# COVID-19 AND SOUTH ASIAN POVERTY INDICATORS: AN ECONOMY-WISE STUDY

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**ABSTRACT**

*The widely unexpected to come in 2019, yet known to happen one day, Covid-19 has stricken the economies over the globe. The governments for the sake of the safety of their citizens started imposing lockdown measures which resulted in temporary, and later in some cases permanent, closure of businesses. This strategy, known to be the best, comes with a high cost to growth, employment, and standard of living of the people. The low and even negative growth rate in developing economies is an alarming situation for the poor class living in those countries. The badly hurt in this hard time is the poor all around the world, especially in developing economies (Valensisi, 2020). It is estimated that the world's one-third of the population and nearly 45% of the newly poor, due to Covid-19, will be living in South Asia (Sumner et al., 2020). This motivates the authors to have a deep look into the South Asian economies and find the empirical of the effects of Covid-19 on poverty in these seven economies. This research uses the 5%, 10%, and 20% reduction in per capita income of each South Asian economies and illustrates the increase in poverty in these nations and the economies more vulnerable and in need of dire assistance. In the end, this study will put forward some policy recommendations based on its findings.*

Key words: Covid-19, South Asia, Poverty Index, Poverty Headcount

## INTRODUCTION

The novel coronavirus known as Covid-19 is here since the last quarter of 2019 and virologists are of the view that it will remain here, and we must opt with it. The new normal has been introduced since the outbreak of Covid-19 in Wuhan that spread rapidly throughout the world, one of the pieces of evidence of how interconnected and fast traveling today's world is. To contain the virus, all economies went to a partial or complete shutdown of its production and other activities for the sake of saving their citizens' lives. Such policy on one hand has saved millions of lives, compared to the Spanish Flu, but has harmed economies in terms of business closure and high unemployment. The slower or even in some economies negative growth rates.

The further extra burden on the economy is the sustenance of the poor and the unemployed through social security programs. (Gentilini, Almenfi, and Orton, 2020). Whether these programs have sufficiently lowered poverty in south Asia (Deyshappriya, 2020) is beyond the scope of this study and needs to be studied. These programs were designed as cash transfers and ration distribution to the poor and unemployed, and financing for small business including microbusinesses. The impact of these programs has been studied and they have a positive impact on lowering poverty in the poorest regions (Ghani et al., 2012).

There also have been subsidies and other support to businesses around the world which also contributes to the cost of the pandemic to economies, but they are beyond the scope of this study. The amount of human losses, due to the COVID-19 spread, is contained through the lockdowns, but on the other hand, the economic costs of the lockdowns are not trivial. The developing economies do not have the capacity for longer lockdowns. Moreover, business closures have led to more unemployment and an increase in poverty. This study investigates the increase in poverty in South Asia and designs it in a country-wise format.

South Asia has the world's one-fourth population and approximately two-thirds of the poor live in two regions of Sub-Saharan Africa and South Asia (Sumner et al., 2020, Ghani et al., 2012). South Asia consists of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

## THE PROBLEM STATEMENT

The Covid-19 Pandemic (Loayza, 2020, Sumner et al., 2020) has hit the developing economies hard. Especially, the poor through unemployment. These all happened as nations had only one successful method to contain the pandemic: lockdowns. Lockdowns created shutdowns of the businesses and unemployment rose. Worthy to be mentioned the daily wager labor lost their daily-based wages as lockdowns started in developing economies (Valensisi, 2020). We study the impact of the Covid-19 pandemic on poverty in terms of a decline in the per capita income in South Asian economies.

## THE STUDY OBJECTIVES

Sumner et al., (2020) and Anser et al., (2020) are of the view that more than 80% of the poor, post-covid-19, will be living in South Asia and Sub-Saharan Africa. What may be the stretch of the poor across South Asia (Bargain et al., 2020) and how much may poverty have increased in each economy as well as region, is the objectives of this study (Buheiji et al., 2020; Suryahadi et al., 2020). These will be step-wise as first we explore the facts and figures and then estimate additional poor (Sumner et al., 2020) in each South Asian economy.

Studies estimate that more than 80% of the post-COVID-19, the new poor, will be living in South Asia (Sumner et al., 2020). This alarming situation grabbed the attention of the authors of this research, to study this situation in South Asia. This study investigates

the short-term effect of the pandemic on South Asian individual economies as well as the whole region. The methodology is accounted for the additional number of poor at $3.2 per day and $5.5 per day poverty line. The poverty line of $1.9 per day has been dropped due to the lack of availability of the data. Moreover, the unavailability of data for Afghanistan almost makes Afghanistan out of the study, yet authors have contributed to include Afghanistan through the nearest possible variable or indicator available. We have per capita income data for each economy in south Asia through World Bank Indicators 2018 and PovcalNet. This study also considers shedding light on economic performance indicators, such as Gross Domestic Product (GDP), Gross Domestic Product per capita (per capita GDP), GDP growth, poverty gap index, and Gini Index for the South Asian region and the individual economies.

The final part of the study consists of discussion in conclusion and recommendations based on the findings of the studies. These recommendations target the policy guidelines for the South Asian economies to mitigate and lower the increase in poverty due to the pandemic.

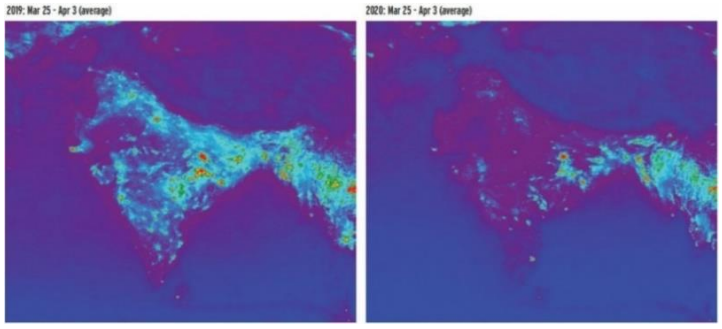
## THE THEORETICAL BACKGROUND

To curb the spread of the covid-19 pandemic governments all around the world have chosen the lockdowns as the best policy, except for some economies such as Sweden. These lockdowns, as government intervention into the markets, have resulted in the lowest production and the highest unemployment increasing poverty. This impact has enhanced poverty in already-poor economies. The classical concept/ theory of the government's intervention in markets (lockdowns that impede production, economic activity, and employment) lead to market disequilibrium has been visited in this study (Mandel and Veetil; 2020; Rank, Yoon, and Hirschel, 2003). As it has been governments' intervention in markets to shut down as lockdown measures, it can be said safely that this intervention in markets has resulted in disequilibrium in markets such as; from goods to the labor market and so on (Mandel and Veetil; 2020). The government intervention is considered to have disturbed the general equilibrium in the economy. This disequilibrium has caused a sudden rise in unemployment causing a sharp rise in poverty in almost all economies in general and South Asian economies in particular (Sumner et al., 2020).

## LITERATURE REVIEW

Poverty is defined by the scarcity of resources related to food, clothing, and shelter by the United Nations in 2020. One of the latest works done on different levels of poverty for the Chinese different counties is by Ren et al., 2018 (2018). Their methodology has been modified and applied in this paper's calculations for the poverty levels. According to Ren et al., (2018) this classification of the area based on poverty intensity helps the government plan and implement proper economic policy. The priority and urgency, then, can be given to the areas with extreme poverty. With the same intentions, this paper includes such calculations in the methodology so that a clearer view can be found and to provide better policy recommendations.
The poverty gap index and poverty headcount ratio are good indicators of the poverty variable to be measured while the Gini coefficient corresponds to income inequality (Hoy and Sumner, 2020) which is another perspective of looking at poverty in an economy. This has been a guideline for this paper to include the poverty gap index, Gini index, and poverty headcount ratio in the study (Warr, 2000).
The following figure shows how economic activity has seceded due to the pandemic. The comparison consists of the same time as the previous and current year (retrieved from blogs at the World Bank).

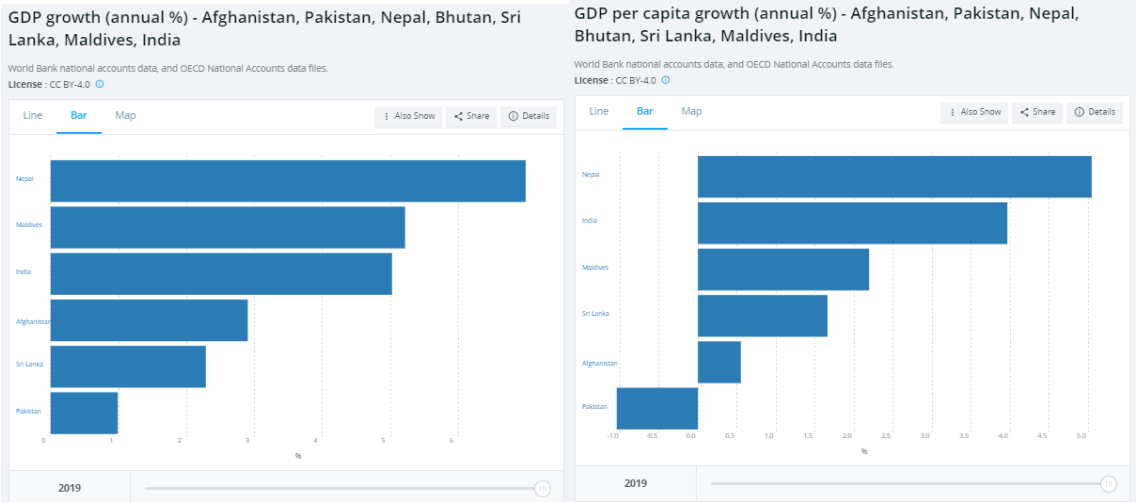
**Figure 1: How economic activity has seceded due to pandemic, comparing the same time of the previous and current year**




## SOUTH ASIAN ECONOMIES AT A GLANCE

It is deemed necessary to look upon the economic indicators of the economies in the region in early 2019. This will help us in understanding the level of economic loss the pandemic has put on these economies.
Nepal had the highest GDP growth rate in 2019, while it was lowest for Pakistan.

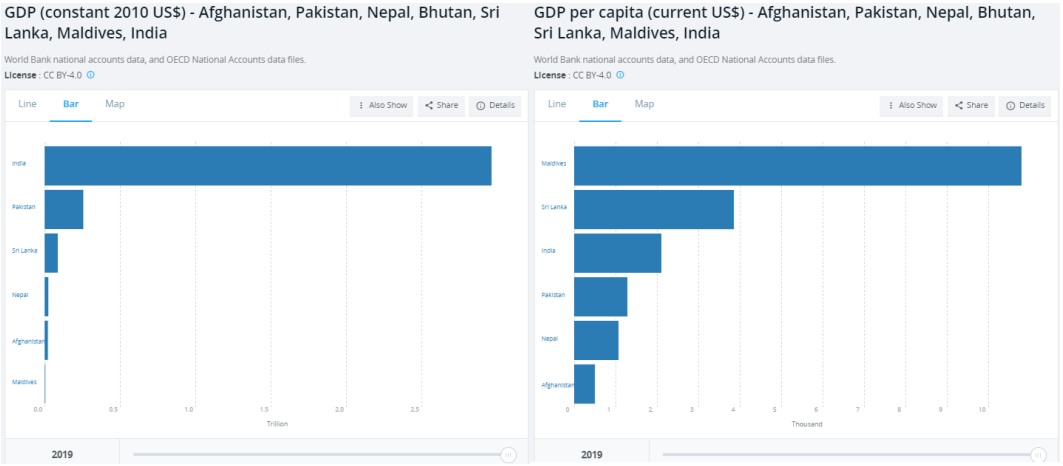
**Figure 2: GDP growth and Per capita GDP growth of the South Asian economies**




Source: The World Bank's World Development Indicators

In terms of Per capita GDP growth, Nepal stands first and Pakistan (Abbas et al., 2018) faces a negative growth rate in this account. The total GDP of India is the highest in the region and Maldives has the lowest total GDP.

**Figure 3: GDP and Per capita GDP of the South Asian economies**




Source: The World Bank's World Development Indicators

GDP per capita of Maldives is the highest in South Asia while it is the lowest for Afghanistan.

The economies grooming and have been uplifting their poor class for the entire 1990s and flourishing in the 2000s and 2010s, are suddenly struck by the economic crisis of the pandemic in late 2019. After short literature, this study will focus on the World Bank's forecasts of pre-pandemic and post-pandemic growth rates of these South Asian economies.

Sumner et al., (2020) have studied one of the latest studies on Covid-19's impact on poverty in different regions of the world. They have also covered South Asia as a region but lack the country-wise information on such variables in the said region. This gives a gap to be filled by this study and get a clearer insight into this issue. The authors found that nearly 80% (in the worst case) of the newly poor, due to Covid-19, will be living in South Asia and Sub-Saharan Africa (Diop and Asongu, 2020). Their study estimated a 5%, 10%, and 20% contraction of the economy (in terms of per capita income). The real impact and the true values of the income contractions across South Asian economies are not known. It is also considered that there is not any proper global data/study on the impact of the pandemic on poverty. Using the data from the povcalNet (Castaneda Aguilar, 2019), the authors concluded that South Asia and Sub-Saharan Africa are most hit in terms of Covis-19's impact on poverty (Diop and Asongu, 2020; Sumner et al., 2020). Thus, they recommended these economies to formulate proper social support policies (Warr, 2000).

Millions of poor in selected economies are expected due to the regional disparities, conflicts, and public debts (Anser et al., 2020). Their study shows that the extra burden on the health care system due to the Covid-19 is pushing the governments back on increasing the social security net which in turn will increase poverty in some poorest regions of the world. This lack of a health facility enhances poverty in some economies.

Buheji et al., (2020) studied Covid-19's socio-economic impacts on poverty in different economies. The authors recommended the policy suggestions and immediate strategies for the economies worse hit in terms of poverty. The worse hit is the poor in the economies hurt by the restrictions of work and movement as part of the isolation and lockdown.

In their working paper on pandemic's impact on Covid-19 in Indonesia, Suryahadi, Izzati, and Suryadrama (2020) estimated that poverty will increase from 9.2% to 9.7%. This becomes 1.3 million more people to poverty. While their estimation at maximum results in 8.5 million more poor or 12.4% increase in poverty in Indonesia. Their recommendations are mainly based on the income support of the poor in areas of the country with extreme poverty.

The priority and urgency, then, can be given to the areas with extreme poverty. With the same intentions, this paper includes such calculations in the methodology so that a clearer view can be found and to provide better policy recommendations.

The poverty gap index and poverty headcount ratio are good indicators of the poverty variable to be measured while the Gini coefficient corresponds to income inequality (Hoy and Sumner, 2020) which is another perspective of looking at poverty in an economy. This has been a guideline for this paper to include the poverty gap index, Gini index, and poverty headcount ratio in the study.

Bargain and Aminjonov (2020) presented their discussion paper on the pandemic's impact on Latin America and Africa's poverty level. Their study considering work mobility finds that greater work mobility leads to an increase in the Covid-19 spread. And the different poverty levels have different work mobility spans. Their findings provide insight into the trade-off between staying home and work mobility.

Millions of poor in selected economies are expected due to the regional disparities, conflicts, and public debts (Anser et al., 2020). Their study shows that the extra burden on the health care system due to the Covid-19 is pushing the governments back on increasing the social security net which in turn will increase poverty in some poorest regions of the world. This lack of a health facility enhances poverty in some economies.

## DATA AND METHODOLOGY

This paper studies the short-term effect of the pandemic on South Asian economies as well as the region. The methodology to be carried out is to estimate the increase in the poverty gap and an additional number of poor at $3.2 per day and $5.5 per day poverty lines. The poverty line of $1.9 per day has been dropped due to the lack of availability of the data.

We move from providing some facts and figures of the economies in the region to the estimation of the additional poor in these economies based on the new poverty line derived from the different levels of contractions (5%, 10%, and 20%) per capita income. As per authors' best knowledge currently, there are three studies on Covid-19's impact on poverty namely; International Labor Organization (ILO)'s estimated based on the computable general equilibrium (CGE) model of McKibbin and Fernando (2020), International Food Policy Research Institute (IFPRI)'s own CGE model worked upon for estimations by Vos, Martin, and Laborde (2020a, 2020b) and finally, Sumner et al., 2020's working paper in UNU-WIDER. All these studies have been regional wise, while the current study focuses on South Asian individual economies.

## DATA COLLECTION

The data has been taken from PovcalNet's most recent database. It consists of the poverty indicators, mainly the poverty headcount ratio, of the seven South Asian economies. We present the extracted data for the US$3.2, and US$5.5 per day poverty lines of the said economies. At a later stage, the estimates (for the new headcounts and new poor population) are created by using three scenarios of contraction of per capita income of South Asian economies due to the ongoing COVID-19 pandemic: 5, 10, and 20 percent contraction. As we do not observe individuals' income or consumption levels from PovcalNet's built-in database, we capture these per capita income contractions by increasing the value of the poverty line accordingly. That is, for a per capita income or consumption contraction of $x$ percent, the poverty line $z$ is adjusted upwardly as $z/(1-x)$. The three scenarios are performed for the US$3.2, and US$5.5 per day poverty lines. This method is discussed in detail at a later stage.

We have per capita income data for each economy in south Asia through World Bank Indicators (WDI) 2018 and PovcalNet. PovcalNet covers better data than the poverty data by the International Labor Organization (ILO) and the International Food Policy Research Institute (IFPRI). This study also considers the poverty gap index and the Gini Index for the said region and economies. Due to the data constraints, some parts of the calculations have a different point of time, yet reasonable to study and compare. Some missing data have been produced from WDI 2018, while most of the data has been used from the PovcalNet.

The World Bank's estimation of changes in the growth rate of South Asian economies, in early 2019, is depicted in the following figure.

**Figure 4: The World Bank estimation of the growth of the South Asian economies pre and post Covid-19**

REAL GDP AT MARKET PRICES IN PERCENT

| Country | Fiscal year | 2019(e) | 2020(f) | 2021(f) | 2022(f) |
|---|---|---|---|---|---|
| Afghanistan | December to December | 2.9 | -5.9 to -3.8 | 3.3 to 3.9 | 5.2 to 6.2 |
| Bangladesh | July to June | 8.2 | 2.0 to 3.0 | 1.2 to 2.9 | 2.8 to 3.9 |
| Bhutan | July to June | 3.9 | 2.2 to 2.9 | 2.0 to 2.5 | 3.1 to 3.5 |
| India | April to March | 6.1 | 4.8 to 5.0 | 1.5 to 2.8 | 4.0 to 5.0 |
| Maldives | January to December | 5.2 | -13.0 to -8.5 | 6.3 to 7.3 | 5.0 to 5.5 |
| Nepal | mid-July to mid-July | 7.1 | 1.5 to 2.8 | 1.4 to 2.9 | 2.7 to 3.6 |
| Pakistan | July to June | 3.3 | -2.2 to -1.3 | 0.3 to 0.9 | 3.2 to 3.3 |
| Sri Lanka | January to December | 2.6 | -3.0 to -0.5 | 0.2 to 1.2 | 2.0 to 2.5 |

REVISION TO FORECASTS FROM OCTOBER 2019

| Country | Fiscal year | 2019(e) | 2020(f) |
|---|---|---|---|
| Afghanistan | December to December | -8.9 to -6.8 | -0.2 to 0.4 |
| Bangladesh | July to June | -5.2 to -4.2 | -6.1 to -4.4 |
| Bhutan | July to June | -5.2 to -4.5 | -3.9 to -3.4 |
| India | April to March | -1.2 to -1.0 | -5.4 to -4.1 |
| Maldives | January to December | -18.5 to -14.0 | 0.7 to 1.7 |
| Nepal | mid-July to mid-July | -4.9 to -3.6 | -5.1 to -3.6 |
| Pakistan | July to June | -4.6 to -3.7 | -2.7 to -2.1 |
| Sri Lanka | January to December | -6.3 to -3.8 | -3.5 to -2.5 |

Source: The World Bank's Global Economic Prospects

Later, The World Bank re-estimates the growth rate of the South Asian economies post COVID-19 and is given in the figure at top right.

The further estimates for the recovering from the losses of the pandemic to the economies are given in the figure below;

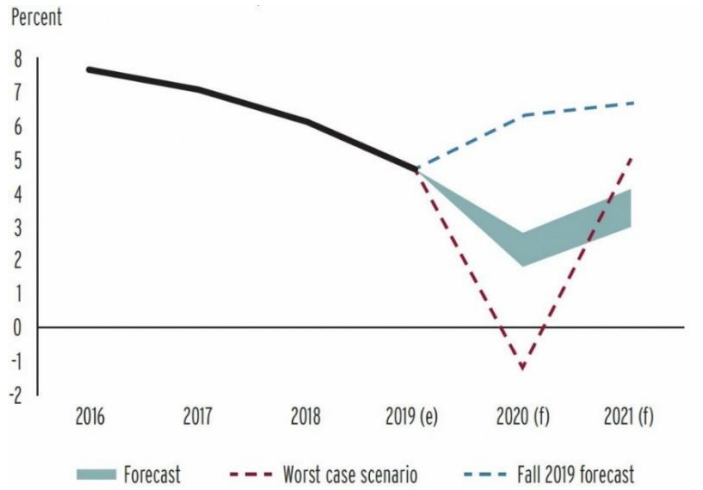
**Figure 4: The World Bank projection of the two-year growth of the South Asian economies pre and post Covid-19**

| | | | | | | Percentage point differences from January 2020 projections | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019e | 2020f | 2021f | 2020f | 2021f |
| **Calendar year basis** [1] | | | | | | | |
| Afghanistan | 2.7 | 1.8 | 2.9 | -5.5 | 1.0 | -8.5 | -2.5 |
| Maldives | 6.8 | 6.9 | 5.2 | -13.0 | 8.5 | -18.5 | 2.9 |
| Sri Lanka | 3.6 | 3.3 | 2.3 | -3.2 | 0.0 | -6.5 | -3.7 |
| **Fiscal year basis** [1] | 16/17 | 17/18 | 18/19e | 19/20f | 20/21f | 19/20f | 20/21f |
| Bangladesh | 7.3 | 7.9 | 8.2 | 1.6 | 1.0 | -5.6 | -6.3 |
| Bhutan | 6.3 | 3.8 | 3.9 | 1.5 | 1.8 | -4.1 | -5.8 |
| India | 8.3 | 7.0 | 6.1 | 4.2 | -3.2 | -0.8 | -9.0 |
| Nepal | 8.2 | 6.7 | 7.0 | 1.8 | 2.1 | -4.6 | -4.4 |
| Pakistan (factor cost) | 5.2 | 5.5 | 1.9 | -2.6 | -0.2 | -5.0 | -3.2 |

Source: The World Bank's Global Economic Prospects

The World Bank's case scenarios are illustrated in the following graph;

**Figure 5: The World Bank different growth scenarios for the South Asian economies pre and post Covid-19**




Source: The World Bank's Global Economic Prospects

This study estimates a 5%, 10%, and 20% contraction of the economy (in terms of per capita income). These levels of contraction are purely intuitive (McKibbin and Fernando, 2020); and Sumner et al., 2020). The real impact and the true values of the income contractions across South Asian economies are not known. It is also considered that we do not have any proper data/studies on the impact of the pandemic on poverty in South Asia.

**A Glance on The Poverty Measures In South Asia**

At this stage of the study, we look upon the poverty indicators of the South Asian economies. These indicators are taken from the World Bank's World Development Indicators (2019) and have been summarized below. These indicators are pre-pandemic values for each economy in the region.

1) Gini Index has been gradually increasing for Sri Lanka (Deyshappriya, 2018) and the Maldives and declining for Afghanistan and Bangladesh. On the other hand, India (House, 2018), Nepal, and Pakistan (Abbas et al., 2018) have seen a slow increase since the mid-2000s. While the Gini Index has been relatively stable in Bhutan.
2) The poverty headcount ratio at $5.5/day scale has declined for Afghanistan, Bangladesh, and Nepal. While, it has been gradually increasing for India, Maldives, and Pakistan (Abbas et al., 2018). The spike in poverty headcount ratio at $5.5/day threshold has occurred and passed by Sri Lanka; for Nepal since 2014, it has been a sharp increase.
3) The national poverty headcount ratios show that it has been increasing for all South Asian economies since the early 2000s with a sharp increase since the mid-2000s.
4) At the $3.2/day measures the South Asian economies have seen a decline of nearly half in the poverty gap which had been on the hype since the mid-2000s.

**DATA ANALYSIS**

The next part of the study consists of the results of the estimations provided in Table 1 to Table 4. The estimates are created by using three scenarios of contraction of per capita income of South Asian economies due to the ongoing COVID-19 pandemic: 5, 10, and 20 percent contraction or decline in per capita income of the individual South Asian economies (Sumner et al., 2020). Sumner et al., (2020) have studied the COVID-19 pandemic impact on economies at the region level. While this study provides an economy-wise study of the impact of the COVID-19 in one of the poorest regions of the world.

As we do not observe individuals' income or consumption levels from PovcalNet's built-in database, we capture these per capita income contractions by increasing the value of the poverty line accordingly.

We use the following equation to estimate the said contractions in per capita income.

$$\emptyset = \frac{z}{(1-x)}$$

That is, for a per capita income or consumption contraction of $x$ percent, the poverty line $z$ is adjusted upwardly as $z$ / (1 – $x$). Whereas; $\emptyset$ is the contraction-incorporated new poverty line. By the contraction-incorporated, we mean this poverty line includes the impact of 5%, 10%, or 20% contraction in per capita income. Furthermore, three scenarios (5%, 10%, and 20% contraction) are performed for the US$3.2, and US$5.5 per day poverty lines. Hence, we will obtain an additional number of poor as well as an increase in headcount ratio caused by the Covid-19 pandemic.

**RESULTS OF THE STUDY**

Further in the discussion, this paper presents in Table 1 to 4, the estimations of the increase in poverty in South Asia. Table 1 depicts the values of the general poverty indicators in South Asia. Table 2 provides the people living in poverty as a percentage and the additional poor in millions at a very lenient estimation of a 5% decline in per capita income. The estimations of the same with 10% and 20% declines in per capita income are provided in Table 3 and Table 4.

**Table 1: The Mean income, Headcount ratio, Poverty gap (at $3.2/ day and $5.5/ day) and Gini Index**

| | Mean | Headcount (%) | | Poverty Gap (%) | | Gini Index |
|---|---|---|---|---|---|---|
| ($/month) | $3.2/ day | $5.5/ day | $3.2/ day | $5.5/ day | | |
| Bangladesh (2016) 32.39 | 117.31 | 52.87 | 84.52 | 15.59 | 39.18 | |
| Bhutan (2017) 37.44 | 267.05 | 12.01 | 38.56 | 2.54 | 12.14 | |
| India (2011) 37.83 | 111.83 | 60.40 | 86.81 | 8.41 | 43.49 | |
| Maldives (2016) 31.29 | 442.51 | 0.51 | 6.65 | 0.08 | 1.30 | |
| Nepal (2010) 32.84 | 118.97 | 50.88 | 83.04 | 15.78 | 38.51 | |
| Pakistan (2015) 33.45 | 150.30 | 34.71 | 75.41 | 7.62 | 28.80 | |
| Sri Lanka (2016) 39.81 | 268.33 | 10.13 | 40.41 | 1.91 | 11.62 | |
| **South Asia (2018) 15.99**[1] | **243.56** | **33.68** | **72.06** | **7.9** | **27.87** | |

Source: Authors' calculations from WDI and PovcalNet data

Table 1 consists of the Poverty headcount ratios and poverty gap index at $3.2 and $5.5 per day measures. It also includes the mean income per month and the Gini coefficient values for the South Asian region and its economies. Afghanistan is not included due to a lack of data. The mean monthly income ranges from $111 for India to $442 for the Maldives. The Maldives has the lowest poverty gap index and it is the highest for India. Gini index is the highest for Sri Lanka and the lowest for the Maldives.

From Table 2 to Table 4, the economies have been abbreviated as, AFG for Afghanistan, BNG for Bangladesh, BHU for Bhutan, IND for India, MLD for the Maldives, NEP for Nepal, PAK for Pakistan, SRL for Sri Lanka, and S.A. for South Asia.

Table 2 illustrates the estimation of the additional poor and additional poverty as a percentage of the total population for the seven South Asian economies. This is based on the optimistic 5% reduction in the per capita income of the economies due to pandemic.

**Table 2: Estimation of the additional poor and additional poverty as a percentage of the total population**

| Economies | People living in poverty (% of the population) | | People living in poverty (Millions) | | Additional People living in poverty (% of the population) | | Additional People living in poverty (Millions) | |
|---|---|---|---|---|---|---|---|---|
| | $3.2/ day | $5.5/day | $3.2/ day | $5.5/ day | $3.2/day | $5.5/day | $3.2/ day | $5.5/day |
| AFG[2] | 54 | | 20 | | 4.89 | | 1.86 | |
| BNG | 52.8 | 84.5 | 86.1 | 137 | 3.9 | 5.1 | 6.35 | 8.3 |
| BHU | 12 | 38.5 | 0.09 | 0.29 | 1.9 | 2.6 | 0.018 | 0.02 |
| IND | 60.4 | 86.8 | 785 | 1128 | 4.2 | 5.3 | 54.6 | 68.9 |
| MLD | 0.51 | 6.6 | 0.003 | 0.03 | 0.8 | 1.3 | 0.004 | 0.007 |
| NEP | 50.8 | 83 | 14.5 | 23.7 | 3.7 | 5 | 1.06 | 1.43 |
| PAK | 34.7 | 75.4 | 74.9 | 162 | 3.1 | 4.9 | 6.67 | 10.58 |
| SRL | 10.1 | 40.4 | 2.2 | 8.8 | 1.8 | 2.3 | 0.39 | 0.50 |
| **S.A.** | **33.6** | **72.1** | **962.8** | **1459.8** | **3.6** | **4.8** | **69.08** | **89.74** |

Source: Authors' calculations from WDI and PovcalNet data

Table 3 depicts the estimation of the additional poor and additional poverty as a percentage of the total population for the seven South Asian economies. This is based on the 10% reduction in the per capita income of the economies due to the pandemic.

[1] This value is taken from World Development Indicators 2018
[2] Due to unavailability of the data in WDI and PovcalNet, we take National poverty line for Afghanistan in Table 2 to Table 4.

**Table 3: Estimation of the additional poor and additional poverty as a percentage of the total population**

| Economies | People living in poverty (% of the population) | | People living in poverty (Millions) | | Additional People living in poverty (% of the population) | | Additional People living in poverty (Millions) | |
|---|---|---|---|---|---|---|---|---|
| | $3.2/day | $5.5/day | $3.2/ day | $5.5/day | $3.2/ day | $5.5/day | $3.2/day | $5.5/ day |
| AFG | 54 | | 20 | | 9.2 | | 3.49 | |
| BNG | 52.8 | 84.5 | 86.1 | 137 | 5.6 | 6.4 | 9.13 | 10.43 |
| BHU | 12 | 38.5 | 0.09 | 0.29 | 1.5 | 4.5 | 0.01 | 0.03 |
| IND | 60.4 | 86.8 | 785 | 1128 | 5.9 | 6.56 | 76.7 | 85.28 |
| MLD | 0.51 | 6.6 | 0.003 | 0.03 | 0.001 | 0.12 | 0.0005 | 0.006 |
| NEP | 50.8 | 83 | 14.5 | 23.7 | 5.5 | 6.1 | 1.57 | 1.75 |
| PAK | 34.7 | 75.4 | 74.9 | 162 | 3.7 | 5.4 | 7.99 | 11.66 |
| SRL | 10.1 | 40.4 | 2.2 | 8.8 | 1.3 | 3.5 | 0.28 | 0.76 |
| **S.A.** | **33.6** | **72.1** | **962.8** | **1459** | **5.4** | **6.56** | **95.68** | **109.9** |

Source: Authors' calculations from WDI and PovcalNet data

Table 4 shows the estimation of the additional poor and additional poverty as a percentage of the total population for the seven South Asian economies. This is based on the worst-case scenario of a 20% reduction in per capita income of the economies due to pandemic.

**Table 4: Estimation of the additional poor and additional poverty as a percentage of the total population**

| Economies | People living in poverty (% of the population) | | People living in poverty (Millions) | | Additional People living in poverty (% of the population) | | Additional People living in poverty (Millions) | |
|---|---|---|---|---|---|---|---|---|
| | $3.2/day | $5.5/day | $3.2/ day | $5.5/day | $3.2/day | $5.5/day | $3.2/ day | $5.5/day |
| AFG | 54 | | 20 | | 13.11 | | 4.98 | |
| BNG | 52.8 | 84.5 | 86.1 | 137 | 13.4 | 13.9 | 21.8 | 22.6 |
| BHU | 12 | 38.5 | 0.09 | 0.29 | 2.5 | 3.1 | 0.019 | 0.023 |
| IND | 60.4 | 86.8 | 785 | 1128 | 14.1 | 14.7 | 183.3 | 191.1 |
| MLD | 0.51 | 6.6 | 0.003 | 0.03 | 1.2 | 1.31 | 0.006 | 0.007 |
| NEP | 50.8 | 83 | 14.5 | 23.7 | 12.8 | 13.8 | 3.66 | 3.95 |
| PAK | 34.7 | 75.4 | 74.9 | 162 | 6.6 | 12.6 | 14.25 | 27.21 |
| SRL | 10.1 | 40.4 | 2.2 | 8.8 | 2.9 | 7.3 | 0.632 | 1.591 |
| **S.A.** | **33.6** | **72.1** | **962.8** | **1459** | **14.1** | **14.9** | **223.66** | **246.5** |

Source: Authors' calculations from WDI and PovcalNet data

## CONCLUSION

The global pandemic named Covid-19 has been put as unavoidable by many known virologists and renowned virology institutes. The lack of preparation for such an event has exposed many economic weaknesses across the globe. The control of the spread through lockdowns, though the most expensive way, was adopted sooner by all economies. This policy resulted in slower and in some cases negative economic growth. The rise in unemployment is a common factor in all economies be they developing or developed (Valensisi, 2020). Furthermore, Ferreira (2016) stated that it is a rule of thumb that the slowdown of the economy and the rise in unemployment has always generated an increase in poverty and additional poor people in the poor class.

We studied different levels of decrease in the per capita income with two different income thresholds proposed by The World Bank ($3.2/day and $5.5/day). Due to the lack of the availability of data the income threshold of $1.9/day had to be dropped out. Findings of this study can be summarized as 1) Afghanistan, Pakistan, and Sri Lanka are considered to be hit harshly by the Covid-19's economic adversaries 2) at a very lenient measure of 5% decline in per capita income and threshold of $3.2/day, poverty headcount will increase by 3.6% and there will be 68 million additional poor living in South Asia.

We recommend the following for the South Asian economies based on the findings of this study:

1) The world must stop Covid-19 as soon as possible so that its social and economic impacts be minimized. The interconnection of today's modern world made the spread of the covid-19 the fastest in history. Hence, the efforts of each economy are valuable and a unanimous effort in containing the pandemic is inevitable.
2) The ease in the lockdowns are never without costs and must be carried out carefully. The economy versus health is a dilemma for almost all economies around the world in this situation of the global pandemic. Thus, the reopening of the economies is highly dependent on the relevant situations and intensity of the new covid-19 cases.
3) The less risky sectors of production and economic activities can be operationalized sooner given the pandemic situation in the economy. This step will decrease the poverty created due to unemployment due to the lockdowns of the economies in the pandemic scenario. The decline in unemployment will decrease the poverty level caused by covid-19.

4) The governments may plan the social support to the additional poor for the next coming years. A contingency plan, maybe with the help of the international development organizations, need to be carried out. Keeping in mind the time lag of the impacts of the welfare programs, these plans need to be urgently designed and implemented.

We acknowledge some limitations of the study such as:

1) The contractions of 5%, 10%, and 20% are purely intuitive (McKibbin and Fernando, 2020) given that we do not have data on the previous pandemics' impact on the economy in terms of contractions in per capita income of the economies.
2) The social support policies of the economies may have contributed to a lesser increase in poverty in South Asian economies, which this study does not consider.
3) There is a high probability of various channels impact poverty other than Covid-19 which this study neglects for simplicity and to stay specific at the Covid-19's impact on poverty in South Asia.

It is recommended that for future research the limitations may be considered to achieve a clearer picture of the problem.

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