



COMPARATIVE ASSESSMENT OF ECONOMIC GROWTH OF PAKISTAN DURING COVID 19

Sarwat Sohail¹, Saima Shahzad Mirza², Muhammad Sohail³, Shahid Aslam Mirza⁴

E-Mail Id: ss.sarwatsohail@gmail.com

¹Department of Management Science, Virtual University of Pakistan, Lahore

²Microbiology laboratory, Department of Energy System Engineering, Punjab Bioenergy Institute, University of Agriculture, Faisalabad, Pakistan

³Department of Management Science, Shaheed Zulfiqar Ali Bhutto Institute of Science & Technology, Dubai

⁴Department of Computer Science, Virtual University of Pakistan, Lahore

Abstract- A novel pandemic of COVID-19 is the biggest crisis for the whole world after the Second World War. This Covid-19 created potential risk not only for the health of the people, but also for the global economy. Now a days Covid-19 became the global issue and became the reason of destruction of the global economy. This pandemic has affected not only the human life, but also the economy of all the countries so badly and caused the global economic recession. This pandemic affected the all aspects of our life. It has been disturbed the overall economy of countries, with this it also affected the social life of people.

The purposes of this review article to discuss the impact of Covid-19 on the global economy as well as on different industries like production industries, services industries, financial markets and how it affected the oil prices at the global level. This study also aims to discuss how Covid-19 has affected the economy of Pakistan. Covid-19 has turned the world upside down and also changed our way of life. It has been affected all sectors of any economy. Covid-19 affected the businesses and creates unemployment, which is the most alarming thing for the economy. It affected the production sector, the services sector, health, education, travel and financial market. This is the review article that concisely discusses the recent reports and discussion about this pandemic and tries to make some implications according to these reports and discussions.

Keywords- Covid-19, Economic Growth, Economy, Pakistan, Pandemic.

Classification Codes- E2, E240, I15, F630, O1, O530,

1. INTRODUCTION

A pandemic is an outbreak of disease that can spread between countries and continents and affect lots of people. Outbreak of any pandemic change the whole world tremendously by shrinking the global economy also has an effect on political and social life. It results in tragic loss of human lives and put immense pressure on the global economy. Although, it is difficult to determine the exact impact of pandemics on the economy but the economic risk associated with these pandemics is not trifling and the effect of pandemics on the economy are inevitable. The vast spread of disease can destroy the societies and no country remain unaffected. The highly globalized world can lose the trade opportunities as a result of pandemic, supply chain industry also affected by the pandemics.

Pandemics left a severe effect on countries economy and countries face many hurdles to bring them back to a normal situation. Many countries face recession and their economic structure collapse due to the uncertainty of the pandemics. Pandemics affect the consumer confidence and consumer spending behavior which reduce the demand, pandemics also shatter the investor confidence both demand and supply side affect the economy in the long run which ultimately disturb the GDP. Due to depressed economic activities foreign direct investment also negatively affected. Closure of businesses and less economic activates become the reason of the inflation curve to be flattened, increase unemployment and lead the economy toward recession. Due to pandemics every country affected because no one knows how the pandemic fall, what are the impact of a pandemic, and tell when it lasts. In human history there are significant record of pandemics which effect the social and economic life so badly. In the last two centuries there are four pandemics in human life which has influence on the life of a human being.

First one was Spanish Flu which was originated from China in 1918-1920 and spread in Europe, America and Asia. Spanish Flu was considered as deadliest pandemic in modern history. This pandemic infected 500 million people and killed estimated 20 million people worldwide [1]. In 1918 during Spanish Flu pandemic world economy affected adversely and that pandemic cost global economy \$800 billion [2]. After ended the World War I the world economy already face crisis, the outbreak of this pandemic cause many businesses to close and killed many people, which ultimately reduced the workforce [3]. Due to this pandemic, world economy faced recession, which led to increase the poverty rate significantly, capital return also adversely affected by this pandemic and GDP fell down from 6% to 8% world widely during 1919 [4] [5].



Asian flu 1957-1958 was the second significant outbreak, which killed 1 to 4 million people worldwide [6]. Firstly, it was originated from China and then spread it in Singapore, Hong Kong, US and Europe. Asian flu has strong global economic impact and reduce the global GDP by \$33 billion. This pandemic shake the confidence of investors and losses in business force to close the business. Imports, exports and service industries face significantly reduce in demand, reduce in human and physical capital and significantly drop in investment [7].

The outbreak of Hong Kong Flu was originated from China in 1968 and within a few months it spread in USA, UK, Australia, Japan, Africa, Eastern Europe and Central and South America [8]. This pandemic infected greater number of people and killed 1 to 4 million people globally. Due to this pandemic world economy face recession due to unavailability of labor and less demand & supply which ultimately lead global GDP fall to 0.7%.

The swine flu appeared in 2009 in Mexico and spread more than 200 countries including Pakistan. This pandemic infected hundreds of millions of people [9], estimated rate of death due to this pandemic was between 1,50,000 to 5,75,000 [10]. During 2009 global economy dropped, share market, tourism, transportation industries went down because of shaking the confidence of consumer. The estimated economic losses in affected countries due to this pandemic was 0.5% to 0.15% of GDP.

After multiple breakout throughout 20th century swine flu was first pandemic that reached in Pakistan on August 10, 2009 when the first case is confirmed in Pakistan by Ministry of Health [11]. Number of cases of swine flu have been increased in the province of Punjab and Federal Areas. In 2014 there were 10 cases of swine flu in different cities of Pakistan and 5 deaths, recently on February 11, 2020 there were 129 cases of swine flu in all over Pakistan [12]. Statistics of swine flu show that the impact of this pandemics is lowest in Pakistan as compared to whole world [13], that's why the economy of Pakistan id not much affected during this pandemic. But the recent pandemic of COVID 19 has influenced the economy of the whole world as well as Pakistan.

Coronavirus is a new strain from the large family of Coronaviruses (CoVs) that cause symptoms ranging from mild Middle East Respiratory Syndrome (MERS- CoV) to severe illness Sever Acute Respiratory Syndrome (SARS- CoV) [14]. Due to the COVID-19 severity and rapidly spread worldwide World Health Organization (WHO) declared it as pandemic on March 11, 2020. According to WHO data as of June 25, 2020 there are more than 9 million people infected with this disease and more than 477 thousand people died all over the world [15]. CoVID-19 has dramatically changed the life, it did not create health issues, but also disturbed all aspects of life. COVID-19 has changed the ways how people learn, work and play, schools are closed, events have been cancelled and people are forced to work from home. This pandemic intensely affect the global economy and has become one of the biggest threat to financial markets and global economy.

2. GLOBAL ECONOMIC IMPACT OF CORONAVIRUS

2.1 Decay in World Gross Domestic Product

The shock of COVID-19 is more severe and speedy, as the growth of global economy fell down from 6.3% to -3% [16]. This massive declining trend in growth of global economy happened from January 2020, a very short period of time. That's why this Great Lockdown is considered to be much worse than Global Financial Crisis 2008 and the Great Depression. Many businesses around the globe are forced to reduce the operation or going to be close, a lot of people are expecting to lose their jobs. Manufacturing companies are also affected by COVID-19 as consumers' loss their confidence and stop buying which reduced demand and production also decreased. Services industries which are the main sources of economic growth in many countries also affect badly. These crises that has affected the global economy by the amount of \$ 9 trillion, which cause a sudden recession in many countries. In 2019 the world's real Gross Domestic Product (GDP) was 2.9%, it is forecasted that in 2020 the global real Gross Domestic Product (GDP) will be 2.5% after decreasing by 0.5% as compared to 2019 [17]. Due to this great recession, many emerging and developing economies will face a decline in per capita income at the end of 2020. Low per capita income means a decline in demands and demand created jobs which leads to create poverty in countries, so this pandemic could cause globally 60 million people to live under poverty line [18].

This year due to COVID-19 the US economy expected to fall by 7.3% and the European Union's economy is expected to shrink by 8.6% [19]. All businesses are closed which shows the declining trend in economic growth and disturb the job market all over the world.

Gross Domestic Product plays a very vital role for economic development, it measures the market value of all goods and services produced in a country in a year. By comparing the year wise GDP of a country tells that how well the economy is performing, whether the economy is growing or experiencing recession. Based on last year's performance it is estimated that world economic growth in 2020 will be 3%, but due to COVID-19 all over the world economic activities goes down and global GDP estimation, fall at -4.9 which is 1.9 lower than estimated GDP based on previous trend of 2019. COVID-19 has more negative impact on economic growth of all countries as compare to estimation. The GDP of all developed, emerging and developing countries is affected by this pandemic.

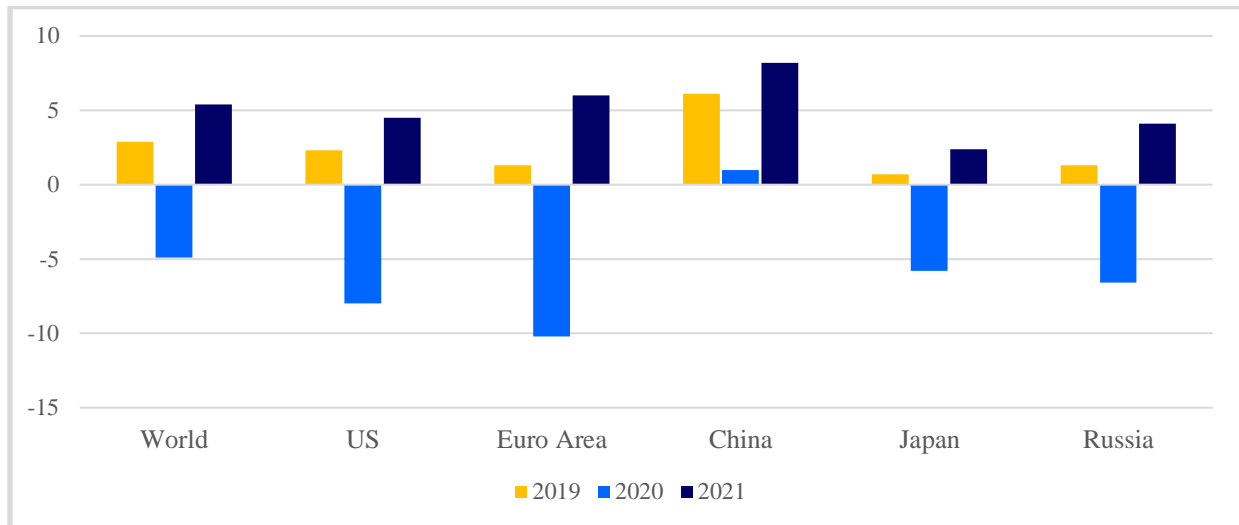


Fig. 2.1 World Economic Growth Projections [20]

As the coronavirus pandemic emerges in the whole world, the Government takes precautionary measure to control the outbreak, the economic activities in all over the world goes down, which contract the GDP in all countries' very badly in the first quarter of 2020. In Fig. 2.1 the GDP growth rate of all countries went in negative in 2020 as compared to last year and it is also projection that the GDP growth rate become positive in 2021. Outbreak of this pandemic started from China so Chinese economy suffers a lot. This emerging and developing country of Asia is the main manufacturing and exporting hub of the world. Manufacturing, exporting and services are the main contributor to GDP growth in China, but the outbreak of COVID-19 pandemic badly effected these sectors in China there is divesting change in GDP of China in the first quarter of 2020 which is -9.8 as compared to 2019 fourth quarter's GDP 1.5 as shown in the Table 2.1, but in quarter 2 of 2020 GDP of China recovered a lot and reached at 11.7% while other countries suffered in second quarter of 2020 because of pandemic.

Table-2.1 Quarterly GDP of Different Countries [21]

	2019	2020	
	Q4	Q1	Q2
US	0.5	-1.3	-9
Euro Area	0.1	-3.6	-11.7
China	1.5	-9.8	11.7
Japan	-1.9	-0.6	-8.3
Russia	-0.3	-0.5	-2.8

In the first quarter of 2020 the change in GDP of US economy is less dramatic because the stay at home measure in many states was introduced in late March which affect the economy less till first quarter as compared to 2019 fourth quarter. The US economy dropped down by -1.3 in the first quarter of 2020 as compared to previous quarter, which was 0.5. GDP and in second quarter it went down more and reached at -9%. GDP of Euro Area is shrinking by -3.6 in the first quarter of 2020 and -11.7% in second quarter of 2020 due to this pandemic while the growth of GDP in Euro Area was in last quarter of 2019 was 0.1. The precautionary measures in Japan was not strict, the contraction of GDP in first quarter of 2020 was -0.6 as compared to previous quarter -1.9. Russia is the emerging country of Europe whose economic activities are less effected during first quarter of 2020 and there is little bit down in GDP in first quarter as compared to previous year quarter of 2019.

2.2 Increase in Unemployment Rate

Coronavirus pandemic, after its emergence slow down the economic activities and restrictions on daily life led to closure of many businesses and cause of permanent and temporary lay off staff which has affected the job market of developed and developing countries. There is no denying that the pandemic is bringing out the intense change in the job market of all over the world. Outbreak of COVID-19 pandemic, many people has been filed for unemployment benefit over the last six weeks mainly in the US. Many people left without work due to this pandemic, 30 million in

the US and 1.76 million in Japan [22]. Fig. 2.2 shows that the pandemic hit the US most in respect of unemployment rate.

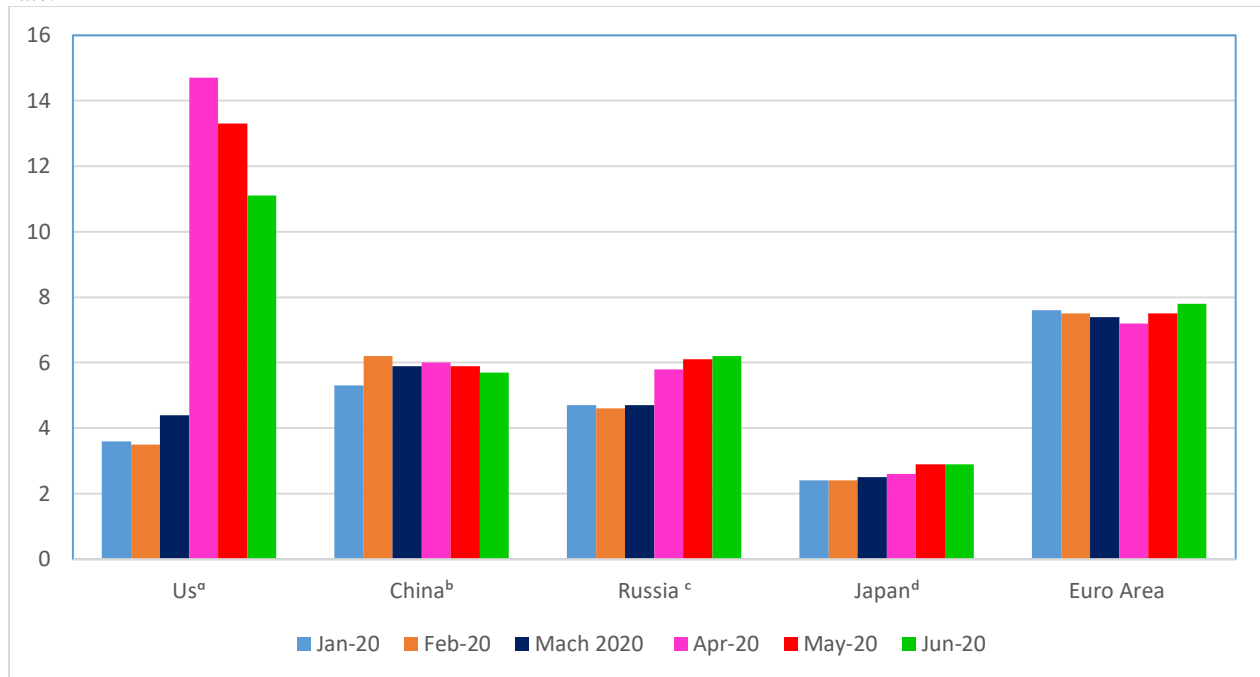


Fig. 2.2 Monthly Unemployment Rate Of Different Countries In %Age [23] [24] [25] [26] [27]

This coronavirus start spreading rapidly in the US and measures is taken in March 2020 which affect the businesses and the unemployment rate increased in the US in March very rapidly and it increased from 4.4% march 2020 to 14.7% in April 2020. This is the highest level of unemployment rate in the US since the World War II. The world second economy, China is recovering from economic shocks due to coronavirus, but the unemployment rate in China still historically high. In April 2020 the unemployment rate in China was 6%, which is high from March 2020 and April 2020. Because of coronavirus in Russia rate of unemployment is continuously increasing, which was 4.7% in March 2020 and in month of June this rate was 6.2%. Almost 1 million people registered for unemployment benefit in Russian since the outbreak of coronavirus pandemic. In Japan jobs of part time workers and temporary workers' jobs have been affected due to COVID-19 as compared to previous years. In early April the economic activities slow down which has impacted the job market in Japan and the unemployment rate increased from 2.6% to 2.9% in May 2020 and June 2020. In Euro Area the unemployment rate is highest 7.8% in June 2020. Across single currency region the restriction due to COVID-19 is imposed in April 2020 which has affected the job market in the Euro Area and the unemployment rate jumped from 7.2% in March 2020 to 7.8% in June 2020 [28].

2.3 Slowdown in Manufacturing Activities

Manufacturing is an important sector of the economy and it has major contribution in the global GDP that why government around the world, mostly emphasis on the manufacturing sector to boost the economy. But the outbreak of COVID-19 has affected the manufacturing sector negatively and shut down the factories and businesses all around the world. The producers of the automobiles, chemicals. Electronics and aircrafts are affected badly due to COVID-19 in because the raw material is not available for production. Due to the pandemic of COVID-19 the global manufacturing output growth decline sharply to 6% during the first quarter of 2020 and this is the first decline after the financial crisis of 2009. Because of this global outbreak of COVID-19 all countries closed their economic activities from March 2020, expect some countries, including China going into lockdown early.

The manufacturing industries in China are mostly affected by this pandemic (January and February) because of low productions and the closure of factories. Since the outbreak of COVID-19 in China in December 2019 China follows the lockdown and the closure of all business and economic activities from January 2020 the manufacturing industry show downward trend with -15.7% till March 2020 when China ease the restriction and business become operational. COVID-19 affected the global production industry negatively because of slowdown in economic activities and closure of business. Coronavirus caused severe damage to economic activities in the region of the Euro area, business activities goes record low in the month of April because of unavailability of raw material and labor that hit the manufacturing sector by -30.40% in the Euro area. Since the spread of Coronavirus the condition of economic activities going worse in Japan in late March. The performance of manufacturing sector negatively affected due to factories shut down and lower demand for products mostly affect the manufacturing industry of Japan as shown in Fig. 2.3.

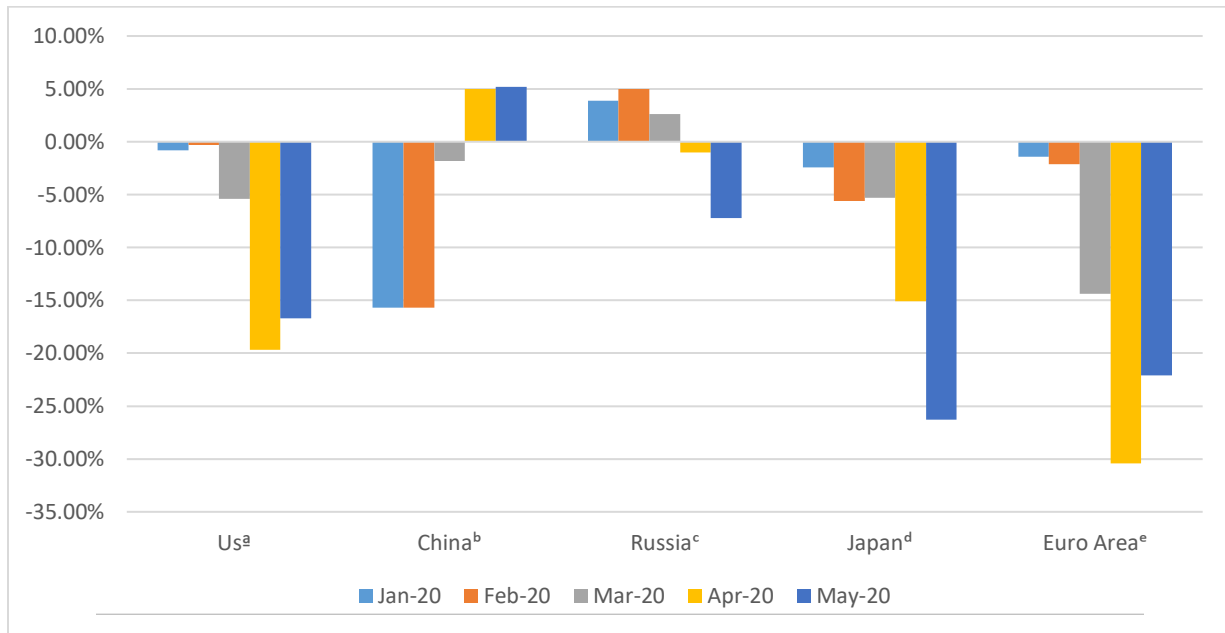


Fig. 2.3 January - May Performance Of Manufacturing Industries Of Different Countries [29] [30] [31] [32] [33]

2.4 Contraction in Services Activities

The service sector is considered to be an important part of the economy, the expansion of services sector connected with the development of secondary sector. The role of the service sector in the growth and development of countries and the global economy is not ignorable. The service sector is a major source of development and employment in many countries. This pandemic of coronavirus not only affect the other sectors but heavily disturb the service sector too, as compare to the other economic crisis. The pandemic has affected the key service sector like tourism, hospitality and retail. Purchasing Manager Index (PMI) is the index that measure the prevailing economic trend in manufacturing and services sectors, whether the market conditions are expanding, same or contracting. One year data of PMI of the world shows that the till December 2019 the PMI was at 52.23 points and record low at 26.50 points in April 2020 due to COVID-19 and after April it is showing an upward trend as shown in Table 2.2.

Table-2.2 PMI-Services of Different Countries [34] [35] [36] [37] [38]

	Jan-2020	Feb-2020	March-2020	April-2020	May-2020	June-2020
US ^a	53.4	49.4	39.8	26.7	37.5	47.9
Euro Area ^b	52.5	52.6	26.4	12	30.5	48.3
China ^c	51.8	26.5	43	44.4	55	58.4
Japan ^d	51	46.8	33.8	21.5	26.5	45
Russia ^e	54.1	52	37.1	12.2	35.9	47.8

The global outbreak of COVID-19 hit the global economy in the month of March and service activities fell at a great extent. The month on month fall in PMI from January 2020 till April 2020 shows the steepest fall in services activities. The pandemic of COVID-19 hit the service activities globally due to restrictions imposed by the government of lockdown and social distance. Businesses of real estate, tourism, travel and transportation hit mostly due to this pandemic even though restrictions lifted by government, consumers will not show confidence and will hold back in placing an order due to COVID-19 and global economic uncertainty.

2.5 Decline in Oil Price

Oil is considered as the lifeblood for developing nations and most important sources of energy. Oil has most dominated role as an energy source in the global market. The prices of oil are determined on the basis of global demand and supply. Since the outbreak of coronavirus the price of oil at a global level is effected due to decreasing demand for oil. China is the main importer of crude oil, but because of the coronavirus outbreak in China the demand for crude

oil is dropped down by 20% of total consumption, as coronavirus squeeze the economy. This huge decline in demand of oil and a slump in oil prices is the biggest shock for oil exporting countries as compare to the event of 9 11 and Financial crisis of 2009. Government of all countries imposed limitations on business activities to limit the spread of coronavirus as a result of these limitation business are closed and this limitation affects the transportation and tourism industries. The limitations on all types of business bring recession in the economy. Due to lock down, business closure, logistic and transportation restrictions the demand for oil price became low and this low demand effect the prices of oil, which create trouble for oil exporting countries, but did not generate much benefit of oil importing countries because of the lock down and restrictions.

The price of WTI (West Texas Intermediate) and Brent Blend use as the reference price for the buyer and seller of crude oil. In Fig. 2.4. The oil price of WTI at its lowest price \$20.09 per barrel in the month of March 2020 and on April 2020 at \$-37.63 per barrel, oil prices have negative value in April 2020 for a short period of time. The price of Brent Blend crude oil also shows downward trend in the month of April 2020 with \$20.46 per barrel. OPEC basket is at its lowest price of \$ 12.41 per barrel in the month of April 2020. OPEC basket is also used as reference prices, it is the weighted average of oil price from different oil exporting countries of OPEC members.

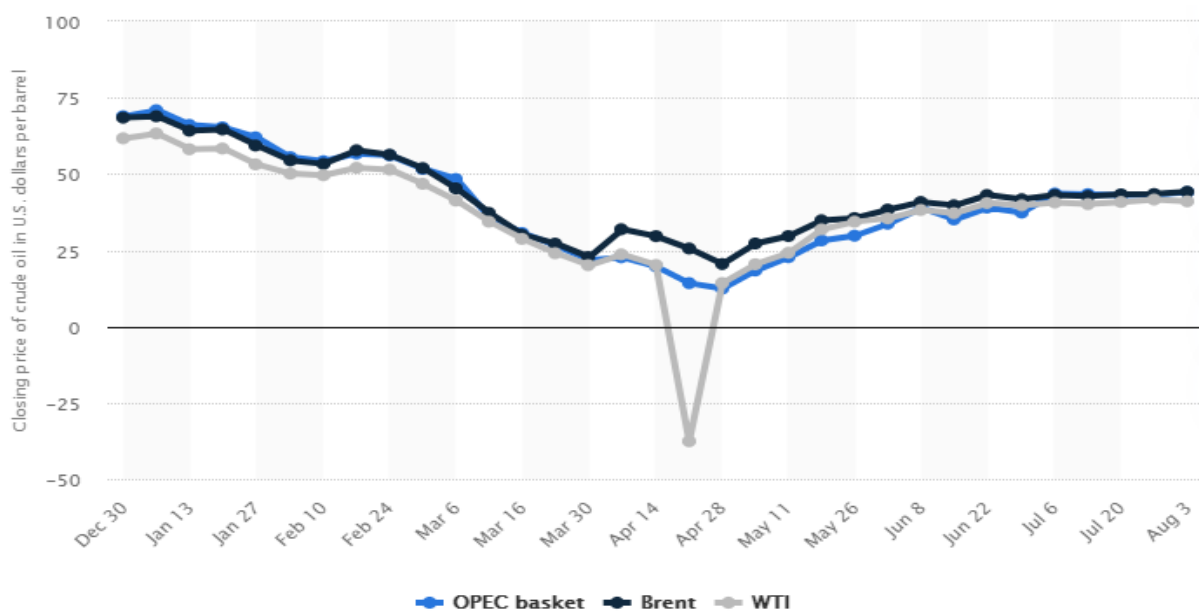


Fig. 2.4 Oil Prices in US Dollar/ Barrel [39]

2.6 Sell Off in Stock Market

Sell off stock market means in a short period of time large volume of securities are sold, which become the reason of the falling price of stocks. Usually, this happened due to law of the demand and supply or due to natural disaster. Outbreak of COVID-19 severely affected the financial market and shake the confidence of the investors and traders. Since the outbreak of COVID-19 till February 2020 the investors were confident about their investment and thought that COVID-19 will not harm their investment, but when the number of cases became rise and initial estimation began dwindle. Due to this fear that this pandemic will destroy the economic growth and financial market will face significant loss, the traders decided to sell their stocks and investors have been frightened from buying stocks.

Four different stock exchanges: US (NASDAQ 100), Europe (STOXX Europe 600), Asian stock exchange (Shanghai Composite Stock Market Index and Nikkei 225 Stock Market Index) showed in this Figure 5. All four stock markets were declining in the month of March 2020, when the COVID-19 began to spread globally and restrictions, lock down were imposed, businesses have been stopped which cause the economic recession, then the value of share price of different companies began to drop which affect the stock market. As the coronavirus pandemic hit the European countries most so the European stock exchange STOXX Europe 600 experienced the drastic fall of 20% from a peak in this year. The US stock exchange NASDAQ 100 went down 12.3%, the NASDAQ 100 stock exchange did not crash so badly, while an Asian stock exchange (Japan Nikkei 225 Stock Market Index) also fell down by 5.1%. According to 16 March, 2020 report the benchmark Index of China, Shanghai Composite Stock Market was declined by 2.53% since the outbreak of COVID-19 in China [40]. The reason of why Chinese market stands at that point while the global stock market is shaking, because after reporting the first case of coronavirus Chinese Government took strict actions and many measures to stop the spreading of pandemic and place Wuhan the epicenter of pandemic under complete lockdown.

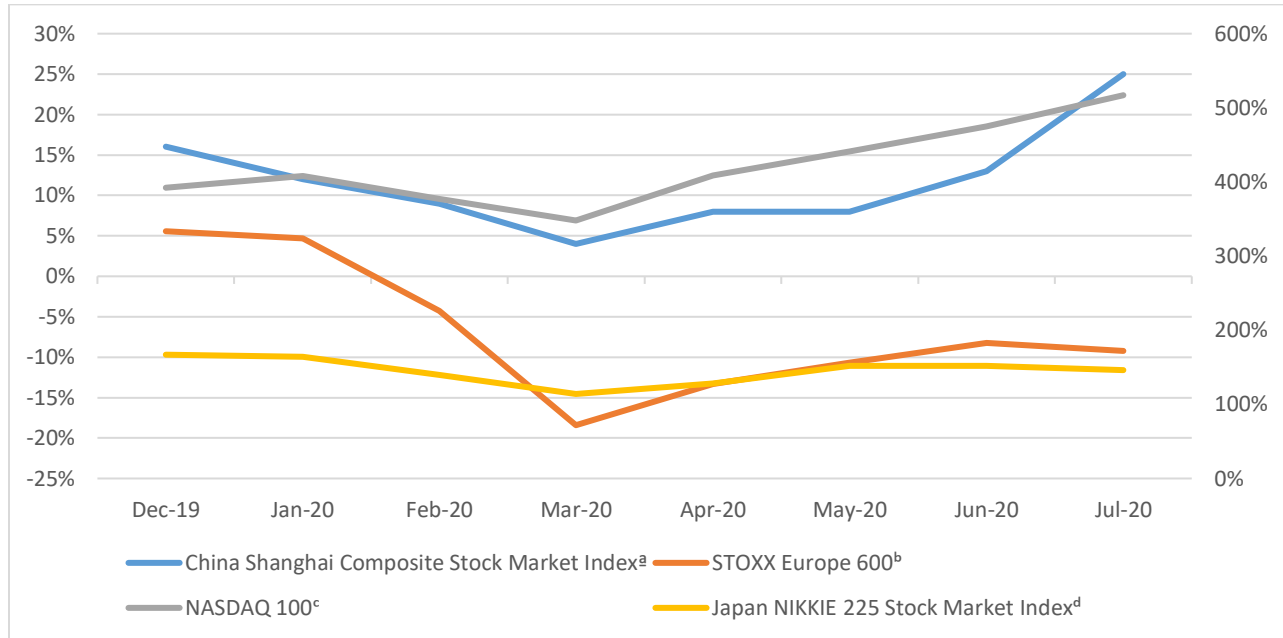


Fig. 2.5 Stock Market Performance During December 2019 To July 2020. [41] [42] [43] [44]

Because of COVID-19 the stock markets face the biggest crash of the stock market in the history that started almost after mid of February 2020. Till mid of February 2020 three big stock market index (Dow Jones Industrial Average, NASDAQ Composite Index and S & P 500 Index) reached at its high level, then began declining. In the month of March 2020, the stock market at global level showed extreme impulsive behavior and reported severe contraction due to pandemic. At global level, the shock of COVID-19 is more severe for stock markets as compared to Financial Crisis of 2008. This COVID-19 has taken the stock markets to completely different directions which impact the economy of the world.

3. IMPACT OF CORONAVIRUS IN PAKISTAN

Pakistan had tried to keep Coronavirus away from the country till 26 February, 2020 when the Ministry of Health, Government of Pakistan confirmed first case of COVID-19 in Karachi, Sindh [45]. Pakistan already has a very fragile economy and trying to recover from already existed crisis. The economy was moving towards stability when Coronavirus pandemic struck the fragile economy, which smash the recovery process of Pakistan's economy badly. Due to COVID-19 restraint measures the economic growth of Pakistan has declined from 1.9% to -1.5% [46]. Pakistan is poor country with fragile economy. Most people live below the poverty line before coronavirus per capita income in Pakistan was \$1625 and budget is always a deficit [47]. Where the coronavirus hit the economy of whole world badly, it shows the immense effect on Pakistan's economy. Due to the adverse effect of novel coronavirus the Pakistan's economy is contracting negatively for the first time over the last 68 years. Due to the increasing number of coronavirus cases in Pakistan the government-imposed lockdown from 1st April 2020 [48]. This countrywide lockdown increased the number of unemployment in the country lot of people become jobless on a temporary basis, almost all business shut down and many people loss their job permanently. This pandemic negatively affect the major export (textile) of the country due to decrease in demand, on the other hand remittances dropped off because many Pakistanis came back to home because of layoffs.

3.1 Effect on GDP Of Pakistan

With COVID-19 other factors like currency devaluation and inflation pressure where the primary role for negative growth rate in Pakistan. In Figure 6 the yearly economic growth rate of Pakistan was stable from 2016 to 2018 but from 2019 the GDP growth rate is continuously decreasing, but sudden outbreak and quashing increasing rate of COVID-19 as well as slashing the economic growth rate pushed the country further into poverty. Due to the lockdown downturn in agricultural, manufacturing and services sectors. Because of the pandemic Pakistan is estimated to bear an economic loss of up to Rs. 2.5 trillion during this fiscal year [49]. Before coronavirus outbreak in Pakistan it was estimated that GDP growth rate will be increased by 3%, but actually it contracted by 0.4% and cause a total loss in GDP rate is 3.6%. The most affected people of Pakistan due to economic impact are daily wages people. The outbreak of pandemic and lockdown effect their live the most. Already at least 10 million people in Pakistan lives under the poverty line [50], now due to COVID-19 and prevailing economic condition may this line increases.

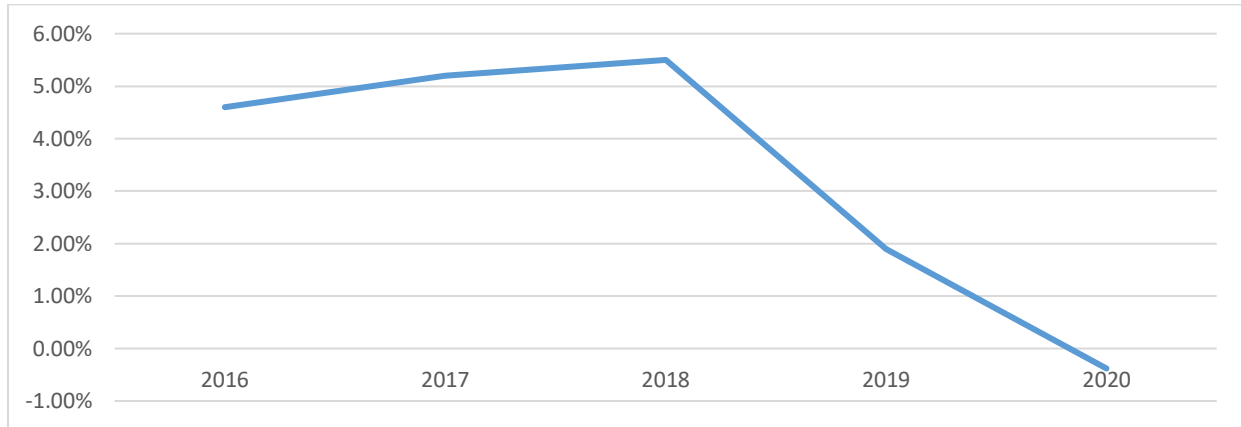


Fig. 3.1 Yearly Economic Growth Rate of Pakistan [51]

3.2 Unemployment Rate in Pakistan

Increasing unemployment rate is another challenge for Pakistani economy because of the pandemic and lock down, according to estimated 3 million people will become jobless during this pandemic [52]. Soon after the pandemic hit the country of Pakistan, the government of Pakistan imposed the nationwide lock down from April to May. This short duration of lockdown highly impacted the livelihood of vulnerable employment group and daily wage earner. Due to lock down all business whether medium or small have been closed and livelihood opportunities have been clasped all of sudden. The most affected person due to this lockdown was a daily wage earner. Due to economic inactivity during lock down many people become jobless. Many industries lost their order and some not able to fulfill their order due to unavailability of raw material ultimately the earning is reduced so they fired large numbers of employees after lockdown in order to reduce cost. After easing lock down not only private business fired many work force, but thousands of government employees also lays off to revive the economy [53]. All this scenario hit the unemployment rate in Pakistan and it is expected that is will reach at 4.45% at the end of 2020 as shown in Figure 7.

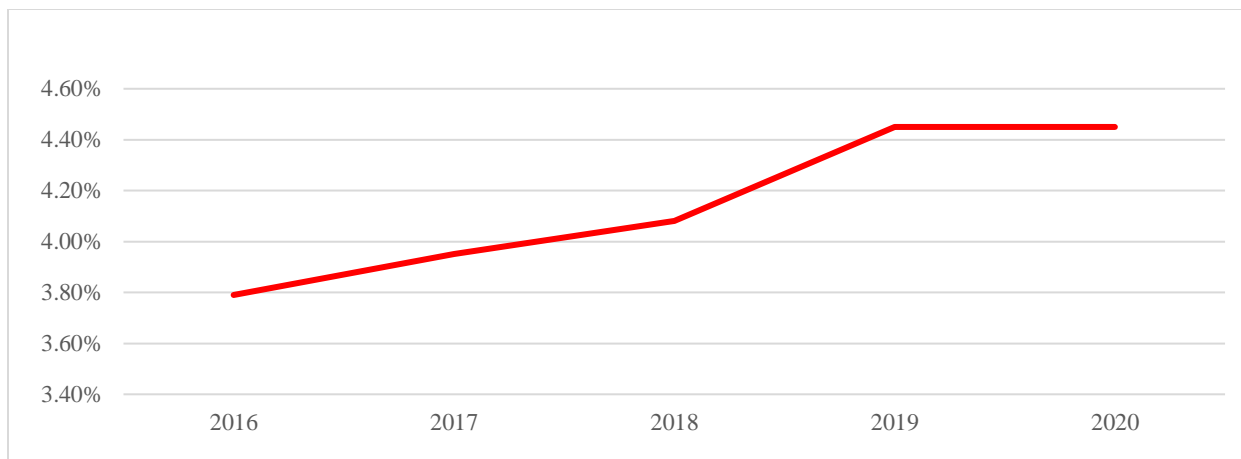


Fig. 3.1 Yearly Unemployment Rate in Pakistan [54]

3.3 Service Sector

Coronavirus has been affected the major countries' economies, the economic activities have been on hold or stopped due to COVID-19. Pakistan is also facing the same circumstances because the implementation of lockdown to stop the spread of coronavirus. COVID-19 also affected the services sector of Pakistan because of closure of millions of businesses and unemployment. Tourism, hospitality and transportation industry are highly affected by COVID-19 in the service sector.

In Pakistan service sector is a major sector towards GDP contribution and also a main source of employment [55]. According to last year (2018-2019) Economic Survey of Pakistan the contribution of the service sector in the GDP of Pakistan was 61.2% and the total growth rate of the service sector during last year was 4.71%. Novel coronavirus affected the global economy, the World Bank also indicated that this coronavirus will impact the GDP of Pakistan negatively, which will also affect the service sector. Due to the spread of the virus all business activities shrank and service sectors also collapsed due to lock down implementation. Tourism, hospitality and transportation are affected

mostly due to coronavirus. In Pakistan after lockdown and implementation of SOPs mostly hospitality activities remain close to zero and tourism industry after bear loss due to the suspension of international flights and domestic lockdown, the employees of this sector lost their jobs due to closure of all activities. Similarly, transportation industry face difficulties' due to lock down and restriction on movement within the country. Figure 8 showed that the growth rate of services sector in Pakistan from year 2017 to 2020. The growth rate of services sector in Pakistan is positive till 2019 but it has negative trend in 2020 due to coronavirus, because during this year the service sector is badly affected by coronavirus. Economic activities related to all sectors including service sectors are low in the second quarter of 2020 which was the duration of spreading the novel coronavirus in Pakistan and implementation of lockdown.

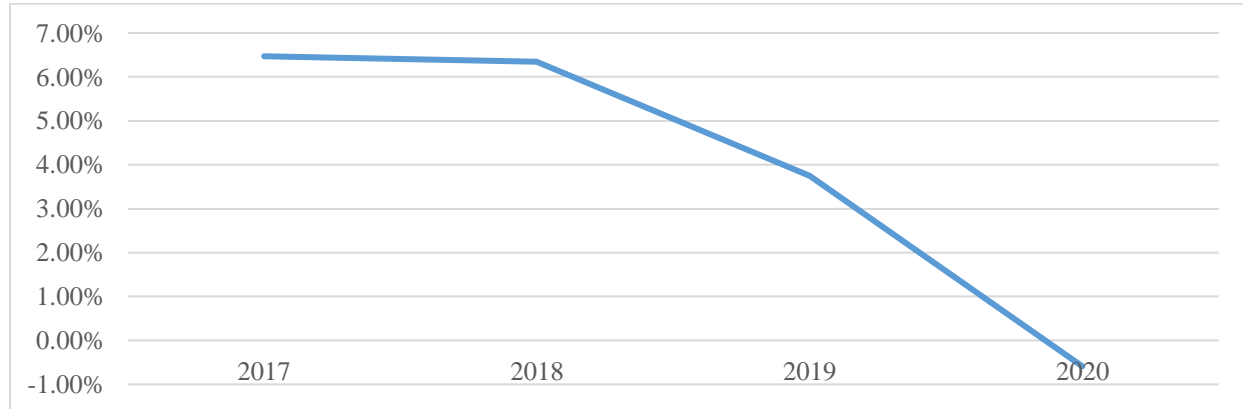


Fig. 3.2 Yearly Service Sector Growth Rate [56]

3.4 Manufacturing Sector

The manufacturing sector is a dynamic sub sector of industrial sector, which has a contribution of 64.4% in the industrial sector and contribution towards GDP of Pakistan is 18.34% [57]. Manufacturing sector in Pakistan is a main contributor towards the employment generation. The manufacturing sector has three sub sectors: Large Scale Manufacturing (LSM) which has a total share towards manufacturing is 78% and contribution in GDP is 9.5%, second is Small Scale Manufacturing (SSM) with a total share in the manufacturing sector is 15.2% and in GDP share is 2% and the third sub sector is slaughtering, which have 6.9% contribution towards manufacturing and contribution of this subsector in GDP is 0.94% [58].

In Pakistan the outbreak of coronavirus has the contrary effect on the manufacturing sector, which untimely decrease the GDP of the country. In fiscal year 2020 the manufacturing sector is shrinking by 10.32% during 11 months July to May as compare to last year [59]. The last fiscal year is the hard year for LSM and suffering continued for all year and resulted in -2.28% growth rate. At the end of the year December 2019 the LMS sector was at its peak with growth of 15.27%, when the pandemic outbreak in China the manufacturing sector in Pakistan turns downward because the raw material and finished goods products for this sector was coming from China and other parts of the world. With the outbreak of pandemic in Pakistan and implementations of lockdown in Pakistan this sector face major decline. In Figure 9 % of monthly growth rate of LSM reached at its negative value of 21.99% in March 2020. The second reason of downfall in the manufacturing sector in Pakistan was a slowdown in consumer demands due to coronavirus which also affects the small scale manufacturing sector.

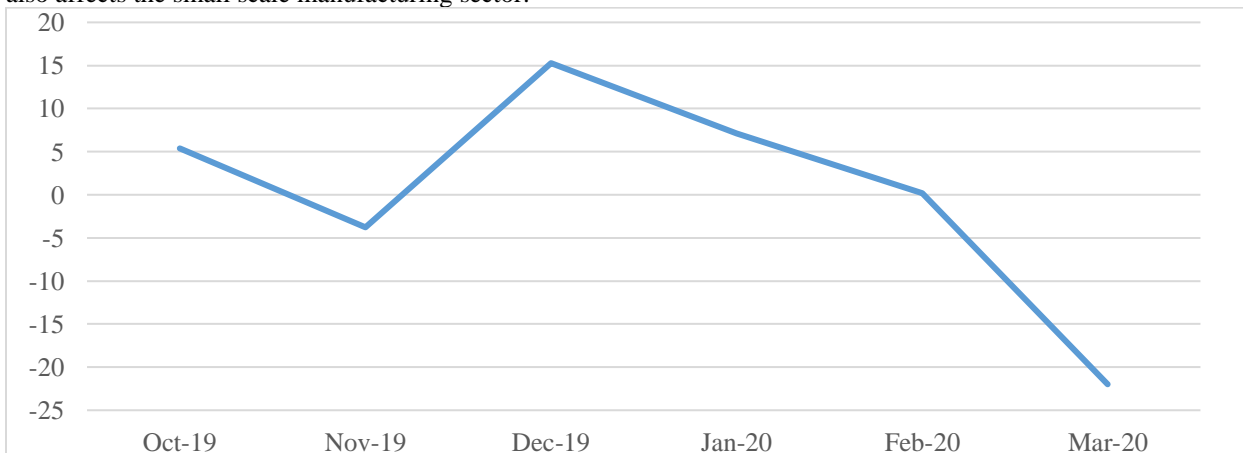


Fig. 3.3 Monthly Growth Rate of Large-Scale Manufacturing of Pakistan (In %Age) [60]



The large scale manufacturing industries of Pakistan faced a negative growth in 2020 till July. Automobile industries in Pakistan were already suffering because of inflation, high tax rate and low consumer demand, meanwhile the outbreak of coronavirus further increased the loss of the auto industry. All international manufacturers and local manufacturers of auto parts stopped their production due to lockdown and unavailability of workers. This stopped production units cause loss of billions to these industries. Steel and construction industries in Pakistan also witness negative growth from start of 2020 because the for steel industry Pakistan import raw material from China and Japan, both have increased number of cases of coronavirus and stopped their exports. In the result of this not only steel industry in Pakistan, but the construction industry which depends upon the steel industry have been stopped their production. Pakistan is the exporter of cement and this industry also affected directly and indirectly by a coronavirus. Cement industry observed negative growth during this period was due to less local market demand of cement because of halting operation of the construction industry and low export of cement due to less international demand and due to closure of export operation. According to Cement Manufacturing Associations, during March 2020 the dispatched cement was 14.26% lesser than last year dispatched. In pharma industry Pakistan import more than 90% raw material from China and other countries like Spain, Italy and Japan. But now Pakistan has a shortage of raw material due to lock down and halted production in these countries, as a result, pharma industry in Pakistan not only negative growth rate in this sector but also the medicine and preventive products from COVID-19. But still it is hoped that pharma industry may increase their revenue by offering the products and services that will be effective in the prevention of the spread of coronavirus. Other manufacturing industry in Pakistan like textile, chemical & dye and paper & Board industry also facing difficulties in generating revenue during these circumstances because mostly Pakistan import raw material from other countries where the number of coronavirus continuously increasing and trade is stopped due to lockdown.

Similarly, other industry of consumers' goods loss its profit during lockdown i.e. cooking oil showed negative growth by 0.75% and vegetable ghee industry showed negative growth of 3.46%, the production of sugar industry declined by 3.69% whereas blended tea industry profit increased by 23.57%. Electronics goods production industry refrigerators, Air conditioners, electric bulbs, tubes, fans, motors and tv sets declined because of lower production and due to restrictions, business closures, scarcity of raw material and unavailable of the work force because of movement restrictions.

The high weighted manufacturing sectors also badly affected by the coronavirus not only in Pakistan but globally. The outbreak of pandemic downturn the global economic activities and also impact the domestic demand, which accelerated the downturn of the manufacturing sector. Due to unavailability of raw material, imposition of lock down, closure of businesses, unavailability of workers, cancelation of orders are all the reason of declining the manufacturing sector at the national and international level. Still, there is a situation of uncertainty about the lockdown, restriction and fear of coronavirus spread the manufacturing sector will further go down.

3.5 Stock Market of Pakistan

Coronavirus was emerged from Wuhan city of China in December 2019 and reached to 200 countries within 4 months. The World Health organization (WHO) declared this virus as pandemic in March 2020. When WHO declared it as pandemic all countries took preventive measures and banned travel to other countries, imposed lockdown and closed down all business activities. Due to all these preventive measures all business activities went down and many businesses failed to survive and many big businesses faced difficulty in their survival. All this situation affected the stock market hard.

This virus became a global pandemic and affected the world business. Researchers claimed that when major events occurred in this world stock market operation always affected [61]. This virus affected the world stock market like the Unites States Stock market, European Stock Market and Shanghai Stock Market showed a negative trend. In Pakistan the first coronavirus case registered in February and authorities took preventive measure and decided to impose lockdown, due to closure of the industrial economy of the country shrank which is reflected by the performance of the stock market. However, when patients' number of coronavirus raised, the stock market started declining because due to pandemic all business stop working. Due to this situation foreign investors also withdrawn their investments. The stock market in Pakistan hit its lowest value during last five years.

Karachi Stock Exchange (KSE) 100 index is a major stock market, which tracks the performance of the big companies. In this article we have data of KSE from January 2020 to July 2020, the Figure 10 of KSE index performance showed that the performance of KSE was satisfactory from January to March but in March the infection of coronavirus was started rapidly and stock exchange performance went down and reached at the lowest point in the middle of the March when there was situation of lockdown. During April to May the KSE performance got better when the government removed the restriction and people started working and business activities came to normal and still with increasing number of COVID-19 patients the performance of the stock market is good because there is no restriction on business activities within the country.

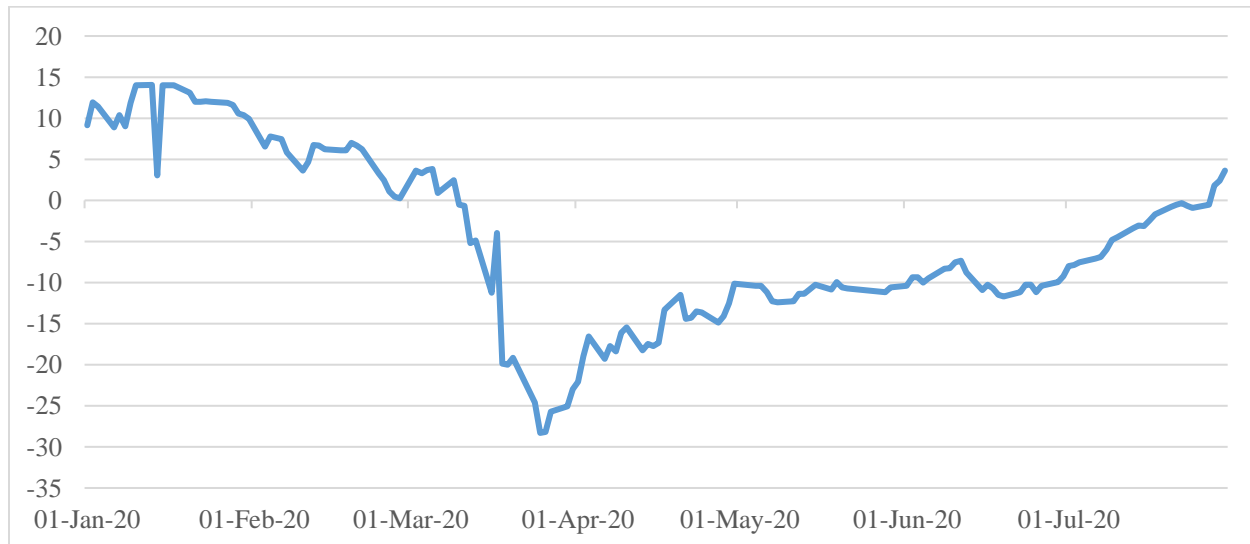


Fig. 3.4 KSE Index Performance During January - July 2020 [62]

4. CONCLUSION & RECOMMENDATIONS

The cases of coronavirus are continuously and rapidly increasing in Pakistan. The first patient of coronavirus was registered in Sindh in February 2020 and the government of Pakistan impose lock down in March 2020 till May 2020, the lockdown was partial and people did not follow the rules and regulations which were the reason of continuously increased. Most cases of coronavirus in Pakistan increased during Eid when people ignored the SOPs. Due to illiteracy of Pakistani people, they did not follow the methodology of mask, sanitizers and social distance. Prime Minister of Pakistan said we are not able to impose smart lock down like other countries the main reasons are poverty and lack of funds for the country. We did not have sufficient saving and budget is always deficit and we do not have enough money to fulfill the expenditure of our nation so we will continue with partial lock down. On the other hand, people of Pakistan take SOPs very leniently and authorities are not able to force them to follow all SOPs. People are continuously roaming without any reason, marriage ceremonies are held and people ignoring the all restrictions. When coronavirus was started to spread, all countries close all places with big gathering, including the place of religious worships, but in Pakistan religious initiations went against the policies. Masjids in Pakistan were not closed like Saudi Arabia and other countries and authorities removed the restrictions.

All educational institutes', religious institutions, schools, colleges and universities are open, it is not possible to follow restriction and SOPs at all levels whether in cities or in rural areas. It is also a big source of the virus spreading, the Government should force the school management to start home learning rather than physical attendance at school. People who are treating the coronavirus infected people are at high risk of infection. The Government did not arrange proper dresses for doctors and other staffs due to this many doctors infected with the virus. Because of infection in medical teams some hospital in the country closed and a lot of people deprived of health facility. In February 2020 the death rate in Pakistan was less than 100 but now it reaches more than 7000 [63]. Another big problem is that in Pakistan there are less coronavirus testing kits than requirements. Beds facilities in ICU are less ventilators are less and the government proposed only 2% of GDP budget for the health sector, which is far less as compared to the individual cost of treatment.

Coronavirus hit our economy so hard because Pakistan already tries to prevail in a tough situation, but this pandemic is proving a big challenge for our economy and pushed back our economy. According to all problems this study recommends that government should impose full lockdown in the country to cut down the number of the cases. Only few hours should be allowed for purchasing and for other necessities. Social gathering should be stopped in any case. Educate the people more about this infectious virus and guide them to safe themselves from this by following the proper guidelines. Use mask, sanitizers and keep social distance in gathering. Give punishment who goes against the rules. More budget should be allocated to the health sector and provide health facilities and medicine at affordable cost for the poor also.

Pakistan is developing country with poor healthcare system and facilities in hospitals are very weak. With this scenario we are not able to fight with infectious diseases. First time in history, Pakistan is facing this pandemic situation, this is the time we all should work collectively and support each other. At government level the federal government should guide the provincial government regarding their pandemic policies and support them to strengthen their health system. Allow the provincial government to take help from medical experts and develop our health related policies according to their advice. Device policies which will be helpful for all society, especially vulnerable groups.



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