

Economic Impact of Covid 19 on Bangladesh, India, and Pakistan

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ABSTRACT

The primary aim of this study was to explore the repercussions of the COVID-19 pandemic on developing nations, with a specific focus on Pakistan, Bangladesh, and India. To accurately portray the pandemic's impact on these economies, our research employed a model incorporating fixed effects. The findings revealed a notable decline in the per capita income of the countries affected by the COVID-19 pandemic. The existing economic downturn can be attributed to various factors, with a significant contributor being the reduced availability of labor. The prevalence of illnesses and adherence to public health guidelines led to a noticeable shortage of labor for active participation in economic activities. As a consequence, there was a decline in both productivity and economic output. Moreover, our analysis yielded a thought-provoking finding: a notable increase in fatalities had a discernible effect on the populace. The population experienced a significant decline as a result of the fatalities caused by the pandemic, an event that had complex economic ramifications. This decline in population paradoxically resulted in a rise in GDP per capita. By employing a fixed effects model, our research gains greater resilience, rendering it a valuable asset for policymakers, economists, and scholars endeavoring to navigate the intricate landscape of the effects of pandemics on emerging economies. In summary, the findings of this research stand to make a significant contribution to the wider comprehension of the repercussions of COVID-19 on these particular countries.

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INTRODUCTION

Any pandemic occurrence has long-term and multi-dimensional consequences throughout the world. Several pandemics from the previous century, such as Asian flu, Spanish flu, Swine flu, Ebola virus, and Zika virus, killed thousands of people and damaged the world economy. In 2019, the US presidential election, BREXIT, and the US-China trade war all had a negative impact on the world economy. Lockdowns in low- and middle-income countries have resulted from the COVID-19 pandemic's global expansion. For individuals who depend on sources of informal income and poverty, this unanticipated pandemic presented significant hurdles (IMF, 2020). Hence, the creation of a policy strategy to assist those social classes is unavoidable. There has been a notable 60% decrease in household income overall since the COVID-19 lockdown (Mahmud & Riley, 2021). This is consistent with several studies that use self-reported income adjustments to document the effect of the shutdown

on profit (Malik et al., 2020; Nestour et al., 2020; Rahman & Matin 2020). Because of the lockdown and remaining at home to lessen the possible damaging impacts of COVID-19, Pakistan may experience challenges in the well-being dimension (Arndt et al., 2020).

Due to the worldwide dissemination of COVID-19, it is anticipated that the global economy will experience a contraction of 4.9 percent in the year 2020, surpassing the magnitude of the global financial crisis of 2008-2009. Moreover, it is common for supply chains to experience a breakdown involving multiple interconnected entities, such as representatives, corporations, providers, purchasers, and monetary delegates, which can have detrimental effects on the economy. The decrease in utilization, commercial activity, lower inflationary assumptions, and cheaper contract installments in United States (US) families can be attributed mostly to the implementation of lockdown limitations (Fernandes, 2020). The economic well-being is subject to a multitude of elements, encompassing the annual income of households, their level of financial instability, and the number of jobs they are unable to find. The level of income and contentment that an individual experiences as a result of having their needs met is directly proportional to that individual's level of well-being. When there is a jolt to the system, it has an immediate and direct effect on the income that is related with well-being. As a direct result of this, people have less money available for the day-to-day expenses that they need to cover.

Governments have established economic recovery techniques to alleviate citizens' plights and preserve lives by pouring funds into the economy through stimulus packages. Governments across the globe are implementing reaction packages as significant economic stimulus measures in response to the adverse effects of the COVID-19 pandemic on both human development and economic decline (Sackey & Barfi, 2021). Governments have implemented diverse and significant stimulus packages encompassing fiscal and international policies aimed at bolstering the manufacturing and servicing sectors, as well as manufacturing and household consumption. These measures also encompass healthcare delivery enhancements, liquidity support for banks, allocation of funds to households and businesses, infrastructure development for healthcare delivery, and policies intended to mitigate the costs associated with workforce reduction (Aldaco et al., 2020; Cheng et al., 2020; Elgin et al., 2020). According to the World Health Organization, there have been 172,630,637 confirmed cases of COVID-19 and 3,718,683 casualties as of June 6, 2021. Keeping the whole circumstance in mind, this research tried to attain the following goals.

To Examine the effect of the number of Covid cases on the economy of Bangladesh, India, and Pakistan.

To Examine the impact of Stringency measures on the economy of Bangladesh, India, and Pakistan.

To Analyze the impact of death cases during Covid on the economy of Bangladesh, India, and Pakistan.

LITERATURE REVIEW

The COVID-19 is an unexpected shock that simultaneously affected the world. Thus, it is a unique example of a shock globally. Diverse mechanisms that householders in the countries use to cope with smooth shocks have been highlighted, like as informal risk-sharing, sales of assets, increased labor, cuts in non-food expenses, savings, and credit (Dercon, 2002; Morduch, 1995). However, many of them might fail during the crisis. This pandemic has profoundly impacted the economic measures of income which is discussed by the following reviews of existing knowledge. Several studies have shown significant decreases in employment and labor market results, which impact the household income and cause unemployment in the countries (Andersen et al., 2020; Baker et al., 2020; Brodeur & Wright 2020; Qian & Wen, 2020). Researchers highlighted that several mechanisms used by households for smooth shocks, including informal risk-sharing, selling assets and animals, increasing labor supply, cutting non-food spending, and the use of saving and credit during crises and pandemics (Eagle & Fafchamps, 2016; Jack and Suri, 2014). Further, (McKenzie, 2003) used household surveys to examine the micro-impact of the aggregate shock of the Mexican peso crisis. This paper explored the variations between the household effects of the crisis and the adaptation strategies used by households to deal with this shock. This found out that the household has spent more on health than food items during the crisis.

Further, studies concluded that social distance measures indirectly impacted well-being and mental health through increased anxiety, depression, stress, and other negative emotions and economic costs (Brooks et al., 2020; Holmes et al., 2020). A result of Holmes et al. (2020) study revealed raising calls to consider COVID-19's effect on people's well-being and spending. Andrews et al. (2018) highlighted that during the economic fluctuations and shocks in the country, social protection programs play vital roles in supporting the poor to get out of poverty during shocks. Social safety nets aim to contribute to the economic growth of the countries by allowing investment in education, healthcare, Consumption, Food security, Poverty. Some researchers evaluated that during shock-like COVID-19, households will rely less on social networks for insurance because everyone is affected at once by this shock. This also applies to transfers, where shocks at the national level have previously reacted fast (Asare et al., 2020; Yang 2008; Yang & Choi, 2007). Similarly, (Azize & Gamil, 2020) highlighted the importance of social protection programs during the COVID-19 pandemics crisis and showed that social security initiatives are a versatile and strategic tool to counter the COVID-19 pandemic. Covid 19 has an impact on the health of the people. (Botha & New, 2020) did a study on how the COVID-19 pandemic had influenced the individual health life, family health, and health services by using a unique online survey of over 5,000 respondents in the US, the United Kingdom, Germany, Spain, Italy, and Australia. The findings showed a clear and essential negative effect on human health and welfare because of COVID-19 labor market shocks. Mahmud & Riley (2021) investigated the effect of COVID-19 on the well-being of people living in Uganda. They concluded that due to market closure, wage labor decreases, both of which decrease concerning before the lockdown by over 50%. Owing to the fall in revenues, households are purchasing less food, while equivalent food expenditure per adult drops by 44 per cent. Cheng et al. (2020) found that even people who maintain their revenue

during the pandemic are adversely affected by well-being. A substantial decline in the overall happiness of individuals reporting a drop in household income highlights the importance of economic support measures to help households and businesses cope with the economic challenges posed by the COVID-19 crisis. The previous knowledge highlighted a strategy that households had used to achieve smooth aggregate shocks, primarily through labor supply, credit, and change in expenditure at household levels. The previous researchers used household level (surveys) data to find the impact of Covid 19 on the economy. However, in this study, we used macro-level variables of the government support, the stringency measures, the containment health supports, and the economic support policies during Covid 19. Moreover, this study will contribute to the exciting literature and find the effect of the Covid 19 pandemics on Bangladesh, India, and Pakistan's economy.

Impact of Covid on the Global Economy

According to a detailed analysis conducted by the “United Nations Department of Economic and Social Affairs” (UNDESA), the job crisis has erupted in front of millions of workers as practically every country has closed its borders. If the trend continues, the global economy's growth rate will fall by 1%. According to a UNDESA study report, the severity of COVID-19's economic impact will be determined by how long individuals may roam freely in economies and economic activities are prohibited (UN, 2021). The impact of initiatives gives a financial push to help lessen the severity of this pandemic predicament. The COVID-19 lockdown situation is now in effect throughout the world. In these circumstances, Europe and North America and other nations have been badly impacted by migration, which negatively impacts the services industry, the retail, luxury, hospitality, entertainment, and the transportation industry. In the economy of these jurisdictions, these industries account for around 30% of job possibilities. Because of a drop in corporate revenue, unemployment is likely to rise fast. A considerable portion of the population in many affluent nations lacks sufficient financial resources and may be forced to struggle even after four months (Kushwaha, 2020).

Major Areas of Impact

This epidemic has a significant detrimental impact on several industries. These include the tourism sector, where people avoided travelling to reduce the risk of contamination; the retail sector, where there is disruption because of a drop in consumer demand; and e-commerce, which may grow, but is experiencing supply chain disruptions in the telecom and technology sectors. Automotive manufacturing may be halted; the energy sector is vulnerable, and though the medicines business may see a windfall, severe hurdles will need to be overcome.

The Economic Consequences of the COVID-19 Pandemic on Bangladesh and India

The COVID-19 has already had an impact on 215 countries throughout the world. Economically developed countries have failed to deal with the pandemic while developing and poor countries cannot cope with this situation. The national shutdown in Bangladesh during the first quarter of COVID-19 stunned both the formal and informal sectors. Bangladesh's real GDP growth rate was expected to slow to 2.0% in the fiscal year 2019-20, owing to decreased readymade garment exports, reduced

private venture development, and more widespread disruptions because of COVID-19 (Begum et al., 2020). Bangladesh, being the most densely populated country globally, faces a significant challenge in terms of the limited number of clinical offices available to cater to its vast population. Consequently, the expectation for these facilities to adequately service such enormous populations appears to be impractical. Until today, vaccinations have only been carried out modestly. Stopping the spread of this devastating virus requires just isolation and lockdown. It was projected that India would have negative GDP growth over the 2020-21 period. The implementation of a statewide shutdown has had a substantial influence on economic activity over the course of the past two months. The economy has experienced a significant decline in private consumption, resulting in a substantial impact. There was a significant decline of 33% in consumer durables production during the month of March 2020 (Diao & Mahrt, 2020). There has been a drop in the quantity of electricity consumed. During the month of March, there was a contraction observed in the service sector, characterized by underperformance in many areas such as sales of passenger and commercial vehicles, domestic air passenger traffic, and overseas tourist arrivals, all of which failed to meet anticipated levels. The agriculture business continued to serve as a source of optimism.

Impact on the Garment Industry and Foreign Trade

COVID-19 has resulted in approximately a \$3 billion loss in work order cancellations in the Bangladesh readymade garments (RMG) industry. This will affect approximately 2 million people in the industry. Around 4 million people are directly employed in the RMG industry, including backward linkage sectors, accessory, packaging manufacturers, and transportation (Alam et al., 2020). The government has declared a TK-50 billion incentive package to minimize losses in the RMG sector (Alam et al., 2020). The country has enjoyed tremendous economic growth in recent years, fueled primarily by exports of readymade garments and remittances from migrant workers. The country is heavily reliant on imports from surrounding countries. Following the Covid-19 outbreak, import and export-oriented businesses are likewise at risk. Bangladesh's primary port is Chattogram. This port handles over 92% of all import-export transactions. In the month of March, there was a decline of more than 12% and 26% in imports and exports, respectively, through this particular port. Due to the escalating coronavirus epidemic, there is growing concern among business professionals on the potential further decline of the nation's imports and exports in the foreseeable future. The primary source of revenue for the Chattogram Custom House is derived from taxation. In accordance with Chattogram customs practices, the nation imported goods valued at Tk 31,617 crores based on customs valuation in the month of March, which represents a decrease of around 4,500 crores compared to the preceding month (IMF, 2021).

Impact on the Petroleum

The current steps in India to halt the spread of Covid-19 have significantly harmed fuel consumption, with petroleum product consumption decreasing to an appalling 0.21% in 2019-20 to 213,686 thousand tons. Last fiscal year, India's petroleum demand grew at its slowest rate in at least a decade.

According to new figures from the oil ministry, consumption declined 18% in 2021, to 16,083 thousand tons compared to the same month a year ago.

Impact on Agriculture and Manufacturing

Tea estates could not harvest the first flush because of logistical issues caused by the lockdown. The effect on the second flush is unknown. The entire tea industry reliant on Darjeeling tea would face a considerable drop in revenue. As a result, tea shipments could fall by up to 8%. Agricultural companies such as dairy, tea, coffee, and rubber plantations, as well as allied stores and industries, will reopen on April 20, under the new lockdown parameters to reopen the economy and relax the lockdown. Leading Indian companies, including Tata Motors, Bharat Forge, Grasim Industries, Aditya Birla Group's fashion and retail division, Larsen & Toubro, Bharat Forge, Ultra Tech Cement, and Thermax, have temporarily halted or limited operations in a number of factories and industrial sites throughout the nation. Most iPhone manufacturing operations in India have also been halted. Almost all two-wheeler and four-wheeler manufacturers have halted manufacturing till further notice. Many businesses have opted to remain closed until at least May 31.

Impact on Pakistan's Economy

The global economy is in flux because of the lockdown and estrangement. Pakistan's economy is seriously impacted by the country's limited financial credit supply to meet the demands of a massive population. COVID-19's potential negative economic impact is summarized here. Before COVID-19, 35% of Pakistan's population aged 10 and above, or around 55.74 million people, were employed. However, because of the cessation of operations following the installation of lockdown, this has dropped to 22% to 35.04 million population approximately. Sindh was the most affected province. The working population fell to 23% during the Covid Period from 38% before the shock, followed by Punjab with a 14-percentage point drop and Baluchistan with 11 percentage points. Because of the COVID-19 Lockdown, 20.63 million people lost their employment. A drop in income affects 6.7 million people (PBS, 2021).

Affected Workers by Industry

Employees in the construction industry were the worst impacted by the shock. Over 80% lost their jobs or saw a loss in income, followed by workers in the manufacturing sector, with 72% losing their jobs or seeing a fall in income. According to these findings, the closure of the industrial and construction sectors accounts for 46% of the overall economic impact. When looking at the distribution of affected workers by occupation, (labor in agriculture, mining, hotel and restaurant, hawkers, vendors) was the most brutal hit, with 36% of workers losing their jobs or being unable to work during the Covid period followed by Service Workers/Sales Workers with 26%. Craft and Related Trade Workers were the third most impacted occupation category, with 18% losing their jobs.

Table 1: List of Industries affected due to Covid

Industry	Affected %	Jobless %	Decease in Income %
Construction	80	59	21
Manufacturing	72	58	14
Transport, Storage	67	55	12
Wholesale and Retail Trade	63	44	19
Mining and Quarrying	38	31	7
Social and Personal Services	36	27	9
Agriculture, Forestry Hunting and Fishing	14	7	7
Others	33	25	7

Source: <https://www.pbs.gov.pk/content/special-survey-evaluating-impact-covid-19>

Population Faced Job Loss/Decrease in Income by Occupation

During Covid-19, 72 % of Craft Related and Plant & Machine Operators employees were severely impacted, with 57 % and 52 % of both occupations losing their employment. Other occupations with a more significant prevalence of impacted employees include service employees, sales employees, and elementary school teachers, where 45 % and 42 % of employees lost their employment. Agriculture was the least impacted occupation, accounting for only 9% of the total (Akram et al., 2023).

Table 2: Impact of Covid on workers

Occupation	Affected %	Jobless %	Income Decrease %
Services worker	59	45	14
Agriculture	9	5	4
Craft worker	72	57	15
Machine Operators	72	52	20
Elementary Occupation	56	42	14

Source: <https://www.pbs.gov.pk/content/special-survey-evaluating-impact-covid-19>

Financial Issues Faced by Households during COVID-19

Households have a variety of sources of income: some rely only on domestic or international remittances, others have revenue from jobs/businesses and revenue from property, such as rent, while others rely only on gifts and help. Almost 53% of Pakistani households reported having less money, either earned or unearned. The global COVID-19 pandemic has had a significant and far-reaching effect on households across the globe, resulting in a diverse array of financial challenges. The aforementioned concerns exhibited heterogeneity contingent upon variables such as one's work position, sources of money, and the magnitude of the pandemic's repercussions across various geographical areas. During the COVID-19 epidemic, households have encountered a variety of prevalent financial challenges.

Throughout the epidemic, supply chain interruptions have led to higher costs for some essential goods and services, demonstrating the presence of inflation and its effect on living expenses. The combination of inflation and decreased incomes posed a greater difficulty for households in sustaining their quality of living. The emotional well-being of several individuals and families was adversely affected by the presence of financial stress and uncertainty. The adverse effects on individuals' well-being were observed as a result of the anxiety, concern, and distress stemming from factors such as

job loss, economic instability, and the pervasive uncertainty surrounding future prospects. Certain households were dependent on government aid, community support, or charitable groups as a means to fulfill their fundamental need, particularly in instances where alternative sources of income were disturbed. Retirement and pension concerns have become a significant issue for individuals who are either retired or approaching retirement age. These individuals are currently grappling with uncertainty surrounding their retirement plans and pension money. Retirement funds were impacted by the fluctuations in the stock market and the prevailing economic instability. Governments and organizations in multiple nations have enacted relief measures to alleviate the economic consequences of the epidemic. These initiatives include direct stimulus grants, prolonged jobless benefits, eviction moratoriums, and food aid programs. Notwithstanding these steps, it is probable that the enduring economic ramifications of the pandemic would persistently impact households, so shaping their financial decision-making and tactics for an extended period.

DATA AND METHODOLOGY

From the country and global levels, some researchers studied the influence of the COVID-19 pandemic on macroeconomics. In contrast, Some scholarly studies focused on the pandemic's influence on the stock market in the United States and critically analyzed the economy's different effects (Pagano, Wagner, & Zechner, 2020). Another research used the VAR framework to assess the impact of the COVID-19 pandemic on the macroeconomy (Ludvigson, Ma, & Ng, 2020). Based on their findings, they concluded that the COVID-19 pandemic shocks are linked to previous expensive adversities. Baqae & Farhi (2020) used a non-linearity method in a multi-sectoral model to assess the pandemic's influence on aggregate data in the United States. They proposed that the pandemic's shocks might be reduced via a non-linearity method. Moreover, the COVID-19 pandemic has a spillover effect on the world economy, which is expected to appear in the previous years observed by (Mckibbin & Fernando, 2021). The pandemic has caused the global economy to deteriorate due to supply and demand-side interruptions, resulting in job losses, lost income, and health and education degradation, all of which have harmed human capital development (UNDP, 2021). Furthermore, triggering a global economic slump (World Bank, 2021). This study finds the impact of Covid 19 on the economy of Bangladesh, India, and Pakistan. The study possesses the following econometric equation.

$$GDP_{it} = \beta_0 + \beta_1 Cases_{it} + \beta_2 Deaths_{it} + \beta_3 SI_{it} + \mu t \quad (1)$$

In the above equation, β_0 is the intercept of the slope and $\beta_1, \beta_2, \beta_3$ are the coefficients. i represents the cross-section of the countries. In contrast, t shows the time used in the study. μ is used for the error term in the model.

Sources of data

The study used data from 1st January, 2020 to 30th October, 2021. Four variables have been used to examine the impact of covid-19, which are the Gross Domestic Products, Stringency index, number of Covid cases, and death. Data of these indicators were taken from the Oxford COVID-19 Government Response Tracker. The dependent variable is the GDP, a proxy for economic growth. The independent variables are the Stringency index, Covid cases, and death cases. The following tables show the description of the variables.

Table 3: Name of variables and Descriptions

Variables	Descriptions
GDP	It measures the economic output of a nation in per person format.
Cases	The total number of Covid 19 cases in the economy.
SI	Stringency index comprises indicators of school closures, workplace closures, restrictions on gatherings, close transports, travel prohibitions, international travel controls, and restrictions on internal movements, stay at home, and cancel public events rescaled to a value from 0 to 100. If policies differ at the subnational level, the index is displayed as the most stringent sub-regional response level.
Deaths	The total number of deaths occurred due to Covid 19.

Sources: Oxford COVID-19 Government Response Tracker

RESULT AND DISCUSSION

The study used the data from 1st January, 2020 to 30th October, 2021. The study used variables strictly related to Covid 19 and post-pandemic effects. We used three countries for our analysis: Pakistan, India, and Bangladesh. The rationale behind using only these three countries was that they nearly depicted the same characteristics. Their GDP per capita was very low, all of these countries were developing countries, and poverty was relatively high in all of these countries. So, these were the nations that were most prominently affected by Covid 19, because, already the rate of poverty was high, in addition, the people lost their jobs and businesses due to the shutdown. The heteroscedasticity test for the data is available below.

Breusch Pagan Test

$$\text{Prob} > \text{chi}2 = 0.0161$$

As it could easily be seen from the above result, the p-value was statistically significant, and we successfully rejected our null hypothesis of homoscedasticity. So, our data has a problem of heteroscedasticity. The white test for heteroscedasticity was also conducted to clarify the heteroscedasticity problem.

White Test

$$\text{Prob} > \text{chi}2 = 0.0003$$

Table 3: Results of White Test

Source	Chi ²	Df	P
Heteroscedasticity	31.27	9	0.0003
Skewness	2.23	3	0.5251
Kurtosis	2.99	1	0.0835
Total	36.50	13	0.0005

Sources: Author's Own Calculations

The values in the above table show that again the p-value was statistically significant, and we rejected our null hypothesis of homoscedasticity. So, the data did contain the problem of heteroscedasticity. After ensuring our data was affected by the heteroscedasticity problem, we moved toward the Hausman test to decide whether to go for a fixed effect or random-effect model. Moreover, to remove the effect of heteroscedasticity from our data.

Hausman Test

Table 5: Results of Hausman Test

Variables	Fixed	Random	Difference
Cases	-.0000127	.0000317	-.0000444
Death	.0012423	-.0011715	.0024139
Stringency	.0639635	.0112324	.052731

Sources: Author's Own Calculations

$$\text{Prob}>\text{chi2} = 0.0000$$

The Hausman test result was available above. Moreover, according to the result, the p-value was significant, such as less than 0.05. It clearly showed that we rejected the null hypothesis of the random effect model was suitable. So, in this study, we will apply the fixed effect model.

Fixed Effect Model

Now we will provide the results of the fixed-effect model. However, it should be kept in mind that the fixed effect model automatically solves the heteroscedasticity problem by making each entry in the data unique. So, by applying the fixed-effect model, we do not need to go toward other fixes for heteroscedasticity problems.

Table 6: Results of Fixed Effect Model

GDP	Coef.	Std. Err	T values	P values
Cases	-.0000127	.000006	-2.11	0.040
Death	.0012423	.00049692	2.5	0.020
Stringency	.0639635	.030900	2.07	0.043
_cons	1362.627	24.09471	67.76	0.00

Sources: Author's Own Calculations

If we look at the above table, the P-value for the F statistics (less than 0.05) and, in general, the F statistics value was 7.54, which was very high compared with the threshold level of 4. So, the model in our data was perfect for analysis. Although if we look at the R square value, it was not high. The GDP per capita of a nation depends on the number of Covid cases and the death resulting from Covid.

It depends on several other variables such as foreign direct investment, export, import, inflation, unemployment. However, on the bright side, the R squared value was undoubtedly small, yet it still showed that 14% of the GDP per capita for 2020 and 2021 was merely dependent on the Covid 19 pandemic. Furthermore, all our variables were statistically significant with a t value (Greater than 2) and P-value (Less than 0.05). However, their impact on the economy was small yet statistically significant. The rising cases of patients due to Covid result in a decrease of GDP per capita as these patients were no more helpful in increasing GDP per capita by working, on the other side, they result in a decrease of GDP per capita because of money government needs to put on them to recover them. On the other hand, the number of deaths positively correlates with the GDP per capita. As the number of persons dying due to Covid increased, the population decreased; hence, the GDP per capita increased.

CONCLUSION AND POLICY IMPLEMENTATION

This study analyzed the impact of the Covid 19 pandemic on the three major developing economies such as Pakistan, Bangladesh, and India. These countries were selected because they exhibit the exact characteristics of high corruption, high poverty rate, and low level of development. The data was taken from 1st January, 2020 to 30th October, 2021. This period was selected because the Covid started in the early period of 2020. After applying the Hausman test, the study results dictate that the increasing number of Covid 19 cases result in the decrease of GDP per capita. It was because, as more and more people started to get ill, less and fewer people were available for work. Hence, it results in a decrease in GDP per capita. Moreover, the increasing number of deaths due to Covid 19 increases the GDP per capita due to a population reduction. On the other hand, the stringency index showed a positive association with the GDP per capita of these three nations. Overall, the Covid 19 proved to be a great pandemic and destroyed the social lives of the world. Furthermore, the government must invest a massive sum of money to counter its negative impact. However, more efforts are needed in this regard.

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