The Impact of COVID-19 on the Rate of Growth in Economic Activity in South Asian Countries

Syed Mohammad Farrukh

Co-Chairman, Institute of Business Economics Research & Academia

aairahtech@gmail.com

Mohammad Najam Khan

Research Scholar, KASBIT, Karachi

Abstract

The research conducted to analyze the impact of COVID-19 pandemic on economic growth of South Asian economies. The research focused on four major south Asian economies includes Pakistan, India, Srilanka and Bangladesh. The COVID-19 is the pandemic for all economies and it has affected the growth, financial and economic conditions of all economies. During the COVID-19 period economic activity has been slow down, due to economic activity unemployment created and inflation has been increased. These Macroeconomic factors affects the position of investors and reduce the investments in financial markets thus this effect the stock market performance and trading has been decreased. The research conducted based on secondary data analysis of 2020 and 2021 monthly data indices taken of COVID-19 and macroeconomic variables of Pakistan, India, Srilanka and Bangladesh. The data analysis performed through E-views 9.5 Software and research analysis performed based on Unit root test, regression analysis and co-integration analysis to evaluate the comparative analysis between economic. The time series data analysis performed for each economy, unit root test analysis shows data is not stationary at level and researcher taken first difference of economic growth of each country to convert data in to stationary data. The regression analysis separately performed on all economies, this is evaluated the COVID-19 has significant impact on economic growth of each economy includes Pakistan, India, Srilanka and Bangladesh, due to COVID-19 the economic growth has been decreased over the period of time. The co-integration analysis performed to evaluate the long term relationship and researcher also found long term relationship of COVID-19 index and economic growth of various economies.

***Key Words**: COVID-19, Economic Growth and South Asian Economies.*

Introduction

The research conducted to analyze the impact of COVID-19 pandemic on economic growth of South Asian economies. The COVID-19 has significant impact of financial markets, financial conditions and macroeconomic variables. The COVID-19 has significant impact of economic growth of country, as business activity reduces and countries unable to complete their export orders. There is Ban on imports from various economic as well due to COVID-19 safety measures and business in all sectors has been affected. In Asian economic like Pakistan and India business has affected in education sector, travel industry, Tourism industry, oil and Gas Sector and manufacturing sector, this put lot of impact of economic growth of country. Due to COVID-19 economic like Bangladesh and Srilanka has affected at large and Srilanka has burden of debts and payments due to affects on business activity.

The COVID-19 is the evident event and pandemic for global economy and Pakistan. The COVID-19 impacts the economy at large and affects all financials and macroeconomic variables. The change in macrocosmic variables affects the financial markets and this affects the firm's performance and trading in stock market returns. The Macroeconomic variables includes Exchange rates, money supply, inflation, interest rates, foreign direct investments, gold prices and so forth are the factors affects the stock market performance. The financial markets market is the place where buying and selling of shares taken places and various organizations offer shares to public for investments. Due to COVID-19 this affects the slowdown in economic activity; the trading has been decreased and thus decreases in stock prices and firm's performance also impacted (Alam, Mohsin, Latif & Zia, 2020).

The Macroeconomic factors affects the financial markets in South Asian economic, there are various risk factors for investment in stock market, the volatility in stock market affects the prices changes and volume of trading. The Stock market in India, Bangladesh and Pakustan has impacted a lot due to COVID-19 affects, this affected by firm performance which is internal factor and there are many external factors affects the financial markets (Ali & Rizvi, 2020).

The Pakistan Stock Market (PSX) now a central market regulate all small exchanges. Previously there were three major stock markets includes Lahore Stock Exchange (LSE) Islamabad Stock Exchange (ISE) and Karachi Stock Exchange (KSE). In 2016 all merged as one Pakistan Stock

Market, which is Karachi Pakistan. In Pakistan Stock market today about 577 listed active companies trading there shares in Market and about Rs. 8.2 billion invested in Stock by corporations. There were 957 companies but many companies are delisted due to regulation or faced losses in trading shares (Iqbal, Sarwat and Sharif, 2020).

KSE-100 is a stock index in the Pakistan Stock Exchange (Pakistan Stock Exchange Limited, 2021), which in turn comprises the Karachi Stock Exchange, Lahore Stock Exchange and Islamabad Stock Exchanges. It measures the performance of 100 companies that offer the largest and the highest market capitalization. Established in 1991, KSE-100 used to have a base of 1,000 points and reached 14,814 points by 26th December 2007. It is the main stock index and serves as a benchmark for comparison of prices on the Pakistani Stock Exchange. (Capital.com, 2021)

COVID-19 impacts on Financial Markets

First witnessed in Wuhan in China in December 2019, the virus began to spread to other parts of the world and was hence termed as a pandemic within two months by the World Health Organization. Named the 'severe acute respiratory coronavirus-2' or 'SARS-CoV-2', the virus claimed the lives of many individuals worldwide and forced the governments to impose strict lockdowns as a measure for containing the virus. Companies and the corporate sector has had to adhere to these protocols and measures as well and many of the small businesses ceased to exist. Pakistan, being a developing country was not able to cope with the sudden impositions and its economy suffered as a result, thereby negatively impacting the stock market as well. Small businesses went into closures while large-scale industries and companies suffered from losses and had to do layoffs as well. With all these issues going on, the stock markets in Pakistan began to decline and suffered from their lowest value on 19 March 2020, which was the lowest reported value in 5 years. Causes of these include the lockdown, the withdrawing of foreign investments and closure of industries (Ramelli, & Wagner, 2020).

COVID-19 is the virus that destroys the entire world and created major impact of business sector. This virus was first detected in Wuhan city of China where health sector had immediately created emergencies for the public. Later the government had created measurements to manage the circumstances but it was out of control because the cases were increasing by transmission. It was declared that this virus could be easily spread and soon 200 other countries started to be infected. Other than this, medical professionals had declared that this virus could not be controlled until people started to avoid contact and stay at home with strict precautions. On

analyzing the situation several countries had started to create strategies to avoid such situations and increase the monitoring and checkups at different sectors (Samad, A. S, 2019).

CVODI-19 Impact of Pakistan Stock Exchange

The Pakistan Stock Market is one Stock Market in Pakistan where all corporations issue the shares of investment and investors are investing for savings and investments. Today the active organizations are 577 companies issuing shares of equity for investors to invest. Pakistan's first stock exchange established on September 18, 1947 named as Karachi Stock Exchange (KSE) with five listed companies and having 37million Pak Rupees. In October 1970, Lahore Stock Exchange (LSE) was created and the third Stock Exchange named as Islamabad Stock Exchange (ISE) which was created in Islamabad in 1989. These three Stock Exchange were functioning as separate entity as profit making organization but due to several conflicts and rises in interest rate all of three stock exchange merged and form a separate entity on January 11, 2016 which is named as Pakistan Stock Exchange (PSX). Moreover, now a days PSX has 577 (five hundred seventy seven) listed companies with market capitalization of 8079.598 billion (PKR). These companies are from various sectors like: banking industry, energy sector, textile organization, fast food industry, and many other. After multiple problems PSX was affirmed as the 5^{th} best performing market in the world in 2016.

Objectives of Research

1. To analyze the impact of COVID-19 economic index on economic growth of Pakistan.
2. To empirically test impact of COVID-19 economic index on economic growth of India.
3. To evaluate the impact of COVID-19 economic index on economic growth of Srilanka?
4. To explicate the impact of COVID-19 economic index on economic growth of Bangladesh?

Hypothesis

H1: There is significant impact of COVID-19 economic index on economic growth of Pakistan.

H2: There is significant impact of COVID-19 economic index on economic growth of India.

H3: There is significant impact of COVID-19 economic index on economic growth of Srilanka.

H4: There is significant impact of COVID-19 economic index on economic growth of Bangladesh.

Literature Review

Overview of Economic growth and Financial Markets

The COVID-19 is the pandemic for all economies and it has affected the growth, financial and economic conditions of all economies. During the COVID-19 period economic activity has been slow down, due to economic activity unemployment created and inflation has been increased. These Macroeconomic factors affects the position of investors and reduce the investments in financial markets thus this effect the stock market performance and trading has been decreased. Stock Market reflect the economic conditions of an economy and have an intense impact on the economy and everyday people. Stocks reflect the ownership interest in the companies and are very important to customers and businesses. Stocks are a significant component of individual portfolios. Businesses use the stock markets to grow capital for their strategic and operational motives. Stock prices affects consumer and as well as business confidence which affects the economy and stock markets (Roberts, 2016).

Pakistan's new economic reality, has been declared an emerging global economy. Two specific factors (i) steady political and macroeconomic sustainability at national level that fuels investor interest and creates an enticing center for domestic and foreign capital (ii) the growth and revolution in the current financial sector. The fundamental shifts in the stock market were remarkable. The investor invested their money in capital markets, but they did not exactly know that what they receive in future. But through studied historical analysis of stock market prices, investors can estimate their future returns and risk of investment (Iqra, Sarika, Samad, & Khatri, 2017).

The Pakistan Stock Market job in monetary development has been develop through past years and its keeps up its situation as the fitting exchanging market south Asia in 2016. The securities exchange returns consistency look into has been led in US and Malaysia, anyway there is no such check in Pakistan Stock Market situation. The specialists in this manner endeavor to lead comparable research, so as to foresee the securities exchange returns, rely upon money related proportions. The financial exchange Returns consistency in conspicuous market is the most advances and testing issue. Securities exchange returns change can be foreseeing through money

related proportions so as to gauge the legitimacy level and danger of speculation by assessing the gainfulness proportions (Aslam, 2014).

The data from KSE-100 from 2019 could be analyze that interprets 2020 March was the month in which the KSE had experienced sudden fall due to lockdown and ceasing the operations (Rida Waheed, 2020). This was the lowest point from past 5 years and within 2 weeks $2Billion was declined from the Karachi Stock Exchange in which companies requires financial assistance from the IMF. As the government had started the strategy of working from home for the departments, KSE had started to recover the loss after April as the operations were strayed that created an opportunity for the KSE to manage the loss. In that case, government had announced the package of $5.66 Billion for the exports to enhance their operations. Later in May and June the operations in several companies listed in KSE had started their operations by achieving the loan from IMF and with the help of package. Moreover, the companies had implemented strict testing and SOPs that ultimately reduce the cases of covid-19 in business sector (Ghayalani, 2020).

Therefore different categories of cases were created that interprets whether the employees are allowed to join the workplace or not. Those who started to developed immunity has to work from home. These strategies assisted KSE to improve their development. After 2 months that us august and September situation started to get normal as the business sector started their operations. Most importantly KSE-100 had achieved the growth in short time due to the package for exporters. This interprets that enhancing trading benefits the Karachi Stock Exchange. Eventually Pakistan Stock Exchange was improved because Karachi considered as the Hub and central from where business sectors could achieve development (Zhang, 2016).

Stock market is the major component of department that interprets that economy of a country. It is further divided into cities where the companies in those stock exchange are listed having higher free float capitalization. For instance Karachi Stock Exchange (KSE-100) has 100 companies having free float capitalization. It was established in 1991 November with 1000 points. As the covid-19 pandemic had created major impact on business sector all over the world. Karachi Stock Exchange had been affected in February 2020 and reaches the lowest point as compared to previous 5 years. However, the government strategies and new package for trading had enhanced the condition of KSE-100. Currently, the condition of KSE-100 is stable (Liu & Shreshtha, 2018).

COVID-19, Macroeconomic Factors and Economic Growth

The researchers analyzed the significant effect on stock market values of shifts in macroeconomic conditions. The relationship linking macroeconomic variables and the Athens stock exchange general index was explored. They used factors such as the exchange rate of inflation, money supply, volume of trade, and stock returns. Monthly data obtained from 1990 to 1999 and evaluated by the granger causality test for all variables. Their test findings found that the short-term inflation rate, money supply and pace of trade had a large effect on Athens stock exchange returns. They also suggest that the exchange rate and stock market returns have had a negative correlation. Their research also found that forecasting stock prices is inadequate since for stock price forecasts, they used knowledge which was readily accessible to public (Hao WANG, 2019).

The research investigated the influence of economic variables on stock market of Malaysia. They were used industrial production, Industrial Production, interest rate and exchange rate as independent variables and Malaysian stock market returns as dependent variables. They applied vector auto regression (VAR) model for analyzing. This model showed that relationship of Malaysian stock index with industrial production, Industrial Production, interest rate and exchange rate was co integrated (Minh, 2020).

(Tri & Vo, 2019), examined the relationship among macroeconomics variables and three big economies such as Unite states (US), Japan and China. In their study they were taken gross domestic product (GDP), Industrial Production, exchange rate and interest rate as dependent variables and stock market exchange returns of US, Japan and China as dependent variable. They applied autoregressive distributive lag (ARDL) co integration model for analyzing. They concluded US was influenced by financial crises of 2007, Japan collapse later 1990 and China was less influenced by financial crises (Roberts, 2016).

The COVID-19 is global pandemic also affects the economic conditions of Pakistan, the COVID-19 has significantly affects the income of people, living standards, cause for unemployment, high inflation and exchange rates in Pakistan. The research conducted based on time series secondary data, of selected variables includes the COVID-19 economic Pakistan economic indices, Exchange rates, inflation and inters rates in Pakistan (Samad, A. S, 2019).

The Economies like US faced the huge unemployed increases to 7m reported ever highest unemployment rate in US. The Business activity reduced and all around the there is only situation of lockdown and even safer investment in Gold and shares are affected. The Stock markets are collapsed including New York Stock Exchange, Nasdaq, Pakistan Stock Exchange, Bombay Stock exchange and so forth (Guo, Kuai, & Liu, 2020).

Exchange Rates

The Change of Pakistan Rupees with US Dollars, amount paid to change the currency based in Internal monetary value. The Study is analyzed inflation, interest rate, industrial production, import and export impact on dependent variable was China's stock market returns. Their results showed that inflation and stock returns are positively related and other factors as interest rate, industrial production, export, imports and inflation are significantly related to stock prices of China's stock exchange (Nawaz, Kashif & Samad, 2017).

They examined the effect of the exchange rate on Malaysian stock market. During crisis time, they examined and introduced the granger non-causality test. The Malaysian currency (Ringgit) depreciated at the time and the US dollar appreciated. Therefore, the effect of the exchange rate on Malaysian stock exchange rates has been substantial (Jaradat, Khrawish, & Saim, 2015).

The stock market returns and the deprecations of money in term of currency. Currency of the country also effect and influences the stock returns. Devaluation of currency is deliberate downward adjustment of the value of the country against another currency. Heinz Harmann (2009) are research in the macroeconomic variable and stock returns. He explains that the reduction can decrease the index of stock in short term and exchange rate is determined the company performance. Ibrahim (2003) are research on macro-economic variable on stock returns. They concluded that the bi-vitiate relationship in macroeconomic variables and stock returns. Bi-vitiate relation means positive and negative both effect in the stock returns. Manish Kumar (2008) investigate the impact of macroeconomic variable (exchange rate) and the stock return. They are collect the daily data of prices through the state bank of Pakistan. He is working on the e-views program and used the unit test and co-integration test to run the long connection of the data. The exchange rate has beneficial for stock returns and has high profitability performance on stock returns. They also explain that interest rate and inflation rate are harmful for stock returns.

Inflation

Inflation is macroeconomic factor affects the financial markets; the change in inflation affects the economy, many researchers in various economies found negative relationship of inflation with economic growth and financial markets. The increase in money supply by central bank increase business activity hence increases in the prices of goods and services. Thus the investors or people look for business activity rather then investing in stock market, this shows the negative impact of stock market performance and stock market returns (Aslam W. , 2014).

The rate of inflation reflected by consumer price index (CPI) which represents the associate degree of upward value movement of product and services. Inflation happens either once costs go up or once it takes extra money to shop for constant things. Researchers think that the rates of inflation can influence the stock exchange volatility and risk. When inflation is predictable people are likely to hold less money. Unanticipated inflation has more harmful impacts on economy as it makes the economy inefficient and also led to redistribution of wealth among traders (Drobyshevsky, 2017).

Researchers think that the rates of inflation can influence the stock exchange volatility and risk. In examining the information of historical result during the time of inflation fluctuation it would provide some clear vision for investors (Fazal & Salam, 2013). Inflation categorized as expected and unexpected and expected rate of inflation rate economists and investors analyze the rate accordingly, when inflation is predictable people are likely to hold less money. The macroeconomic factors and Stock market of India incorporate a portion of the macroeconomic factors like: modern generation, conversion scale, loan cost, were utilized as autonomous variable, and Indian Stock Exchange Market was considered as reliant variable (Padhi and Naik, 2012).

Money Supply

The effect of macroeconomic factors on Pakistan stock market rates, Independent variables like inflation rate, exchange rate, interest rate, gross domestic product (GDP) and primarily money supply were used, and New Zealand stock market rates have been the contingent variable. To evaluate, they utilized causality checks to analyze. The research explored on macroeconomic factors and Stock market of India incorporate a portion of the macroeconomic factors like: modern generation, conversion scale, loan cost, were utilized as autonomous variable, and Indian Stock Exchange Market was considered as reliant variable. Breaking down information from

1994 to 2010, by utilizing vector blunder connection model, reach at a resolution that cash supply and modern creation has positive effect on Indian Stock Exchange. Indian Stock trade is contrarily influenced by swapping scale, expansion, financing cost (Naik & Padhi, 2012).

The specialists in this manner endeavor to lead comparable research, so as to foresee the securities exchange returns, rely upon money related proportions. The financial exchange Returns consistency in conspicuous market is the most advances and testing issue (Fama and French,2014). The securities exchange returns change can be foreseeing through money related proportions so as to gauge the legitimacy level and danger of speculation by assessing the gainfulness proportions (Fama, 2014).

The research analyze and review the relationship of macroeconomics variables and the stock returns. They are suggested that exchange rate has beneficial for stock returns and has high profitability performance on stock returns. They also explain that interest rate and inflation rate are harmful for stock returns (Fazal & Salam, 2013).

Granger, Husang and young's (2008) are also research to the stock market returns and the deprecations of money in term of currency. Currency of the country also effect and influences the stock returns. Devaluation of currency is deliberate downward adjustment of the value of the country against another currency (Ghayalani, 2020).

The research in the macroeconomic variable and stock returns. He explains that the reduction can decrease the index of stock in short term and exchange rate is determined the company performance. Ibrahim (2003) are research on macro-economic variable on stock returns. They concluded that the bi-vitiate relationship in macroeconomic variables and stock returns. Bi-vitiate relation means positive and negative both effect in the stock returns (Yao Qian, 2019).

The relationship between Karachi stock exchange (PSX) and Macroeconomic factors. He used Exchange rate and T-bill as independent variables and PSX returns were taken as dependent variable. By analyzing through co-integration and correlation, he found that inflation and T-bills are indirectly related to PSX (Aroni, 2015).

Research Methodology

The research methodology elaborates the research process, research design, methods of data collection, analysis and sources of data. The research conducted to analyze the impact of COVID-19 impact on economic growth in South Asian Economies includes Pakistan, India,

Srilnka and Bangladesh. The time series data of COVID-19 period 2020 and 2021 collected to perform secondary data analysis and comparative analysis performed for economies.

Population, Sample and Sampling technique

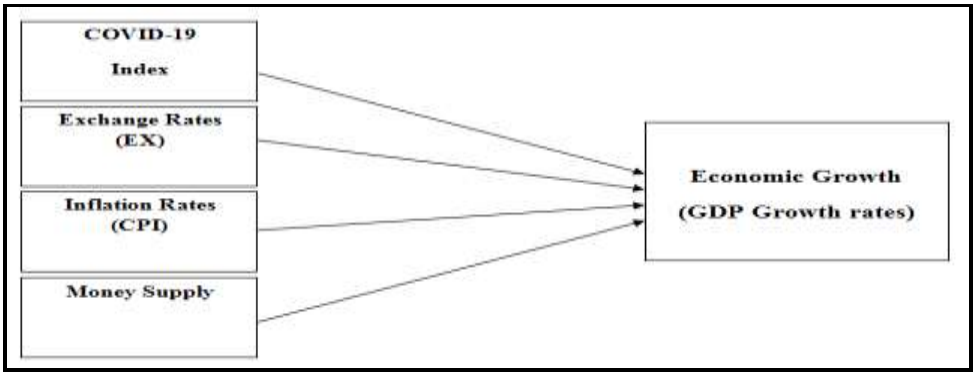
As, this research is based on secondary data sp researcher work upon time series analysis based on available data. The daily data of stock returns and COVID-19 indices take from relevant sources. The research is Quantitative based on time series data. The secondary data analysis performed based on E-views and Econometric models. The data of collected (2 years monthly data indices January 2020 to December 2021. based on time window event of COVID-19 impact on financial markets. The other variables of are the Exchange rates, inflation and interest rates conducted to analyze the impact of variables. The COVID-19 taken as independent variable foe each economy and Economic growth is dependent variable. The other variables include Exchange rates, inflation and money supply as controlled variable in the research.

Research Design

The research conducted in Post Positivism research paradigm and data collected based on daily indices and returns. The Quantitative research conducted based on selected variables and data driven research conducted to analyzed the impact of macroeconomic factors and COVID-19 to analyze the impact on economic growth of south Asian economic includes Pakistan, India, Srilnka and Bangladesh. The research developed the hypothesis and testing of hypothesis is based on secondary data.

Figure 1
Conceptual Framework

Independent Variables (IVs) Dependent Variable (DV)



Source: Adapted: Khan, Elahi, Ullah & Khattak (2020) and Ali, Alam & Rizvi (2020).

The conceptual framework elaborates the relationship of independent and dependent variables. The COVID-19 index, Exchange rates, inflation and money supply are the independent variables and Stock market returns is the dependent variables. The COVID-19 is composite index on change in market indicators, reflects the economic growth, how COVID-19 affects the market growth and economic growth of country, research want to evaluate this change with references to impact of stock market indices. The conducted research to analyze the impact of COVID-19 on stock market returns, COVID-19 is time consideration in which economic growth and macroeconomic variables are affected. Normally all these variables includes Exchange rates, inflation and money supply impacts on economic growth and financial markets, but we consider the time proxy of June and July 2020 which is lock down period and analyze the COVID-19 impact on stock market. The stock market is affected and investor faced the loses as well, this research provides the ground and explanation to researcher how they are doing investment in given time framework of COVID-19.

Data Collection and Analysis

The research conducted based on secondary data and data collected of selected variables includes COVID-19 indices, Exchange rates, Inflation and Stock market return as dependent variable. The monthly data from January 202 to December 2021 has been collected from each economy includes Pakistan, India, Srilnka and Bangladesh. The COVID-19 of each country taken as independent variable and economic growth taken as dependent variable. The data collected from world economic indicators, and every country Central bank and data also confirmed from Business and Economics data by World bank. The Exchange rates, Inflation and Money supply are taken as controlled variables in this research.

The Collected data analyzed based on econometric models, Unit Root test applied to check the stationary of data, the Regression analysis applied to check the impact of variables on economic growth of each country Pakistan, India, Srilnka and Bangladesh, the co-integration applied to check long term relationship of variables.

Empirical Analysis

The research conducted to analyzed the impact of COVID-19 and macroeconomic factors on Stock Market returns. The Time series analysis research conducted based on secondary data analysis and daily data collected from the Pakistan Stock Market, State Bank of Pakistan and Pakistan Bureau of Statistics. The data collected of 2 years monthly frequency from January 2020 to December 2021 of Pakistan, India, Srilnka and Bangladesh during the period of lock down, as this provides the actual concern and analysis and impact of financial investments and trading. The Collected data analyzed through E-views software, time series analysis performed to evaluate the results. The test performed is the Unit root test, Regression analysis, Co-integration models for analysis of variables and its impact of Stock market performance.

Unit Root Test (Stationary Analysis in Data)

Ho = series have no unit root (time series is not stationary)

Table 1

Results of ADF Test

Variable	At Level	Critical value	Decision Ho	At 1st Difference	Critical value	Decision of Hypothesis
E.G(PK)	-0.91	0.61	Do Not Reject	-4.45	0.00	Rejected
COVID-19(PK)	-4.46	0.00	Rejected	-8.10	0.00	Rejected
E.G(IND)	-1.14	0.67	Do Not Reject	-4.14	0.00	Rejected
COVID-19(INDR)	-4.16	0.002	Rejected	-8.14	0.00	Rejected
E.G(SRL)	-1.14	0.66	Do Not Reject	-4.40	0.00	Rejected
COVID-19(SRL)	-4.46	0.00	Rejected	-8.14	0.00	Rejected
E.G(BNG)	-0.97	0.44	Do Not Reject	-4.46	0.00	Rejected
COVID-19(BNG)	-4.14	0.002	Rejected	-8.16	0.00	Rejected

The above table shows the results of Stationarity test, based on ADF to check the volatility unit root in the data. The data is timer series cheeked the Stationary of data; data is stationary at 1st difference as tested through ADF (augmented Dickey Fuller test). The table shows the values at Level are significant to reject null hypothesis. Hence there is unit root in the data and through first difference ADF tests applied to convert in to normal Stationary Data.

Justification of results of ADF test

The results elaborates the data is volatile and not normally distributed hence we can say there is unit root in the data testing at level. The results of ADF Shows that at 95% confidence interval the value should be greater than 2.88 to reject to the null hypothesis and researcher can say there is No unit root in data at series or level. But all the variables values are less than 2.88 and probability also not less than 0.05, this shows there is unit root in the series and researcher applied first difference to remove the unit root in the data. After applying first difference he the values are greater than 2.88 and probability is less than 2.88 this shows there is not unit root in the data and not data is normally distributed and all the hypothesis are rejected their in not unit root in the data.

The results of Unit root test shows the COVID-19 indices of each country is stationary at level and economic growth of each country is non Stationarity, hence the first difference applied. The first difference applied to convert them to normally distributed data and data is converted to stationary data at first difference. The data is reliable and valid for applying regression and co-integration analysis.

Regression Analysis

Table 2

Regression Analysis (COVID-19 on Economic Growth in Pakistan)

Dependent Variable: Economic Growth in Pakistan				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.440361	0.162529	33.47320	0.0000
COVID_19_INDEX_PK_	0.006768	0.308579	2.121931	0.0027
R-squared	0.700022	Mean dependent var		5.440000
Adjusted R-squared	-0.045432	S.D. dependent var		0.774731
S.E. of regression	0.792135	Akaike info criterion		2.451484
Sum squared resid	13.80450	Schwarz criterion		2.549656
Log likelihood	-27.41781	Hannan-Quinn criter.		2.477529
F-statistic	2.000481	Durbin-Watson stat		0.408189
Prob. (F-statistic)	0.0002			

The above table shows the results of regression analysis. The output processed through E-views. The regression analysis applied to analyze the impact of various factors on stock market returns in the COVID-19 outbreak. The regression model results shows that the COVID-19 has

significant impact on economic growth as t statistics value is 2.12 and probability is less than 0.00. This show COVID-19 has impacted the economic growth in Pakistan and economic growth has been reduced to COVID-19 pandemic. The R square shows the value 0.7 which is also satisfactory the model has 70% explanatory power.

Table 3

Regression Analysis (COVID-19 on Economic Growth in India)

Dependent Variable: Economic Growth in India				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.581155	0.183053	30.48933	0.0000
COVID_19_INDEX_IND_	0.047337	0.278037	3.170253	0.004
R-squared	0.60013	Mean dependent var		5.578000
Adjusted R-squared	0.44079	S.D. dependent var		0.873128
S.E. of regression	0.892164	Akaike info criterion		2.689321
Sum squared resid	17.51104	Schwarz criterion		2.787493
Log likelihood	30.27186	Hannan-Quinn criter.		2.715366
F-statistic	3.028986	Durbin-Watson stat		0.394022
Prob. (F-statistic)	0.003			

The above table shows the results of regression analysis. The output processed through E-views. The regression analysis applied to analyze the impact of various factors on stock market returns in the COVID-19 outbreak. The regression model results shows that the COVID-19 has significant impact on economic growth in India as t statistics value is 3.17 which is greater than 2.0 and probability is less than 0.00. This show COVID-19 has impacted the economic growth in India and economic growth has been reduced to COVID-19 pandemic. The R square shows the value 0.60013 which is also satisfactory the model has 60% explanatory power.

Table 4

Regression Analysis (COVID-19 on Economic Growth in Srilanka)

Dependent Variable: Economic Growth in Srilanka				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.185866	0.137290	30.48933	0.0000
COVID-19 Index (SRL)	0.013868	0.081456	2.170253	0.046
R-squared	0.316	Mean dependent var		4.183500
Adjusted R-squared	-0.044079	S.D. dependent var		0.654846
S.E. of regression	0.669123	Akaike info criterion		2.113957
Sum squared resid	9.849960	Schwarz criterion		2.212128
Log likelihood	-23.36749	Hannan-Quinn criter.		2.140002
F-statistic	2.028986	Durbin-Watson stat		0.394022
Prob. (F-statistic)	0.000000			

The above table shows the results of regression analysis. The output processed through E-views. The regression analysis applied to analyze the impact of various factors on stock market returns in the COVID-19 outbreak. The regression model results shows that the COVID-19 has significant impact on economic growth in Srilanka as t statistics value is 2.17 which is greater than 2.0 and probability is less than 0046. This show COVID-19 has impacted the economic growth in Srilanka and economic growth has been reduced to COVID-19 pandemic. The R square shows the value 0.316 which is also satisfactory the model has 30% explanatory power.

Table 5

Regression Analysis (COVID-19 on Economic Growth in Bangladesh)

Dependent Variable: Economic Growth in Bangladesh				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.800451	0.203161	33.47320	0.0000
COVID_19_INDEX_BN_	0.005640	0.257149	4.21931	0.0027
R-squared	0.710022	Mean dependent var		6.800000
Adjusted R-squared	0.45432	S.D. dependent var		0.968414
S.E. of regression	0.990168	Akaike info criterion		2.897772
Sum squared resid	21.56953	Schwarz criterion		2.995943
Log likelihood	32.77326	Hannan-Quinn criter.		2.923816
F-statistic	6.200481	Durbin-Watson stat		0.408189
Prob. (F-statistic)	0.00201			

The above table shows the results of regression analysis. The output processed through E-views. The regression analysis applied to analyze the impact of various factors on stock market returns in the COVID-19 outbreak. The regression model results shows that the COVID-19 has significant impact on economic growth in Bangladesh as t statistics value is 4.21 which is greater than 2.0 and probability is less than 0.0027 which is less than 0.00. This show COVID-19 has impacted the economic growth in Bangladesh and economic growth has been reduced to COVID-19 pandemic. The R square shows the value 0.710 which is also satisfactory the model has 71% explanatory power.

Co-integration Analysis

Table 6

Co-integration Test results

Hypothesized		Trace	0.05	
No. of CE(s)	Eigen value	Statistic	Critical Value	Prob.**
None *	0.608832	118.6941	69.81889	0.0000
At most 1 * (PK)	0.545917	72.70184	47.85613	0.0001
At most 1 * (IND)	0.392122	34.01756	29.79707	0.0154
At most 1 * (SRL)	0.127444	9.626301	15.49471	0.0310
At most 1 * (BNG)	0.058355	2.946201	3.841466	0.0061

The above table shows the results of co-integration analysis; the co-integration shows the long term relationship of factors with stock market performance. All variables includes COVID-19, are taken on first difference hence the report shows results at most one, the value of probability is 0.00 at first difference this shows the COVID-19 and macroeconomic factors are significant factors that's has impact on economic growth of south Asian Economies.

Summary and Conclusion

Summary

The COVID-19 is the pandemic for all economies and it has affected the growth, financial and economic conditions of all economies. During the COVID-19 period economic activity has been slow down, due to economic activity unemployment created and inflation has been increased. These Macroeconomic factors affects the position of investors and reduce the investments in financial markets thus this effect the stock market performance and trading has been decreased. The research conducted based on secondary data analysis of 2020 and 2021 monthly data indices taken of COVID-19 and macroeconomic variables of Pakistan, India, Srilanka and Bangladesh. The data analysis performed through E-views 9.5 Software and research analysis performed based on Unit root test, regression analysis and co-integration analysis to evaluate the comparative analysis between economic. Due to COVID-19 lock down was imposed and economic activity become slow down thus affects the money circulation, export orders and has impact of inflation, income of people, and overall growth of economy in Pakistan. The research conducted based on time series data of factors includes COVID-19, Exchange rates, inflation, interest rates on Stock returns in Pakistan. The regression analysis separately performed on all economies, this is evaluated the COVID-19 has significant impact on economic growth of each economy includes Pakistan, India, Srilanka and Bangladesh, due to COVID-19 the economic growth has been decreased over the period of time. The co-integration analysis performed to evaluate the long term relationship and researcher also found long term relationship of COVID-19 index and economic growth of various economies.

Conclusion

The COVID-19 has significant impact of financial markets, financial conditions and macroeconomic variables. The COVID-19 has significant impact of economic growth of country, as business activity reduces and countries unable to complete their export orders. There is Ban on imports from various economic as well due to COVID-19 safety measures and business in all sectors has been affected. In Asian economic like Pakistan and India business has affected in education sector, travel industry, Tourism industry, oil and Gas Sector and manufacturing sector, this put lot of impact of economic growth of country. Due to COVID-19 economic like Bangladesh and Srilanka has affected at large and Srilanka has burden of debts

and payments due to affects on business activity. The research conducted based on secondary data and data collected of selected variables includes COVID-19 indices, Exchange rates, Inflation and Stock market return as dependent variable. The monthly data from January 202 to December 2021 has been collected from each economy includes Pakistan, India, Srilnka and Bangladesh. The COVID-19 of each country taken as independent variable and economic growth taken as dependent variable. The data collected from world economic indicators, and every country Central bank and data also confirmed from Business and Economics data by World bank. The Exchange rates, Inflation and Money supply are taken as controlled variables in this research. . The regression analysis separately performed on all economies, this is evaluated the COVID-19 has significant impact on economic growth of each economy includes Pakistan, India, Srilanka and Bangladesh, due to COVID-19 the economic growth has been decreased over the period of time. The co-integration analysis performed to evaluate the long term relationship and researcher also found long term relationship of COVID-19 index and economic growth of various economies.

Summary of Findings

The Unit Root Test results indicate that the COVID-19 indices in each country are stationary, and their economic growth is non-stationar. The first difference applied to convert them to normally distributed data is 0.7, indicating a reliable and valid data for regression and co-integration analysis. The regression model results show a significant impact on economic growth in Pakistan, India, Sri Lanka, and Bangladesh. The R square value of 0.7 is satisfactory, with 70% explanatory power. The model also shows a significant impact on Sri Lanka, Bangladesh, and South Asia, with a probability of 0.00 at the first difference. These findings suggest that COVID-19 and macroeconomic factors are significant factors affecting the economic growth of South Asian economies.

Recommendations

The COVID-19 has significant impact of economic growth of South Asian Economic. The research analyzed the COVID-19 index has decline the economic growth of Pakistan, India, Srilanka and Bangladesh.

- The investor must consider the financial markets conditions at times of pandemic and does not and reduce trading in the period of pandemic and Financial crisis and when there is inflation in market investor need to reduce the investment and trading in financial markets.
- The research analyzed the COVID-19 has significant impact of financial markets and investors need to consider the market situation and analyze the market accordingly that needs to changed and analyzed with context of investments.
- The Exchange rates, Money supply and COVID-19 index all has significant relationship with Stock market returns in long run based on co-integration approach.

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