

Impact of COVID-19 on Nepalese Stock Market

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Abstract

Post the outbreak of COVID different studies have been conducted to find the impact of it on various aspects such as physical and mental state of human lives, business, industries, economy, and so on. With the objective of assessing the effect of COVID-19 on Nepalese stock market (NEPSE), using NEPSE index and market turnover as independent variable and taking 1st 6 months' every operating day data since active COVID cases were seen, this paper tests two hypotheses. First the median of active COVID cases is found, considering as the good mid position indicator, then the cases above the median point are divided as High COVID case situation and Low COVID situation. The non-parametric test Mann-Whitney U-test is applied that finds: 1st: the NEPSE index was increasing during the high COVID cases than that of low COVID situation and 2nd: NEPSE market turnover was also increasing during the high COVID cases than that of low COVID situation. This concludes with significant positive effect of COVID on Nepalese stock market. Digitization of NEPSE, leisure time with people, their sentiment to enter the stock market when stock prices are low and optimism that prices of stock would increase in the future, are some of the factors contributing to the increase in NEPSE performance during high COVID situation.

Key words: COVID19, NEPSE, NEPSE index.

I. Introduction

The world is experiencing an unprecedented health shock as the novel corona virus disease of 2019 (COVID-19) sweeps across the massive population around the world. The first case of the virus was recorded in China's Wuhan during December 2019 and has since spread to various parts of the world rapidly. The World Health Organization (WHO) issued its first global alert of the COVID19 on 30th January 2020 (WHO, 2020a). The largest number of COVID-19 death cases kept on shifting from People's Republic of China to Italy, South Korea, France, Spain Germany, Japan, the United States of America and all other countries around the world simultaneously. In order to curb the spread of the virus, various governments around the world, continue to institute and adopt several preventive and public health policy measures such as travel restrictions, lockdown, school closures, physical or social distancing, wearing of face masks, and regular hands washing (Takyi & Bentum, 2020). The COVID-19, increasing at an alarming rate pandemic has posed a great threat to the economic growth and development of many economies.

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The fear of COVID-19 has raised concern towards the health and thus booming the health sector while all other sectors are facing hard time, however, the lockdown of the economy (to control the spread of COVID19) around the world created economic uncertainty. Economic uncertainty increases the market volatility (Bowes, 2018). Both the goods market and stock market have faced uncertainty from COVID-19. However, one of the major concerns of financial economists and investors is the impact that the COVID-19 pandemic would have on the financial and the stock markets.

As the number of confirmed cases started increasing raising the risk of the COVID-19 outbreak to the general public, investors would shape their sentiments towards the disease, which could significantly influence the stock market. For example, when the stock market trends upwards and there is a less perceived risk then investors would behave more optimistically. On the other hand, when the stock market trends downwards and there is a high perceived risk then investors sentiments would become relatively pessimistic and as a result, they would tend to wait to enter the market until a revival begins (Peters, & Slovic, 2012; Liu, Manzoor, Wang, Zhang, & Manzoor, 2020; Lu & Lai, 2012). Such situations would lead to short-term investor overreaction and would make the stock market to be pricing in fear. As a result, many investors would resort to holding other assets which are regarded as "safe-haven investment" to reduce risk during these uncertain economic periods (He et al., 2020). The consequences of such actions by investors could reduce stock market prices, leading to lower performance of the market. Igwe (2020) is of the view that the shock from this pandemic can increase the volatility that can negatively affect the economic and financial system of every country. With the increasing risk and uncertainties, and loss of income due to lockdown, the investment in stock market has been hit negatively. The consumption expenses are increasing as people believe eating more diet would lower the risk of COVID leading to less saving and thus resulting to low investment. No any goods and stock market remain unaffected from COVID.

Various studies have been conducted to identify impact of COVID-19 on stock market in SAARC countries. SAARC stands for South Asian Association for Regional Cooperation, established in 1985. It is the geopolitical union and intergovernmental organization of 8 member states of Southern Asia including: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Srilanka. There were catastrophic consequences of COVID-19 in the South Asian Region with no immediate vaccination. Only lockdowns, social distancing, shutdown of business activities and educational institutions were meant to control the contagious COVID-19 (Kugelman, 2020). Another study by Saleem (2020) has identified the declining effect of COVID-19 on the stock returns of SAARC countries where India and Pakistan experienced significant decline in stock returns with the increase in the hitting intensity of COVID-19 viral outbreak. Similarly, Bangladesh and Srilanka face tough times with a slight nosedive only for a short period after COVID-19 pandemic and markets of Nepal were less responsive to the corona virus. (Mallik & Sen, 2020) concluded that amid COVID-19 the stock markets of the SAARC nations are not efficient in semi-strong form as price adjustment process due to release of COVID-19 information is slow.

A lot of study has been conducted till today regarding the influence of COVID outbreak in the global stock markets. However, contrasting effects are seen in different nations. Although Nepal lies in the under developed list, the financial and economic activities are far more progressing than the past decades. In Nepal, Nepal Stock Exchange (NEPSE) is the only stock market trading financial securities. Some newspaper articles advocating the COVID and Nepal Stock Exchange (NEPSE) performance can be found, but there are hardly any research article addressing this issue.

Problem Statement

The effect of this pandemic is prevalent not only in least developed or emerging economy but also in developed economies. Looking to the global stock market scenarios amid COVID-19, first, US stock market: The three major U.S. stock market indices bottomed out on March 23, 2020, since then, the Dow Jones, S & P 500 and Nasdaq have soared 76, 76 and 95 percent, respectively, making the past 12 months one of the best 365-day stretches since World War II (Richter, 2021). UK's leading stock market index FTSE has fallen more than 10% on 12th March, 2020 (Zhang, 2020). Likewise, the top leading emerging economies such as Brazil, Russia, Mexico gradually moved towards hard mobility restrictions that will bring down the emerging economies to a recession of -1 percent in 2020 (Herfero, 2020). Similarly, after 10 years of history of the South Korea, the Korean stock market index KOSPI dropped below 1600 from COVID-19 (So, 2020). In China higher uncertainty due to COVID-19 results in greater volatility of stock return (Liu, 2020). Two major Indian stock indices: Bombay Stock Exchange (BSE), Sensex dropped to 13.2% on 23rd March, 2020, (which is the highest fall since 1991 Harshat Mehta scam) and National Stock Exchange (NSE), Nifty also declined to almost 29% during the same period (Mandal, 2020). Adding to this, Bora (2020) has found that pre-COVID-19 has higher return on the indices than during COVID-19. Both Indian stock market indices Nifty and Sensex reached bottom line during the first period of lockdown (24th March to 6th April).

The Government of Nepal issued a nation-wide lockdown from 24th March, 2020 and ended on 21st July, 2020 (Banstola, et al., 2021) with multiple extensions. There was only case confirmed on 23rd January 2020 when a 31-year-old student, who had returned to Kathmandu from Wuhan on 9 January, tested positive for the disease but no fatalities. Then, Nepal's first case of local transmission was confirmed on 23rd March and the first death was seen only on 17th May.

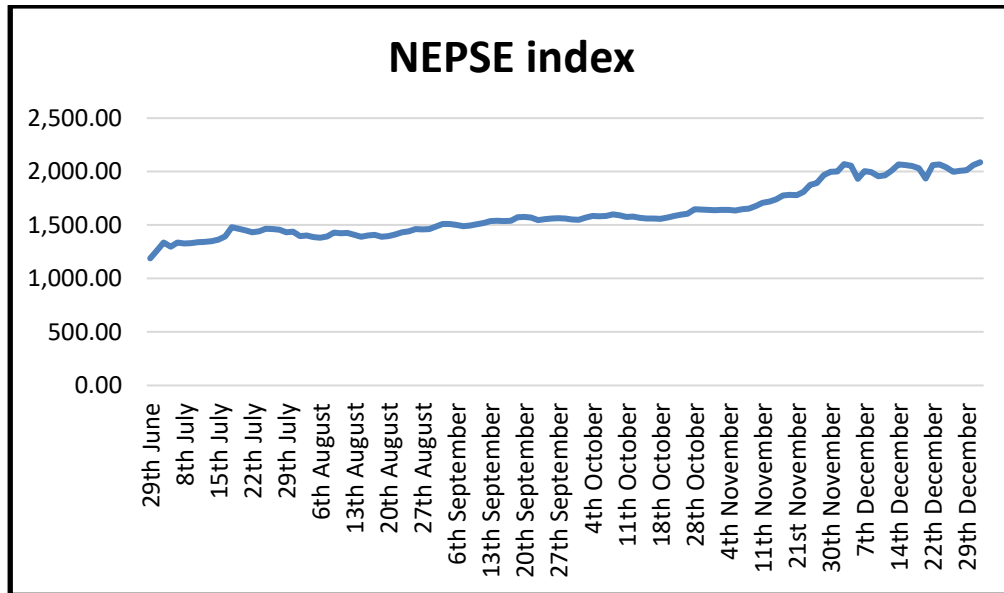
On May 8, 2020 the Government of Nepal announced partial opening of the economy. With this decision, transactions were resumed in NEPSE from May 12; 50 days later than last transaction on March 22. Majorly in Nepal where the stock transactions are affected by a slight movement in any sector and any matters related to political, legal or social, the COVID outbreak was such a huge shock and topic of every discussion. The NEPSE index had increased by 47% from 1109 (Nov 26, 2019) to 1632 (Feb 25, 2020), fostering the prediction that NEPSE is out of the bear market that loomed Nepalese Stock Market since mid-2016. This amplified index in 3 months activated the short term investors trading for fast earning. The concept of profit booking was also getting familiar. However, the COVID buzz boosted panic selling. On March 22, 2020, the market index closed at 1251, evaporating over 72% of gains made from November 2019 (Kriti Investment, 2020).

Khatabbeh, et al. (2020) found the increased volatility in the stock market performance during the initial COVID outbreak and then negative significant impact was seen in top 11 global stock markets. When the world was facing high volatility in the stock market performance another study by Shankar and Dubey (2020) found the positive effect of COVID-19 on trading volume and investors' confidence in India as stimulated by the sentiment of investor's aim of entering into the market when the stock prices are low.

In case of Nepal, the Nepalese capital market is not much sophisticated and well-developed as compared to the global developed countries' stock market. DEMAT was introduced to ease the stock trading process in 2011 A.D; however it was not much popular. After the lockdown was loosen, the number of MeroShare accounts has surged from 7 lakhs to 26 lakhs, and Demat accounts have doubled to 36 lakhs.

Figure 1

NEPSE Index



Looking to the above figure about the stock market index after the positive cases of COVID was seen, we can observe that the stock market has faced fluctuation during the initial periods of COVID outbreak, however, the line shows the upward sloping trend of NEPSE index (as the index moved from 1188.71 to 2000+ for the first 6 months of COVID outbreak).

Looking at these situations: Is there positive or negative impact of COVID pandemic on Nepalese stock market? is the main issue addressed here. Similarly, there are very few research conducted to analyze the impact of COVID on Nepalese stock market. So, this aims to examine the empirical gap.

Besides, the major objectives for this study are:

- To analyze the impact of COVID-19 on NEPSE index during the 1st 6 months of COVID period.
- To assess the impact of COVID-19 on NEPSE market turnover during the 1st 6 months of COVID period.

II. Theoretical Framework

There are multiple factors affecting the performance of stock market. However, the outburst of never expected pandemic in 2020 beginning left each and every aspect shocked and affected.

Although in the world's history, the ultimate impact of other deadly diseases, such as; influenza, the plague of Athens, Bubonic plague, and HIV/AIDS, on human health is

comparatively higher than COVID-19, ignoring other economic costs (Feehan et al., 2021), the COVID-19 pandemic has affected the economic and business activities as well. In the situation where except some small island, no other countries have remained unaffected, economically this pandemic is challenging the advanced as well as emerging economies. So, when concerned about the study on the impact of COVID-19 on the stock market, various researchers have found different results.

Khatabtbeh et al. (2020) has shed some lights on the potential economic and social cost of the COVID-19. It aims to empirically examine the immediate reaction of stock market to the pandemic. 11 top affected countries' leading stock market is looked Belgium, China, France Germany, Italy, The Netherlands, South Korea, Spain, Switzerland, United Kingdom and the United States. An event methodology being used for 11 global stock market cases showed that the first confirmed COVID-19 case announcement has had a significant negative impact on the returns and these effects were more substantial following the WHO announcement of COVID-19 as a global pandemic on March 11, 2020. Onali (2020) study further added that for the first three months up to 9th April, 2020, in United States, China, Italy, Spain, the UK, Iran and France human beings were affected but stock market did not experience much impact.

Some studies are also conducted about the spill-over effect among countries around the globe. (He et al., 2020) Using conventional t-tests and non-parametric Mann–Whitney tests, empirical analysis of direct effects and spill-overs of COVID-19 between Asian and European and American countries is done. The findings were: COVID-19 has a negative but short-term impact on stock markets of affected countries and that the impact of COVID-19 on stock markets has bidirectional spill-over effects between Asian countries and European and American countries. However, there is no evidence that COVID-19 negatively affects these countries' stock markets more than it does the global average. The same findings are found between Gulf Corporation Council (GCC) stock market and Chinese Stock market, (negative short-term impact and bidirectional spill-over effect on GCC stock market due to movements in the Chinese Stock market) using the same tests (Salman et al., 2021). This study also argued that stock markets of GCC countries are comparatively less affected as compared to the effects suffered by the global stock market.

With regards to the impact of COVID-19 in Chinese Stock Market (Shanghai Stock Exchange SXX), an empirical study is conducted by (Chuanjian et al., 2021). This study used quantile regression and dynamic ordinary least square technique (DOLS). Covid-19 active cases and deaths have been considered from 1st April 2020 to 30th July 2020. The study found the negative and significant relation between COVID cases and SXX closing index. However, the magnitude of these variables is found declining. Moreover, domain causality test confirmed the unidirectional causal relationship between COVID-19 and SXX index.

Another study to know about impact on African stock market performance, during and after the occurrence of the COVID-19 finds, out of 13 sample African countries, 10 have significant and adverse effect whereas 3 countries found no significant impact (or a rather short-lived negative significant impact) (Takyi & Ennin, 2020). This study has used the Bayesian structural time series approach and data between 1st October, 2019 to 30th June, 2020 and claims that within the sample period, there is almost no chance that the COVID-19 pandemic would have positive effects on the stock market performance in Africa.

An empirical causal comparative study using causality test with the backing of regression, regarding impact of pandemic COVID-19 on Asian countries' stock returns (covering eight nations: China, India, Israel, Japan, Korea Republic, Malaysia, Saudi Arabia, and United Arab Emirates) revealed that the changes on daily confirmed new cases have been severely inflected stock returns in overall as well as cross-over the industries (Sapkota,

2020). The study period was from 20th January to 30th May 2020 where the influence of death form COVID-19 found negative but mostly insignificant. Similarly, the categorical variables size of economy, geographical area, regulations, and country specific impact have been found very low.

Looking over to the same issue in the neighbor stock market i.e. Indian stock market, one study by Bora (2020) of two Indian market indices; National Stock Exchange of India index (Nifty) and Bombay Stock Exchange index (Sensex), indicates that Indian stock market has experienced volatility during the pandemic. Using GARCH model a comparative analysis is done taking pre-COVID and during COVID data from 3rd September, 2019 to 10th July, 2020. On comparison, it found that pre-COVID-19 period had higher return than during COVID; in fact, the return of both stock markets reached the bottom line during the first lockdown in India, from 24th March to 6th April. The study from Chaudhary et al. (2020) supports this conclusion and further adds that the Indian stock market has similar standard deviation in returns as those of developed economies of the United States, Japan and the United Kingdom but Indian stock market has higher negative skewness and higher positive kurtosis of returns that makes the market seem more volatile.

Positive COVID cases are the independent variable and NEPSE index and market turnover are the dependent variable. With the increase in the COVID cases, is there increment in the NEPSE index and market turnover is the main concern of this study.

The NEPSE index takes the market price of all the listed shares and the changes in their prices are reflected in the index. This index is published at the end of the day. Mathematically,

$$\text{NEPSE index} = \frac{\text{Total market capitalization of current period}}{\text{Total market capitalization of base period}} * 100$$

Similarly, the market turnover indicates what volume (Rs.) of trading activity took place on the given trading day of the entire capital market. NEPSE also publishes about the total turnover at the end of the day.

Hypothesis

Based on the above explanation, we formulate two hypotheses: One with NEPSE index and another with Market turnover:

First Hypothesis

Null hypothesis (H0_a): There is no significant difference in NEPSE index during high COVID cases and low COVID cases.

Alternate hypothesis (H1_a): NEPSE index increases in the high COVID cases than in the low COVID cases.

Second Hypothesis

Null Hypothesis (H0_b): There is no significant difference in Market turnover during high COVID cases and low COVID cases.

Alternate Hypothesis (H1_b): Market turnover increases in the high COVID cases than in the low COVID cases.

III. Research Methodology

Research design

The research design for this article is descriptive and analytical research. It has used descriptive statistics to simplify data and make easy to understand the data. Similarly, inferential statistical tool is used to get the empirical result.

Nature and Sources of Data

This article takes secondary data about the NEPSE index, market turnover (Rs.) and COVID-19 positive cases. WHO named the pandemic and alerted on 29th January. Nepal government declared lockdown on 24th March. Since then, share transaction was closed. It was only after slight loosening of lockdown when NEPSE was opened. So, it covers the daily time period from 29th June, 2020 to 31st December, 2020, i.e., first 6 months since the positive COVID cases are reported in Nepal. NEPSE remains closed on Friday and Saturday, hence those days are excluded from the study. This has made the total sample data 123.

The stock index data and turnover data is derived from the NEPSE website and the COVID related data are derived from the official page of Ministry of Health and Sciences.

Methods of Data Analysis

In case of secondary data, proper care is to be given on the nature of data and use the tests accordingly. Generally, based on preliminary tests such as normality and stationary, the parametric and non-parametric tests are to be used. SPSS software is used to analyze the data. After obtaining the data, firstly, normality of the data is checked.

If the data are normally distributed and stationary at level, then ordinary least square method is appropriate. This makes the regression model as follows:

$$\text{Stock market index} = \alpha_t + \beta_1 * \text{No. of positive COVID cases} \dots\dots\dots (i)$$

$$\text{Stock market turnover} = \alpha_t + \beta_1 * \text{No. of positive COVID cases} \dots\dots\dots(ii)$$

However, in this study, the data was not normally distributed despite various efforts such as taking log, adding variable and increasing and decreasing sample size. So, eventually, non-parametric test was the only option left. He, et al. (2020) also had not normally distributed data and had used Mann-Whitney U-test to analyze the impact. Basing on this, the non-parametric test, Mann-Whitney U-Test is used for analyzing the impact of COVID on the Nepalese stock market.

IV. Results and Conclusion

Here the analysis starts with the descriptive statistics. At first, the median is found for the positive COVID cases considering it to be the suitable measure to find the mid position.

Table 1

Descriptive Statistics

Group Statistics					
	N	Mean	Std. Deviation	Std. Mean	Error
Median value of Positive COVID cases	1008.5				
COVID-19 positive cases					
NEPSE index	Low 61	1574.6298	278.34446	35.63836	

	High	61	1664.1030	158.22913	20.25916
Market Turnover	Low	61	Rs. 2089176.178	Rs. 390064.682	Rs. 49942.665
	High	61	Rs. 2222131.080	Rs. 217987.583	Rs. 27910.450

Note. Excel calculation from collected data

The median value of the positive COVID cases is 1008.5. All the number of positive COVID cases above 1008.5 is classified as High COVID situation and below it is Low COVID. The NEPSE indices are also arranged according to the high and low COVID situation, that divides the total sample equally in to 61-61 in low-high COVID cases respectively. The average NEPSE index during low and high situation are 1574.63 and 1664.10 respectively with high standard deviation during low COVID cases 278.34 than high COVID cases i.e. 158.23.

Similarly, the market turnover averages to Rs. 20,89,176.18 in low COVID cases and to Rs. 22,22,131.080 in high COVID cases with high standard deviation in high case (Rs. 390064.682) and low standard deviation in low case situation.

Table 2

Empirical Results

Ranks				
COVID19 Positive cases		N	Mean Rank	Sum of Ranks
NEPSE	Low	61	46.80	2855.00
	High	61	76.20	4648.00
TURNOVER	Low	61	46.77	2853.00
	High	61	76.23	4650.00
	Total	122		

Note. SPSS output

Here the mean ranks of NEPSE during low and high COVID cases are 46.80 and 76.20. So, we conduct Mann-Whitney U-test to test H_{1a} if NEPSE index increases in the high COVID cases than in the low COVID cases. Similarly, the H_{1b} is tested to see if Market turnover also increased during the high COVID cases than during low COVID cases.

Table 3

Test Statistics

Test Statistics			
	NEPSE index	Market Turnover	Level of significance
Mann-Whitney U	964.000	962.000	

Z	-4.590	-4.601	
Sig. (1-tail)	0.000	0.000	0.05

Here the test statistics, the p-value of NEPSE index and positive COVID cases is 0.000, which is less than 0.05, level of confidence, meaning reject the null hypothesis. Thus, it can be concluded that NEPSE index increases with the high positive COVID cases than at low positive cases.

Similarly, the p-value of market turnover and positive COVID cases is less than 0.05, which means reject the null hypothesis and conclude that NEPSE index increases with the high positive COVID cases than at low positive cases. Both of them show the significant positive impact of COVID on Nepalese stock market as the index and turnover has increased during the high COVID cases.

Discussion

The result of this study is contrasting to most of the previous studies. however, the result is consistent with the result of Shankar and Dubey (2020); Takyi and Ennin (2020). In Nepal, people were mostly investing in the real estate and only 7 lakh people were involved in the share transactions. But, due to COVID, the real estate investment was halted as people couldn't step out of the house amid nation-wide lockdown by the Government. Some were doing work from home, but most people (business person, industrialists, students, etc.) had sufficient leisure time. Baidar (2021) after interviewing some of the active investors and market analysts concludes that now, to remain productive during this phase, share investment was one of the good options. Before COVID, the share market had adopted the digitalization that made it easy to do share transactions without the need of physically be in queue in the broker's office. Similarly, as explained by Shankar and Dubey (2020), the reason for positive effect of COVID-19 on trading volume (the volatility of Indian Stock market has declined in the long-run after COVID outbreak) and investors' confidence in India as: investors' sentiment of entering in to the stock market when the stock prices are low. The fluctuating but rising trend of index had increased optimism in investor about future growth opportunity in the stock market as supported by the record published by the SEBON; individuals who apply for IPO have an annual growth rate of 157%, with number rising from 0.7 million to 1.8 million.

Conclusion and Implications

This paper studies the impact of COVID pandemic on stock market, in the context of Nepal. Using the non-parametric Mann-Whitney U-Test to analyze if the stock market indices and turnover has increased during the 1st 6 months of positive COVID cases, this article concludes that there is significant positive effect of COVID on stock market performance. This implies that people are getting aware about NEPSE. Hence, the policymakers could prepare policies to cater this growing demand. Digitization of NEPSE, leisure time with people, their sentiment to enter the stock market when stock prices are low and optimism that prices of stock would increase in the future, are some of the factors contributing to the increase in NEPSE performance during high COVID situation.

References

- Acharya, A., Bastola, G., Modi, B., Marhatta, A., Belbase, S., Lamichhane, G., Gyawali, N., & Dahal, R. K. (2021). The impact of COVID-19 outbreak and perceptions of people towards household waste management chain in Nepal. *Geoenvironmental disasters*. vol. 8(1), 14.

- Al-Awadhi, A. M., Alsaifi, K., & Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. *Journal of Behavioral and Experimental Finance*. vol. 27(1).
- Baidar, A. (2021). Why Nepal's stock market is booming amidst a pandemic. *Record Nepal*.
- Bora, D., & Basistha, D. (2021). The outbreak of COVID-19 pandemic and its impact on stock market volatility: Evidence from a worst-affected economy. *Journal of public affairs*. vol. 21(4), e2623.
- Burns W.J., Peters E., & Slovic P. (2012). Risk perception and the economic crisis: A longitudinal study of the trajectory of perceived risk. *Risk analysis: An International Journal*. vol. 32(4). pg: 659–677.
- 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*. vol.22(2). pg: 169–180.
- Feehan, A. K., Denstal, K. D., & Katzmarzyk, P. (2021). Community versus individual risk of SARS-CoV-2 infection in two municipalities of Louisiana, USA: An assessment of Area Deprivation Index (ADI) paired with seroprevalence data over time. *PLOS ONE* 16(11): e0260164.
- He Q., Liu, J., Wang, S., & Yu, J. (2020). The impact of COVID-19 on stock markets. *Economic and Political Studies*. 2020:1–14.
- Herfero, A. G. (2020). COVID19 and emerging economies: What to expect in the short and medium term. *Raisina Debates*.
- Igwe, P. A. (2020). Corona virus with loominh global health and economic doom. *African Development Institute of Research Methodology*. vol.1(1). pg: 1-6.
- Kugelamn, M. (2020, March 17). What Coronavirus means for South Asia. *Asia Dispatches*. <https://www.wilsoncenter.org/blog-post/what-coronavirus-means-south-asia>.
- Liu, K. (2021). The effects of COVID-19 on Chinese stock markets: an EGARCH approach. *Economic and Political Studies*. vol.9:2. pg: 148-165.
- Mallick, S., & Sen, A. (2020). COVID-19 outbreak and SAARC countries stock market responses. *Emerging Issues in Commerce and Management*. Pp. 90-109.
- Mandal, S. (2020). Impact of Covid 19 on Indian stock market. *Adamas University*.
- Onali, E. (2020). COVID-19 and stock market volatility. *SSRN Electronic Journal*.
- Saleem, A. (2021). Action for action: Mad COVID-19, falling markets and rising volatility of SAARC region. *Annals of Data Science* 9. pg: 33-54.
- Sapkota, S. P. (2020). Impact of epidemisc infectious disease and death on stock returns: Evidences from Asian stock markets with COVID-19. *Contemporary Research: An Interdisciplinary Academic Journal*. vol. 4(1). pg: 174-191.
- Shankar, R., & Dubey, P. (2021). Indian stock market during the COVID-19 pandemic: Vulnerable or resilient? Sectorial analysis. *Organizations and Markets in Emerging Economies*. 12(1). 131-159.
- So, W. (2020). Coronavirus impact on stock market South Korea 2020.
- Takyi, P.O., & Bentum-Ennin, I. (2021). The impact of COVID-19 on stock market performance in Africa: A Bayesian structural time series approach. *Journal of Economics and Business*. vol. 115.
- Zhang, Y., & Ma, Z. F. (2020). Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 17(7), 2381.
- Zheng, J. (2020). SARS-COV-2: An emerging coronavirus that causes a global threat. *International Journal of Biological Science*.