share. The largest oil production cuts in history were informally agreed to on March 9 by Russia, the Organization of Petroleum Exporting Countries i.e., OPEC, and other producers. Along with Equatorial Guinea, Algeria, Angola, Libya, Gabon, Nigeria, Kuwait, Saudi Arabia, Republic of the Congo, United Arab Emirates and South America, OPEC also includes Middle East, Iraq and Iran. For the months of May and June, they decided to remove 10% of the global production from the market. Rebalancing the status of the oil markets, experts have warned, may prove to be considerably more challenging than previously thought (Zaman et al., 2020b).

Trade

Manufacturing and Trade

This pandemic is unique since previous post-war crises and pandemics typically afflicted poorer countries. Locally, poorer countries have

significant effects, but because to their economy' isolation from the rest of the world, the global effects are rarely recognised. In contrast, the COVID-19 epidemic has afflicted wealthier, more developed countries that are significantly more economically significant to global trade. Due to their reliance on trade with larger countries like China, the USA, and the UK, smaller countries will be severely impacted by this, creating a supply-side shock similar to the Great Trade Collapse of 2008–2009. The highest rates of illnesses are seen in the nations that contribute the most to the global GDP and export the most produced goods. Consequently, this is a shock on both the sides of demand and supply (Zaman et al., 2020b).

The COVID-19 epidemic is, however, having a significant impact on the services industry, unlike earlier shocks. In fact, as we will later demonstrate, while global commerce in goods returned to a normal level by the end of 2020, it has not yet happened with regard to trade in services. One of this pandemic's most defining features is that it has forced us to implement social segregation measures and movement restrictions for the protection of public health. This has a significant impact, particularly on the trade in services because, in contrast to the trade in products, some services commerce involves cross-border mobility and physical proximity between providers and customers. For instance, cross-border consumer and supplier mobility is necessary for services trade, which the WTO General Agreement on Trade in Services (GATS) categorises under modes 2 and 4, respectively. Therefore, restrictions on cross-border movement

will have a more significant effect on the trade in services. Furthermore, depending on whether a physical connection between suppliers and consumers is required and whether an online supply is accessible, this influence may differ among service industries and subsectors (Ando & Hayakawa, 2022).

For instance, cross-border consumer and supplier mobility is necessary for services trade, which the WTO General Agreement on Trade in Services (GATS) categorises under modes 2 and 4, respectively. Therefore, restrictions on cross-border movement will have a more significant effect on the trade in services. Furthermore, depending on whether a physical connection between suppliers and consumers is required and whether an online supply is accessible, this influence may differ among service industries and subsectors. By offering reliable benchmark estimates of the direct impact of the epidemic and the policies to stop its spread on trade flows, our data can be helpful in that endeavour. These estimates might be converted into elasticities for those models' calibration. Our findings also demonstrate how the pandemic situation in other nations affects bilateral trade flows, indicating that the third-country channel should be considered in any structural model. In reality, these effects from other countries show that national coordination is essential for the best pandemic response strategies. Although this makes sense, policymakers need accurate assessments of the scope and character of these interdependencies. Using data on China's exports to every nation and region in the world, we give such estimations of the country product level for

trade flows. This enables us to separate the pandemic's effects on importing nations. Since COVID-19 is both a demand and a supply shock, its impact on a nation's import demand is inherently equivocal. Here, we display the net results as determined by the imports of China into the nation. Additionally, we distinguish between the direct economic impacts of the pandemic as measured by COVID-19 mortality and the indirect effects brought on by governmental decisions to halt economic activity. We discover that the adverse demand effects are dominant in both dimensions and are not insignificant. For instance, based on our baseline specification's point estimates, a monthly increase in COVID-related mortality per capita and the degree of lockdown stringency equal to one standard deviation would result in a decrease in imports from China of about 6%. (1.5 per cent stemming from the former, 4.2 per cent due to the latter). If we assume a change in each of those variables from zero to the sample mean, the joint effect would imply a decrease in imports from China of 11.3%, while a change in each of those variables from zero to the highest levels in the sample would imply a joint effect of just over 30%. But this is only a partial picture because one must also take into account how the pandemic's effects on a country's other trading partners affect its imports from China. For instance, a nation may choose to import more of a commodity from China in response to domestic pandemic conditions if its primary trading partners are unable to do so due to COVID-related limitations in that nation. However, the influence of the pandemic's direct and indirect consequences in the trading partners

is a priori unclear, much like in the domestic economy (Liu et al., 2022).

Economy

World Economy Before and After COVID-19

Pandemic At the beginning of 2020, a number of predictions indicated that an economic rebound was imminent. The effects of the world financial crisis in 2008 were minimal. Additionally, trade and economic growth increased in the majority of the nations. Additionally, the stock markets had reached fresh all-time highs . An enormous economic crisis has been brought on by the COVID-19 outbreak over the past four months. Three crucial sectors need to be examined in order to accurately gauge the effect on the global economy. Manufacturing and trade are first, followed by services, then financial markets, and finally services and commodity prices (Baldwin et al., 2020b; Zaman et al., 2020b).

Manufacturing and the service industries were both impacted by the COVID-19 epidemic. Economic stress has already begun and will intensify quickly. Lockdowns and productivity is decreased by social isolation on the one side, but they also sharply reduce consumer demand for products and services, which causes the market to experience a collapse in activity. However, the only practical methods for halting the development of COVID-19 are lockdown and social seclusion. The economic hazards of limiting the economy still exist, Even so, governments learn by doing, as was the case in the past with the success of the containment approach in the Bhilwara district of Rajasthan, India. Similar to this, flattening the caseload

curve has a cost but is essential for the overall economy (Chaudhary et al., 2020).

REFERENCES

- Ando, M., & Hayakawa, K. (2022). Impact of COVID-19 on trade in services. *Japan and the World Economy*, 62. <https://doi.org/10.1016/j.japwor.2022.101131>
- Asad Ullah, M., Araf, Y., Sarkar, B., Tayeb Moin, A., al Islam Reshad, R., & Rahman, H. (2020). Pathogenesis, Diagnosis and Possible Therapeutic Options for COVID-19. <https://doi.org/10.20944/preprints202004.0372.v1>
- Baldwin, R. E., Weder, Beatrice., & Centre for Economic Policy Research (Great Britain). (2020a). *Economics in the time of COVID-19*. CEPR Press.
- Baldwin, R. E., Weder, Beatrice., & Centre for Economic Policy Research (Great Britain). (2020b). *Economics in the time of COVID-19*. CEPR Press.
- Chaudhary, M., Sodani, P. R., & Das, S. (2020). Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme. *Journal of Health Management*, 22(2), 169–180. <https://doi.org/10.1177/0972063420935541>
- Islam, H., Rahman, A., Masud, J., Shweta, D. S., Araf, Y., Ullah, M. A., al Sium, S. M., & Sarkar, B. (2020). A generalized overview of SARS-COV-2: Where does the current knowledge stand? *Electronic*

- Journal of General Medicine, 17(6).
<https://doi.org/10.29333/ejgm/8258>
- Liu, X., Ornelas, E., & Shi, H. (2022). The trade impact of the COVID-19 pandemic. *World Economy*.
<https://doi.org/10.1111/twec.13279>
- Maqsood, A., Abbas, J., Rehman, G., & Mubeen, R. (2021). The paradigm shift for educational system continuance in the advent of COVID-19 pandemic: Mental health challenges and reflections. In *Current Research in Behavioral Sciences* (Vol. 2). Elsevier B.V.
<https://doi.org/10.1016/j.crbeha.2020.100011>
- McKibbin, W., & Fernando, R. (2021). The global macroeconomic impacts of covid-19: Seven scenarios. *Asian Economic Papers*, 20(2), 2–30.
https://doi.org/10.1162/asep_a_00796
- Pokhrel, S., & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1), 133–141.
<https://doi.org/10.1177/2347631120983481>
- Relations, E.-I. (2008). The Great Lockdown vs. The Great Depression and the 2008 Global Financial Crisis Written by Akshat Sogani. <https://www.e-ir.info/2020/07/02/the-great-lockdown-vs-the-great-depression-and-the-2008-global-financial-crisis/>
- Sintema, E. J. (2020). Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7).
<https://doi.org/10.29333/EJMSTE/7893>
- Sułkowski, Ł. (2020). Covid-19 Pandemic; Recession, Virtual Revolution Leading to De-globalization? *Journal of Intercultural Management*, 12(1), 1–11.
<https://doi.org/10.2478/joim-2020-0029>
- Zaman, K. T., Islam, H., Khan, A. N., Saha Shweta, D., Rahman, A., Masud, J., Araf, Y., Sarkar, B., Ullah, A., & Ullah, M. A. (2020a). COVID-19 Pandemic Burden on Global Economy: A Paradigm Shift. <https://doi.org/10.20944/preprints202005.0461.v1>
- Zaman, K. T., Islam, H., Khan, A. N., Saha Shweta, D., Rahman, A., Masud, J., Araf, Y., Sarkar, B., Ullah, A., & Ullah, M. A. (2020b). COVID-19 Pandemic Burden on Global Economy: A Paradigm Shift. <https://doi.org/10.20944/preprints202005.0461.v1>