

Review

# Potential Economic Impacts of the COVID-19 Pandemic on South Asian Economies: A Review

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**Abstract:** The present research analyzes the potential economic impact of the COVID-19 pandemic on South Asian economies using a systematic review approach. The cause-effect relationship framework showed that the outbreak of COVID-19 slowed down the gross domestic product (GDP) along with major economic sectors and indicators in the South Asian economies. The short and long-run predicted scenario showed that, compared to the agriculture sector, the service and manufacturing sectors will be affected more seriously in all South Asian countries. It was found that governments in the region are trying their best to adopt and implement expansionary fiscal strategies to combat this situation. Many countries have included farmers and allied workers in the government's support system to utilize resources. In order to maintain the balance of international trade, the import and export of essential items must be given special support. To cope with this situation, governments can invest money from different autonomous institutions to expand Micro, Small, and Medium Enterprises (MSME). The findings of this research will be helpful for policy planners to formulate appropriate programs for short and long-run demands, along with economic and fiscal policies to sustain and revive the economic activity in South Asia.

**Keywords:** COVID-19; economy; policy response; cause-effect; systematic review; South Asia

## 1. Introduction

The 2019–2020 coronavirus pandemic, which is globally known as COVID-19, has shaken the entire world. The first cases of the pandemic were identified in Wuhan, China, in December 2019 [1]. Since then, it has infected over 51.0 million people in more than 219 countries. The death toll reached 1.2 million by 11 November 2020 and continues to rise [2]. Irrespective of the health issues, the economic impact of the outbreak of COVID-19 has also had dramatic effects on the wellbeing of families and communities. For vulnerable families, lost income due to an outbreak can increase poverty, create a lack of food security, and reduce access to healthcare facilities. The pandemic has also led to severe global socioeconomic disruption, the postponement or cancellation of sporting, religious, political, and cultural events [3], and the widespread shortages of supplies exacerbated by panic buying through imbalanced trade [4]. Moreover, statistics have shown sharp declines in the agriculture, trade, tourism, and travel sectors due to the COVID-19 outbreak [5].

Experts have suggested that the ongoing novel coronavirus outbreak will have a significant impact on developing countries, with a particularly large influence on South Asian economies [6].

Among the South Asian countries, India, the largest country in South Asia, has already announced an economic stimulus package worth 1.7 trillion rupees (\$22.5 billion), designed to help low-income families. In Pakistan, the informal sector, which is a cash-based sector, is likely to lose tens of millions of jobs, so the government will need to provide people with an absolute minimum income to meet their daily requirements. COVID-19 also had a significant impact on the Bangladeshi economy because it arrived at a time when several major indicators of the economy were already on a downward slope. Economists estimate a 40.0% decline in its \$310.0 billion economy, with 0.89 million jobs at risk due to the pandemic in Bangladesh [7]. In Afghanistan, the world's biggest oil industry is coping with the dramatic decrease in crude-oil price [8], while Bhutan's economy has incurred an estimated loss of \$2.2 million since the COVID-19 pandemic started [9]. The Nepali economy is likely to see an overspread effect mainly on the three fronts of remittance inflow, the tourism industry, and international trade [10]. According to the Central Bank of Sri Lanka, if the pandemic was contained by mid-2020, the economic recovery would only start in the latter part of the year, and real gross domestic product (GDP) growth would be less than 2%. Additionally, the economy in the Maldives is dependent on tourism, which has dropped sharply due to travel restrictions [11]. Although it is less probable to pass away from the effects of the COVID-19, many working old-age adults will still fall ill, and their families will face financial problems as they miss work for days or weeks in low and middle-income countries [12].

There are numerous ways to measure the potential impact of pandemic infectious disease outbreaks on the economy. Literature has shown that economic welfare and growth are positively related to life expectancy but negatively associated with child mortality and maternal mortality rate [13]. Due to the spread of COVID-19 worldwide, it is forecasted that the global economy will contract by 4.9% in 2020, which is a far greater magnitude than that of the 2008–2009 global financial recession [14]. Furthermore, a breakdown situation is expected in the supply chains among various interconnected parties (employees, firms, suppliers, consumers, and financial intermediaries) that will have a cascading effect on the market economy [15]. A recent survey identified that lockdown restrictions were the primary cause of drops in consumption, employment, lower inflationary expectations, and lower mortgage payments in the United States (US) households [16]. The multiple-period exogenous shocks due to COVID-19 led to a 12.75% and 17.0% fall in the industrial production and service employment sector of the US, respectively [17]. A recent study also investigated how COVID-19 cases affected Indian energy consumption in different regions [18]. Social distancing, self-isolation, and travel restrictions have led to a reduced workforce across all economic sectors [19]. A study on seven scenarios of how COVID-19 might evolve in the coming year using global hybrid dynamic stochastic and computable general equilibrium models has demonstrated the scale of costs that might be avoided by greater investment in public health systems in all developed economies [20]. However, another study suggested that the costs could be lower for less developed economies where health care systems are less developed with high population density [21]. From the aforementioned background, the following research question was established in this research:

- (i) What are the major causes and consequences of COVID-19 in the South Asian economy?

Using the traditional analysis methods, the loss of future income was measured due to death and disability that occurred for human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), severe acute respiratory syndrome (SARS), Ebola, etc. These losses adversely affected households, businesses, and governments through modified labor supply decisions, efficiency of labor, and household incomes [22].

Several computable general equilibrium (CGE) macroeconomic models have been applied to study the impact of AIDS [23]. The current COVID-19 virus is more contagious than HIV and appears to be more dangerous than the 1918–19 Spanish influenza, which is well known as the “deadliest plague in world history.” The fear of an unknown deadly virus causes a high level of stress, often with longer-term consequences on the economy [24]. The SARS contagious disease that emerged in 2003 had a significant effect on economies through large reductions in the consumption of basic food,

services, and an increase in business operating costs worldwide [25–27]. Very few studies of large-scale pandemic outbreaks and their impact on the economy have been conducted [28,29]. The potential economic impact of the avian influenza strain was forecasted using the Oxford economic forecasting model and showed that demand for services contracted in Asia for two quarters (combined effect 2.6% Asian GDP or \$113.2 billion), with an export yield loss of 6.5% of GDP (\$282.7 billion) due to continued shocks [30].

Impacts of COVID-19 are well documented in the literature, but only a few studies have examined the economic impact of this pandemic in the US [16,17], and very few studies have conducted public health forecasting [20]. The discussion in this paper contributes to the economic impact of an avian flu pandemic on the Asian economy using the Oxford economic simulation global model experience of SARS [30]. Additionally, the economic implications of the previous and current pandemic in poor countries as explored by Bell and Lewis [31] are reviewed extensively to get an overall idea of the impact scenario for poor nations and their survival strategies. Moreover, the present review paper contributes to the literature by analyzing the economic consequences of a short and long-run time frame. It is notable to mention that a considerable share of revenue in many South Asian economies comes from importing raw commodities to manufacture finished goods for export (Bangladesh, India), and income from tourists (Nepal, Maldives). However, the current lockdown situation after the spread of COVID-19 is causing devastating impacts on major economic sectors of the South Asian region. To identify such impacts, we examine the influence of COVID-19 on the whole economic condition, such as nominal and real GDP growth rates, remittances, and inflation rates. We also analyze sectoral impacts, such as the impact on agriculture (the backbone of the South Asian economy), services, and manufacturing industries (raw materials and inputs).

By searching published articles, literatures, and reports, we have determined that an insignificant number of studies have been done on the potential economic impact on the South Asian economy as a result of the serious pandemics that spread worldwide. Different international agencies are now working on the impact assessment of various sectors due to the spread of the COVID-19. To get an overview of this situation, a systematic review approach using major search engines and keywords is used [32]. Our second question is formulated as follows:

- (ii) How does COVID-19 affect the major economic indicators and sectors?

While immediate action has begun in the US and Europe, many low and middle-income countries are still waiting for support to cope with the pandemic from top funding authorities, such as the World Bank (WB), International Monetary Fund (IMF), Asian Development Bank (ADB), etc. Our target is the developing nations of South Asia as they are not in a strong position to rapidly combat havoc within the economic environment compared to developed countries. In this research, we also determine possible policy responses to be taken by governments in South Asian nations immediately. Therefore, the third research question is formulated as:

- (iii) What are possible policy options to be taken by the governments of South Asian countries to combat the COVID-19 pandemic?

The lack of economic impact assessments for South Asian economies with mitigating policy was the driver for this study. The present research is the first attempt to consider the probable impact on major economic sectors and indicators in South Asian economies due to the novel coronavirus pandemic.

## 2. Spread of COVID-19 in the South Asian Economy

To understand the magnitude of the current COVID-19 pandemic in the South Asian economy, we present an overview of the recent number of people affected, dead, and recovered. Real-time data on the spread of the coronavirus were collected from the Worldometer (worldometer.com). Confirmed cases of the novel coronavirus (COVID-19), which were first reported in China at the end of last year, now exceed 9.7 million in the selected South Asian countries as of 11 November 2020 and are likely to

climb significantly [2]. An overview of the total confirmed COVID-19 cases, deaths, and recovered for the selected South Asian countries is presented in Table 1.

**Table 1.** Total COVID-19 cases in South Asian countries up to 11 November 2020.

Country	Total Cases	Deaths	Recovered
Bangladesh (BD)	425,353	6127	343,131
India (IND)	8,636,011	127,615	8,013,783
Sri Lanka (SL)	14,715	41	10,183
Nepal (NEP)	199,760	1148	160,577
Bhutan (BHU)	364	0	343
Pakistan (PAK)	348,184	7021	320,065
Maldives (MAL)	12,030	41	11,182
Afghanistan (AFG)	42,609	1581	34,967

Note: There may be unconfirmed cases that were never reported to the public health authorities [2].

### 3. Materials and Methods

In this review, the potential economic impact of the COVID-19 outbreak was analyzed for the South Asian countries consisting of India, Bangladesh, Nepal, Bhutan, Pakistan, Sri Lanka, the Maldives, and Afghanistan. We only considered the first wave impacts on the major economic indicators and sectors for the selected South Asian countries.

To address potential economic impact due to the recent pandemic, a systematic literature review of peer-reviewed and grey literature, as well as the websites of national and international organizations, was conducted to assess the current scenario. Searches using ProQuest, Science Direct, Web of Science, and Google Scholar were used. Search terms included, “COVID-19”, “major economic indicators”, “agriculture”, “industry”, and “country-specific policies to mitigate COVID-19”.

For more specific information, such as country-based macroeconomic indicators, we used the websites of the central banks of the studied countries as well as those of different international organizations like the IMF, WB, ADB, Atlantic Council, Center for Global Development, etc., for the best possible information. In this case, the search terms were “COVID-19 economic impact”, “South Asian economy 2020”, “economic impact on least developed country (LDC) 2020”, “COVID-19 paradox”, etc. We also used the search term “remittance inflow 2020” for Bangladesh, obtained from the website of the Bangladesh Bank.

Results describing the probable impact of COVID-19 on major economic sectors in the South Asian economies and mitigating strategies and policies were included in this review. For this purpose, The Financial Express, The New York Times, CNBC, and The Kathmandu Post were used to obtain newspaper articles using “COVID-19 and agriculture”, “COVID-19 consequences”, “business during COVID-19”, “Nepali economy 2020”, etc., as search terms.

Before evaluating the economic depression due to the recent pandemic, a cause-effect method (also known as the problem tree matrix) was followed to identify key consequences of the COVID-19 pandemic on South Asian economies. The cause-effect diagram was used to explore the probable effects of the recent pandemic on South-Asian economies through reviewing newspapers, newsletters, and bulletins. The cause-effect relationship has advantages over other methods as it focuses on the relationships between actions, motivations, or attitudes and the consequences which follow according to their significance, importance, relevance, or value, rather than their chronology. Although there are different types of cause-effect methods, such as spider diagrams, problem walls [33], flow diagrams [34], mind maps [35], and problem trees [36], they are similar in their intent and process for identifying potential solutions.

Cause-effect methods have been extensively used in developing countries, in part because of their role in logical framework analysis (LFA), and their value is widely recognized [37–39]. Problem trees can help “determine the root causes of the main problem” [40], identify the effects, and provide possible solutions [40].

The method is also useful for displaying the relationship of the causes to the effect among the factors to be tested graphically [41–43]. A cause-effect analysis allows problem solvers to broaden their thinking and look at the overall picture of a problem [44]. There are two ways to graphically organize ideas in a cause-effect analysis. They vary in the organization of potential causes, which are either: (a) by category, which is called a fishbone diagram (for its shape) or an Ishikawa diagram (for the man who invented it); (b) as a chain of causes, called a tree diagram [45]. In this research, the second type of cause-and-effect analysis, the tree diagram, is used. This diagram highlights the chain of causes and has structural advantages over the fishbone-style diagram [46]. Moreover, the problem tree analysis helps stakeholders to establish a realistic overview and awareness of the problem by identifying the fundamental causes and their most important effects [47]. In this research, the problem hierarchy was formed following some major steps. First, identification and definition of the core problems (COVID-19 outbreak) for the South Asian economy was completed. Second, the causes and effects (consequences) of the COVID-19 outbreak were formulated after reviewing a significant number of articles and literatures. Third, a diagram (problem tree) that represented cause-effect relationships (problem hierarchy) was drawn. The validity and completeness of the diagram were checked at the end of the process by reviewing the logic and verifying the diagram.

In the next section, the cause-effect relationship of the present novel coronavirus is presented to show the adverse consequences on developing South Asian economies.

## 4. Results and Discussions

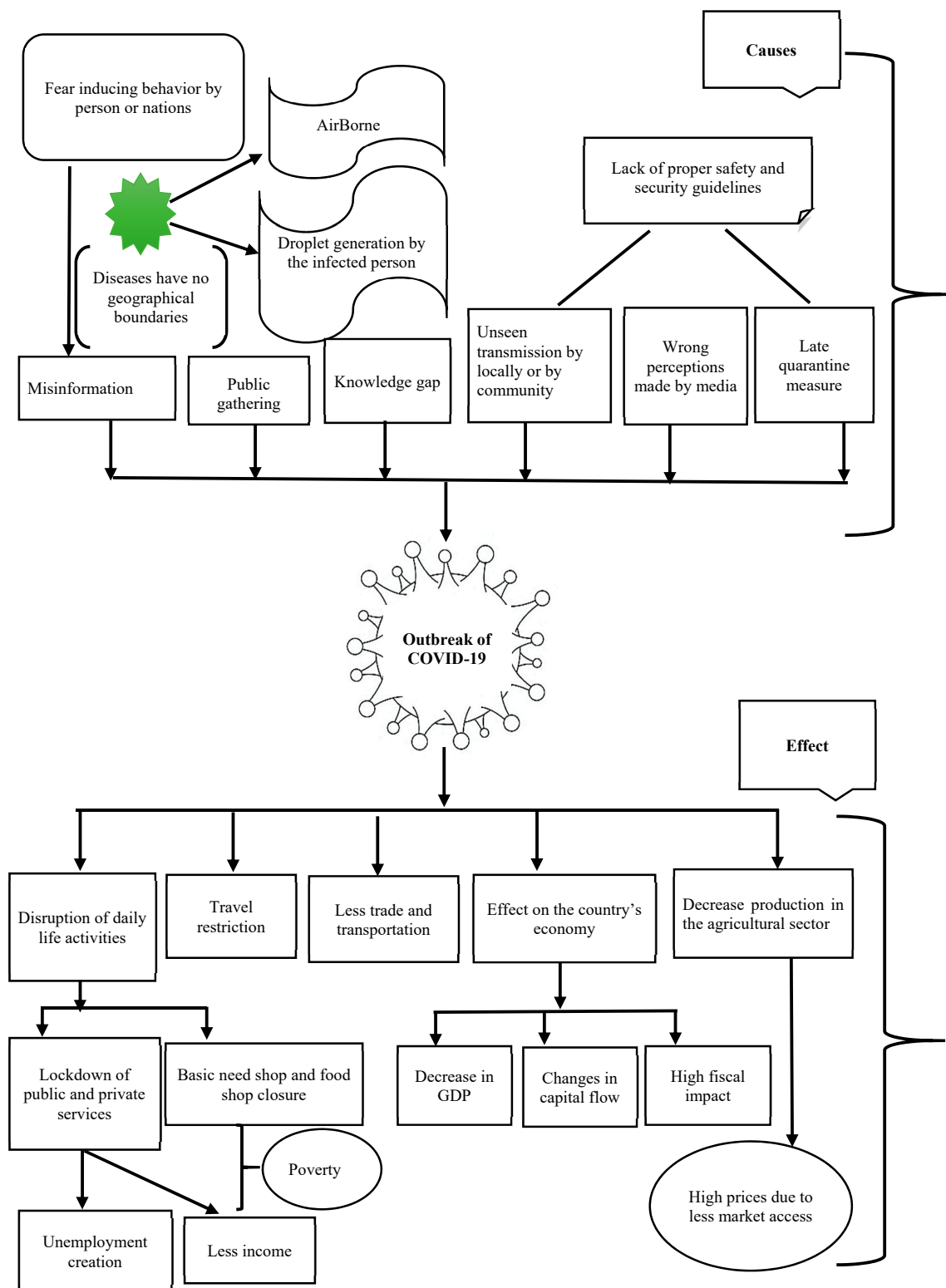
### 4.1. Cause-Effect Relationship of COVID-19 and the South Asian Economy

A cause-effect relationship is a relationship in which one event (the cause) is the reason that the other event happens (the effect or consequence), and one cause can have several effects on the other [46]. This framework presents an insight into the reasons for and consequences of the latest pandemic on the South Asian economy. The COVID-19 pandemic hit the world with remarkable speed and ruthlessness. The virus has spread rapidly and crossed every global boundary, either by droplet generation from an infected person or by air. To some extent, people were misinformed and initially considered it as a seasonal flu or developed a belief that the coronavirus was much more dangerous for people aged 70 or to those suffering from health illnesses, such as diabetes, heart-related problems, etc. This initial knowledge gap and public rejection of the World Health Organization (WHO) declaration was largely responsible for the spread of COVID-19 in developing nations that had weak or inadequate safety and security guidelines [48].

Thus, invisible transmission (on an average 120 nanometer in diameter) first occurred locally and led to a sudden outbreak in densely populated South Asian countries due to the wrong perception from media with delayed quarantine measures taken by governments. Proper social distancing was not maintained when the pandemic started in the first wave, which caused a rapid expansion and a high degree of fear and anxiety that ultimately affected economic activity. Coronavirus containment created unemployment and reduced income levels due to the lockdown, which had an instant effect on people's livelihood and food security. Millions of people were victimized due to travel restrictions and diminished trade that ultimately reduced the national income, GDP growth rate, and remittances of South Asian countries. To summarize, the South Asian economy is facing a major slowdown, which includes decreased GDP as well as damages to their major sectoral shares, such as agriculture, manufacturing and industry, and services sectors. Hence, the virus is starting to ripple through the emerging markets (see Figure 1).

For the first time since the great depression, both advanced economies and developing economies are in a recession. The income per capita is projected to shrink in over 170 countries. Advanced economies, emerging markets, and developing economies are all expected to partially recover in 2021. However, developing economies face additional challenges with unprecedented reversals in capital

flow as global risk appetite wanes, along with currency pressures, while coping with weaker health systems and more limited fiscal capacities to provide support [49].



**Figure 1.** Cause-effect relationship of COVID-19 and South Asian economy.



## 4.2. Effects of COVID-19 on the Major Economic Indicators and Sectors in the South Asian Economy

### 4.2.1. Effects of COVID-19 on the Major Economic Indicators

#### Shocks to the Nominal and Real GDP Growth Rate

To forecast the GDP of South Asian countries after the COVID-19 outbreak, both nominal and real GDP were taken into consideration. Countries in South Asia are expected to be adversely affected, but the degree of impact is likely to vary among the countries. Growth in South Asia is forecasted to decelerate from 5.1% in 2019 to 4.1% in 2020 and rebound to 6.0% in 2021 [50].

First, the growth rate percentage of the South Asian countries from 2015 to 2021 was used to examine the unadjusted market inflation and situations of the nominal GDP before and after the pandemic of COVID-19. The graphical presentation shows that Bangladesh's GDP growth rate has an increasing trend compared to other South Asian countries. In Bangladesh, the growth rate fell from 8.2% in 2019 to 7.8% this year as major markets shrank away from the demand for its fast-fashion garment exports [50]. Growth is expected to advance to 8.0% in 2021 as global consumer confidence improves [51].

Similarly, the growth rate in Pakistan will decrease by about 2.6% in 2020 as economic stabilization restrains domestic demand, cotton output reduces, and COVID-19 takes its toll before edging up to 3.2% in 2021. The GDP growth rate is fluctuating in the Maldives and will increase after the pandemic. As a tourism-dependent country, the Maldives reversed a 5.7% expansion in 2019 with a contraction of 3.0% in 2020 as arrivals slowed down. In Sri Lanka, which depends on its economy of tourism and garment industries, growth decelerated by about 2.2% in 2020 but is expected to achieve a 3.5% growth in 2021. In Nepal, growth is forecasted to fall from 7.1% in 2019 to 5.3% in 2020, with weakness in both agriculture and tourism, and is then expected to strengthen to 6.4% in 2021. Bhutan's growth rate is forecasted to rise by around 5.2% in 2020. In Afghanistan, growth is projected to be unchanged in 2020 but pick up to 4.0% in 2021 due to improving business and consumer confidence (see Figure 2a). All these discussions are based on figures provided by the ADB [6].

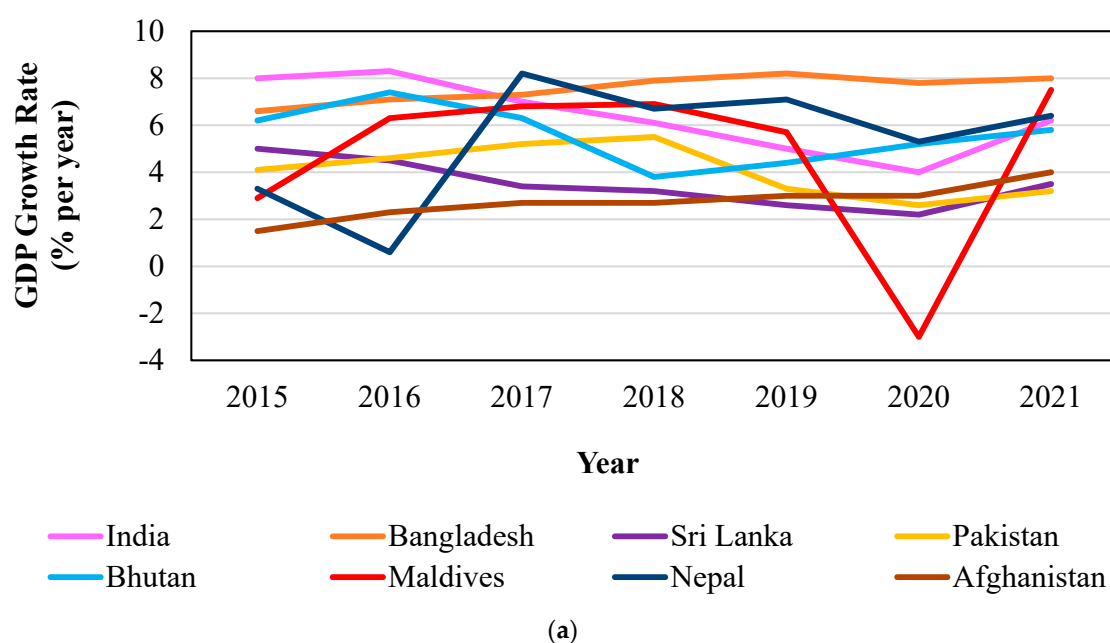
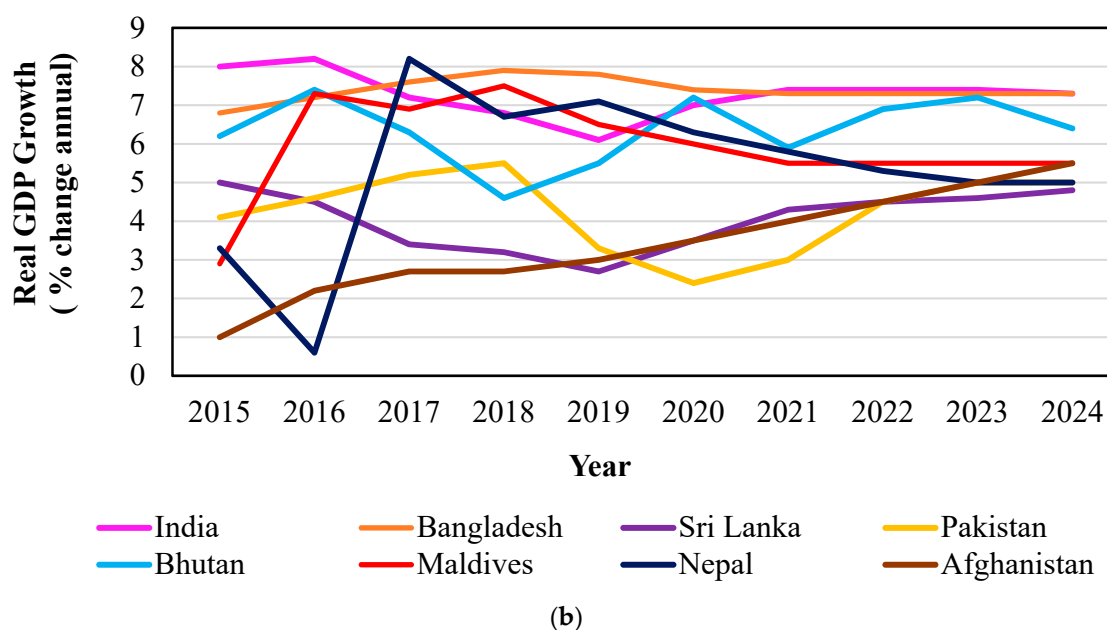


Figure 2. Cont.



**Figure 2.** (a) Nominal GDP growth rate (% per year) from 2015–2021 [51]. (b) Real GDP growth rate (% change per year) from 2015–2024 [52].

In the second section, we attempt to show the real GDP growth rate considering the market inflated prices for final goods and services. According to the ADB outlook on the COVID-19 pandemic, inflation in the sub-region will be moderate, i.e., 4.1% in 2020 as food inflation eases in India with improved agriculture [6,53].

Due to this minor inflationary rate in South Asia, the real GDP growth rate for all countries will decline slowly due to the pandemic (see Figure 2b). Remarkably low inflation will remain the same in the Maldives with subsidies, and price controls on basic commodities joined by estimated deterioration in the recommended requirements. Conversely, Pakistan will experience double-digit inflation fueled by increasing food prices. On average, the South Asian countries recorded a substantial increase in annual inflation, from 3.3% in 2019 to 2.4% in 2020, and real GDP at 6.6 % in 2020 [6,53].

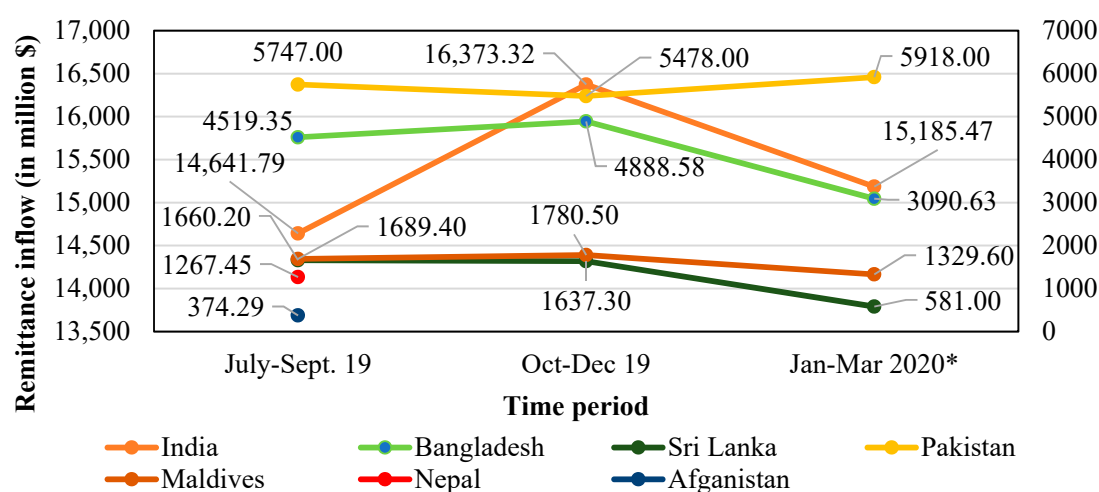
#### Impact of COVID-19 on Remittance Inflows and Inflation Rate

The national shutdowns are likely to impact private consumption, the main engine of growth. While remittances were robust in the first half of the year, they are likely to decline, reducing household consumption. The uncertainties related to COVID-19 are likely to further dampen private investment [54]. Remittances can increase growth, but the effect is only significant at low levels of economic development [55].

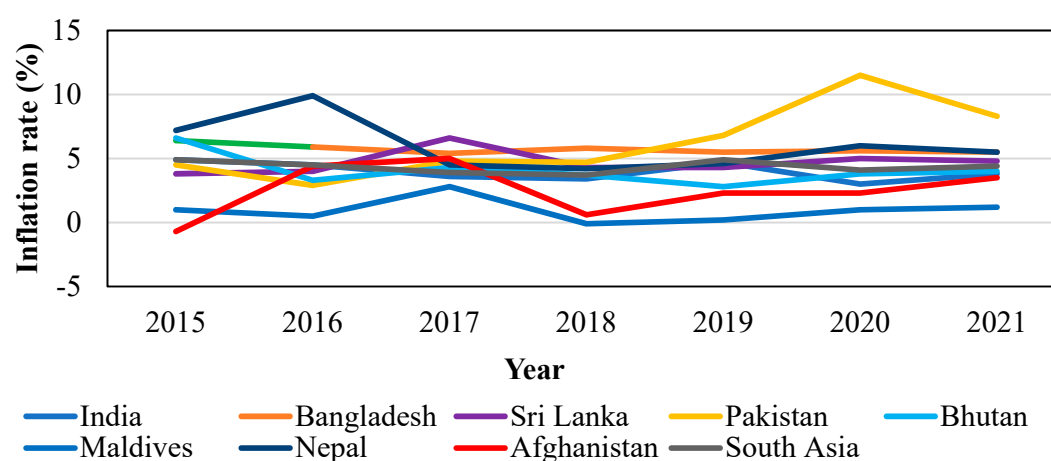
For developing countries, remittance and foreign direct investment both seem to have a positive and statistically significant consequence on per capita income [56]. Remittance inflows in South Asian countries have decreased significantly because of COVID-19 outbreaks. It was found that all remittance inflows declined sharply after December 2019 and became worse as the COVID-19 pandemic spread throughout the region (see Figure 3a) [57,58].

The inflation rate projected scenario is presented in Figure 3b. The inflation rate after the pandemic of COVID-19 will drastically increase in the Pakistan economy compared to other South Asian countries. After 2018, the inflation rate has an increasing trend for Afghanistan and the Maldives (Figure 3b).





(a)



(b)

**Figure 3.** (a) COVID-19 impact on remittance inflows in South Asian countries [56]. (b) COVID-19 impact on inflation rate in South Asian countries [5]. \* denotes up to March 2020.

Average inflation in the Maldives remained subdued at 0.2% in 2019, owing mainly to the government's price controls on the food staples rice, flour, and sugar, as well as lower global prices for oil and food products. In Bangladesh, inflation slowed following a good crop harvest, and the current account deficit narrowed as the trade deficit shrank and remittances expanded further [53,55]. Inflation reached its lowest average in a decade at 2.8% in FY 2019 in Bhutan, and this decline reflected lower food prices as domestic supply improved. Consumer price inflation in India, benign in the first half of FY 2019, spiked above the target zone of 2.0% to 6.0% in December 2019, for the first time since the adaption of inflation targeting. Inflation in Nepal will move up from 4.6% in FY 2019 to an average of 6.0%. Inflation accelerated by 24.0% from 4.7% in FY 2018 to 6.8% in FY 2019 due to poor harvests, tariff increases, and Pakistan's rupee depreciation against the US dollar following the adoption of a more flexible exchange rate. In Sri Lanka, core inflation rose from an average of 3.5% in 2018 to 5.5% but was moderated to 4.8% at the end of 2019 as non-food inflation eased [53,55].

There are several channels through which the COVID-19 outbreak will affect economic activity in the South Asian economy. In the later section, we discuss the major economic sectors, such as agriculture, service, and manufacturing industries, and their effects on GDP and employment related to COVID-19.

#### 4.2.2. Impact of COVID-19 on Major Economic Sectors

A pandemic causes a shortage in the intermediate inputs and lower industrial production, while shortages in staff could adversely impact all sectors. Moreover, structural and financial-sector weaknesses are compounded by severe disruptions to economic activity caused by the COVID-19 outbreak [40]. The adverse effects of COVID-19 on major economic sectors (agriculture, service, and manufacturing industries) are described in the following sections.

##### Agricultural Sector

Table 2 lays out the various channels through which agriculture sectors, including mining and quarrying, can be affected and quantifies the likely magnitudes of the effects under a range of scenarios. The analyzed data were collected from the ADB data library [5]. After the collection of country-wise data, the projected outline of GDP, percentage of GDP share, employment, and percentage of employment sector was estimated. The GDP in monetary value from the agriculture, mining, and quarrying sector will be decreased by \$755.01 to \$1539.79 million in India for shorter to longer containment [5].

**Table 2.** Impact of COVID-19 outbreak on the agriculture sector.

Economy	Projected Scenario	In Millions (\$)	% of Total GDP	% of the Sector GDP	Employment (In Thousands)	% of Sector Employment
IND	Shorter–Longer	755.01 to 1539.79	−0.03 to −0.06	−0.18 to −0.36	288 to 598	−0.11 to −0.22
	Addi_S–Addi_L	7297.17 to 18,594.17	−0.27 to −0.68	−1.71 to −4.36	4821 to 12,236	−1.79 to −4.55
BAN	Shorter–Longer	61.31 to 146.94	−0.02 to −0.05	−0.14 to −0.34	41 to 97	−0.14 to −0.33
	Addi_S–Addi_L	725.25 to 1869.79	−0.26 to −0.68	−1.69 to −4.36	492 to 1254	−1.7 to −4.32
SL	Shorter–Longer	60.85 to 125.11	−0.07 to −0.14	−0.58 to −1.2	18 to 38	−0.7 to −1.44
	Addi_S–Addi_L	158.00 to 409.85	−0.18 to −0.46	−1.51 to −3.92	41 to 105	−1.57 to −4.02
PAK	Shorter–Longer	154.66 to 325.26	−0.05 to −0.1	−0.18 to −0.39	58 to 123	−0.19 to −0.4
	Addi_S–Addi_L	1589.72 to 4036.00	−0.51 to −1.28	−1.89 to −4.79	584 to 1480	−1.88 to −4.77
BHU	Shorter–Longer	0.79 to 1.87	−0.03 to −0.07	−0.14 to −0.32	0 to 1	−0.14 to −0.33
	Addi_S–Addi_L	9.27 to 24.04	−0.37 to −0.95	−1.61 to −4.17	5 to 12	−1.73 to −4.44
MAL	Shorter–Longer	8.75 to 17.7	−0.16 to −0.33	−6.49 to −13.12	6 to 12	−6.49 to −13.12
	Addi_S–Addi_L	1.25 to 3.13	−0.02 to −0.06	−0.93 to −2.32	1 to 2	−0.93 to −2.32
NEP	Shorter–Longer	7.32 to 14.94	−0.03 to −0.05	−0.08 to −0.17	8 to 16	−0.08 to −0.17
	Addi_S–Addi_L	152.45 to 409.2	−0.52 to −1.41	−1.71 to −4.59	165 to 444	−1.71 to −4.6

Note: No data has been found for Afghanistan [5]. Shorter–Longer: Shorter containment, smaller demand shock and longer containment, larger demand shock; Addi\_S–Addi\_L: Additional impact under shorter containment, smaller demand shock and additional impact under longer containment, larger demand shock.

On the other hand, for additional impact under shorter containment, smaller demand shock, and longer containment, larger demand shock will be reduced in India (\$7297.17 to \$18,594.17 million), Bangladesh (\$725.25 to \$1869.79 million), and Pakistan (\$1589.72 to \$4036.00 million). Among the South Asian countries, the percentage of sectoral GDP for shorter and longer containments will be feasible to tackle immediately, and minimum and maximum predicted value range between 0.08% and 13.12% for Nepal and the Maldives, respectively (see Table 2).

##### Service Sector

ADB's predicted impact assessment shows that service sectors, including business, trade, personal, and public services, will be disrupted significantly in South Asian countries (Table 3). Expected losses will be higher for the Indian economy for shorter and longer containment periods (\$1969.05 to \$4273.83 million) and the additional containment periods (\$24,676.60 to \$67,439.57 million) after COVID-19 outbreaks [54].

This process will also affect other South Asian countries trading agricultural products as India is the leading country in this region for producing and exporting products and raw materials. The percentage of total and sectoral GDP share will also decline in all South Asian countries, whereas the Maldives will be affected more significantly for shorter and longer containment periods (−3.53 to −7.14%) under the sectoral share of GDP from the service sector [5].

**Table 3.** Impact of COVID-19 outbreak on service sectors.

Economy	Projected Scenario	In Millions (\$)	% of Total GDP	% of the Sector GDP	Employment (in 000)	% of Sector Employment
IND	Shorter–Longer	1969.05 to 4273.83	−0.07 to −0.16	−0.14 to −0.3	182 to 394	−0.15 to −0.33
	Addi_S–Addi_L	24,676.60 to 67,439.57	−0.91 to −2.48	−1.72 to −4.7	2025 to 5478	−1.69 to −4.58
BAN	Shorter–Longer	124.26 to 292.98	−0.05 to −0.11	−0.12 to −0.29	15 to 35	−0.09 to −0.21
	Addi_S–Addi_L	1684.85 to 4557.73	−0.61 to −1.66	−1.68 to −4.55	291 to 784	−1.73 to −4.66
SL	Shorter–Longer	249.67 to 521.27	−0.28 to −0.59	−0.74 to −1.55	14 to 30	−0.48 to −1.02
	Addi_S–Addi_L	637.49 to 1740.01	−0.72 to −1.96	−1.9 to −5.17	57 to 161	−1.91 to −5.43
PAK	Shorter–Longer	116.31 to 248.85	−0.04 to −0.08	−0.09 to −0.19	13 to 28	−0.08 to −0.17
	Addi_S–Addi_L	2707.04 to 7254.34	−0.86 to −2.31	−2.03 to −5.44	331 to 885	−2.05 to −5.48
BHU	Shorter–Longer	1.85 to 3.79	−0.07 to −0.15	−0.25 to −0.52	0 to 1	−0.3 to −0.62
	Addi_S–Addi_L	12.08 to 34.76	−0.48 to −1.37	−1.66 to −4.76	2 to 6	−1.6 to −4.5
MAL	Shorter–Longer	61.9 to 125.18	−1.16 to −2.35	−3.53 to −7.14	2 to 5	−5.21 to −10.54
	Addi_S–Addi_L	25.06 to 68.04	−0.47 to −1.28	−1.43 to −3.88	1 to 2	−1.41 to −3.68
NEP	Shorter–Longer	20.43 to 42.51	−0.07 to −0.15	−0.16 to −0.34	13 to 28	−0.24 to −0.5
	Addi_S–Addi_L	227.82 to 638.02	−0.78 to −2.2	−1.82 to −5.09	100 to 275	−1.79 to −4.96

Note: No data has been found for Afghanistan [5]. Shorter–Longer: Shorter containment, smaller demand shock and longer containment, larger demand shock; Addi\_S–Addi\_L: Additional impact under shorter containment, smaller demand shock and additional impact under longer containment, larger demand shock.

### Manufacturing Industry

The manufacturing industry usually plays a vital role in the economic growth of developing countries. Recently, it has been argued that the importance of the manufacturing industry has weakened over the last 20–25 years, resulting in early deindustrialization or non-industrialization in developing countries [59].

In the present projections, due to the COVID-19 pandemic, light/heavy manufacturing, utilities, and construction sub-sectors were taken as manufacturing sectors. The results of the analyses showed that countries with fewer manufacturing opportunities would be less affected than those with a high level of manufacturing of light/heavy products like India. India has a large global share of product manufacturing and raw materials. Therefore, India will be affected seriously, followed by Bangladesh and Pakistan in terms of the GDP value [54]. Shorter and longer containment with additional impact under demand shocks for the COVID-19 outbreak in India is projected to be five to eight times higher than the normal situation (see Table 4).

**Table 4.** Impact of COVID-19 outbreak on the manufacturing sector.

Economy	Projected Scenario	In Millions (\$)	% of Total GDP	% of the Sector GDP	Employment (in 000)	% of Sector Employment
IND	Shorter–Longer	1400.20 to 3082.76	−0.05 to −0.11	−0.24 to −0.52	258 to 575	−0.19 to −0.43
	Addi_S–Addi_L	9187.45 to 26,720.35	−0.34 to −0.98	−1.55 to −4.52	2162 to 6260	−1.62 to −4.68
BAN	Shorter–Longer	263.51 to 652.46	−0.1 to −0.24	−0.34 to −0.84	64 to 158	−0.38 to −0.95
	Addi_S–Addi_L	1127.36 to 3278.5	−0.41 to −1.2	−1.45 to −4.22	231 to 650	−1.39 to −3.92
SL	Shorter–Longer	176.72 to 382.81	−0.2 to −0.43	−0.75 to −1.63	17 to 37	−0.79 to −1.74
	Addi_S–Addi_L	369.99 to 1031.64	−0.42 to −1.16	−1.57 to −4.39	31 to 86	−1.46 to −4.06
PAK	Shorter–Longer	106.89 to 227.54	−0.03 to −0.07	−0.2 to −0.43	9 to 19	−0.1 to −0.21
	Addi_S–Addi_L	982.64 to 2660.37	−0.31 to −0.85	−1.85 to −5.01	171 to 480	−1.93 to 5.43
BHU	Shorter–Longer	3.39 to 7.12	−0.13 to −0.28	−0.35 to −0.73	0 to 0	−0.15 to −0.32
	Addi_S–Addi_L	13.53 to 40.29	−0.53 to −1.59	−1.39 to −4.15	1 to 3	−1.59 to −4.51
MAL	Shorter–Longer	74.47 to 150.26	−1.4 to −2.82	−3.74 to −7.54	1 to 3	−4.28 to −8.63
	Addi_S–Addi_L	31.55 to 82.83	−0.59 to −1.55	−1.58 to −4.16	0 to 1	−1.5 to −3.89
NEP	Shorter–Longer	5.76 to 12.1	−0.02 to −0.04	−0.14 to −0.29	5 to 11	−0.18 to −0.36
	Addi_S–Addi_L	73.65 to 214.8	−0.25 to −0.74	−1.75 to −5.1	51 to 142	−1.73 to −4.83

Note: No data has been found for Afghanistan [5]. Shorter–Longer: Shorter containment, smaller demand shock and longer containment, larger demand shock; Addi\_S–Addi\_L: Additional impact under shorter containment, smaller demand shock and additional impact under longer containment, larger demand shock.

Overall, all the discussed South Asian economic sectors were adversely affected due to the current phenomena of COVID-19. Moreover, the agricultural sector was less influenced than the service and manufacturing industry, and a larger share of service and manufacturing industry-oriented countries were more affected than those with smaller service and manufacturing sectors.

### 4.2.3. Policy Responses to Combat the Consequences of COVID-19

A policy action framework based on major economic indicators and sectors was formulated to determine a viable and conceivable avenue to recover losses due to the COVID-19 pandemic in the South Asian economy. The policy measures introduced by policymakers in South Asian countries to cope with the coronavirus-induced recession on major economic sectors can be divided into three categories: (i) agriculture, (ii) manufacturing, and (iii) services. In addition, remittance related policy and mitigating options, as some of the most important economic indicators, were highlighted in this review paper. A systematic review approach based on secondary source literature was collected to explain the policy responses taken by South Asian governments during the pandemic (Table 5).

**Table 5.** Policy response regarding COVID-19 in the South Asian economy.

Sectors	Country	Suggested Actions
Agriculture	IND	A nutrition program should be formulated to use available food stock [60]; farmers and agricultural workers should be included in the government's assistance package and any social protection programs addressing the crisis [60].
	BAN	The central bank could inject funds into the agricultural sector through a grant facility [61].
	SL	Tax-free status could be granted to boost value-added and efficient agriculture and agricultural supplies [62].
	PAK	The government must maintain the provision of inputs to farmers, mobility of labor in the agriculture sector, and shipments of food from farms to markets and markets to retailers [63].
	NEP	People can be self-reliant to mitigate the impact of severe events that will increase rural prosperity, ensure more sustainable food systems and food security, and create greater resilience in fragile states by investing in rural agricultural programs.
Manufacturing	IND	The government should invest in the Ministry of Micro, Small and Medium Enterprises (MSME) to reduce export [64]; MSME loan repayments should also be delayed [64].
	BAN	Minimum support to maintain day-to-day expenses; support for retaining the staff and workers and rationing support facilities for contractual workers [65]; export-oriented sectors, such as the RMG sector, need cash flow support to retain workers [65].
	SL	A new economic zone should be introduced to create employment and investors [62].
	PAK	The government should provide loans to refuel the manufacturing sector [66].
	NEP	During the lockdown manufacturing industries have closed their operations. Those industries producing essential items, for example, medical supplies and food and dairy products, have continued their business operations [31].
Service	IND	The government should promote trade by avoiding export bans and import restrictions [61]; E-commerce should be encouraged [60].
	BAN	The import of essential items needs to be given special support, whereas non-necessary items can be put on hold [67]; workers should be retained and employed through reskilling and retraining [67].
	SL	Focus on reskilling the workforce [62]; job retention by easing the cost of employment [62].
	PAK	A relief package is required for the business sector to encourage them to retain their employees [63].
	NEP	To speed up import and export of essential goods, the focus should be on enacting debt relief measures for businesses and individuals, and easing inter-regional customs clearances [56].
Remittance	IND	A cash transfer to the remittance earners [64].
	BAN	A database of visiting migrant workers who are not able to join their workplaces should be created so that support from the government can be provided over these uncertain times [68].
	SL	Export industries should be provided a tax-free status for a considerable length of time to attract investment, create employment, and generate foreign exchange [62].
	PAK	The government must negotiate for pending payments to employees [62]; the government needs to care for the Pakistani overseas community [63].
	NEP	Temporary work programs should be established for unemployed migrant workers [56].

Source: Adopted from different secondary sources and modified by the research team. Note: No specific policy has been found for Bhutan, Afghanistan, and the Maldives.

The extent and continuance of the economic damage will depend on the government's management nature in this sudden pandemic with fear and anxiety. A various range of policy measures will be essential both in the short-run as well as in the upcoming years. Global cooperation, especially in the field of public health and economic development, is essential. All major countries need to contribute actively. The outbreak of COVID-19 shows that if the disease is generated in developing countries, poor public health may negatively impact people of any socioeconomic group in any society [60]. There needs to be an enormous investment in public health and development in the poorest countries, like Bangladesh, Nepal, Sri Lanka, the Maldives, etc. (see Table 5), and various experts and organizations need to provide supports to these countries.

## 5. Conclusions and Policy Implications

The economic consequences of the pandemic are already impacting South Asian countries with unprecedented speed and severity. In this review article, we used a systematic review approach to examine the potential economic impact on the South Asian economy that provided meaningful and important information for South Asian economies along with the major economic sectors and indicators. We also outlined possible coping strategies adopted by different South Asian countries and their failure to take appropriate short and long-term action to tackle this pandemic immediately. In this research, the cause-effect diagram shows that the economies of South Asian countries will be adversely affected in 2020 and subsequently. Additionally, developing economies will face challenges with unprecedented reversals in capital flow due to travel restrictions and very insignificant trade that will ultimately reduce income and lead to a minimum living standard. The study suggests that, due to the loss of employment in the informal sector of Pakistan, the economy will suffer a high inflation rate that will ultimately reduce its real GDP growth rate. The economy of Afghanistan will also be severely affected due to the low GDP growth rate for both nominal and real conditions. In the Maldives, the real GDP will slightly decline, while the nominal GDP will fluctuate severely due to the restriction of the world tourism sector. Bangladesh and India's situation will remain similar. Remittance inflows in South Asian countries have been decreasing significantly because of the pandemic.

As nearly 60% of South Asia's population is engaged in agriculture, we expected that the impact of COVID-19 on supply chain management would be serious. We found that the Indian agriculture sector will decline dramatically for both shorter and longer containment periods (\$755.01 to \$1539.79 million), whereas the Maldives will be more significantly affected for shorter and longer containments (−3.53 to −7.14%) under the sectoral share of the GDP. To combat the crisis, the government should introduce an agricultural subsidy scheme for the smooth continuation of agricultural activities. Moreover, different non-government organizations (NGOs) should develop rural agricultural programs to ensure the remunerative price for agricultural produces along with efficient marketing facilities. Farmers and allied workers should be included in the government's assistance package, and Good Agricultural Practice (GAP) should be adopted to increase productivity.

Services and manufacturing sectors will also be negatively affected in all South Asian countries due to the disruption of the major raw material supply-demand chain. India is the most affected country under the service sector, and its projected losses are expected to be between \$1969.05 to \$4273.83 million for shorter and longer containment periods, respectively. In the case of revenue losses from the manufacturing industry, India's revenue earning will decline by five to eight times lower than a normal year. Countries with small manufacturing industries will be less affected due to the restriction of export and import goods. Compared to the services and manufacturing sector, the agricultural sector has been less affected during this pandemic period.

The policy implications section under the systematic review approach suggested that every country and its current administration is trying its best to recover from the pandemic by taking different short and long-term policy actions. The South Asian national leaders have already proposed cooperative techniques to recover from the pandemic. It is projected that the economic shock will likely promote inequality in South Asia. For the continuation of the service and manufacturing sectors, different support facilities should be introduced without delay. Although countries in South Asian have long suffered from the intraregional tariff and non-tariff barriers that make it challenging to move goods and people across borders, the countries now have an opportunity to come together to remove charges on medical devices for fighting the crisis and to recover economic losses. In this context, South Asian governments should adopt and implement expansionary fiscal strategies with monetary stimulus to keep credit flowing. Short-term temporary work programs for unemployed workers could be one of the effective ways to cope with this adverse situation. Additionally, the import and export of essential items need to be given special support for timely transit. To cope with this situation, governments can invest in the MSME sector to increase domestic dependency.

The generalization of findings in this study is subject to certain limitations. For instance, the present research is only based on secondary sources using a systematic review approach. There is a chance that some other important indicators and sectors that need to be addressed due to the COVID-19 outbreak are missing. As this is an ongoing situation, all the data we have collected are secondary sources, and these data are changing every moment. Moreover, in the recent weeks over September and October 2020, there has been a lot of countries, including those in South Asia, that have entered a second or third wave. Therefore, the outcomes from our analyses are only rough indicators for the first wave between November 2019 and June 2020. Thus, further study of the impact of the second and third waves on the economic sectors and indicators in South Asian economies is required.

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