



## Covid-19 Pandemic and Pakistan Economy: A Preliminary Survey

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ARTICLE DETAILS	ABSTRACT
<p><b>History:</b> Accepted 22 May 2020 Available Online 15 June 2020</p>	<p><i>The impact of pandemic Covid-19 appears to be quite uncertain across globe. The nations are trying to overcome its impact on their economies. It has affected the production, distribution and life style. Coronavirus pandemic has taken more than 5 lacs lives globally and paralysed the global economy. The developing countries like Pakistan expect to face substantial economic set back from this situation. This study analyses the impact of Covid-19 pandemic on Pakistan economy through observing the relationship between incidence of cases and number of tests conducted. Furthermore, it examines the impact of the demand-side and supply-side shocks due to Covid-19 pandemic on Pakistan economy. On supply side, this pandemic has halted the domestic and international supply chain, causing a shortage of inputs and necessities. On demand-side, decreased domestic and international demand have resulted in massive layoffs and poverty scares. Government and State Bank of Pakistan have announced different relief packages for controlling the situation but due to poor health infrastructure and lack of social protection, the people remain vulnerable to medical and financial misery. These unprecedented circumstances call for immediate policy changes for saving millions of people from virus and poverty.</i></p>
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### 1. Introduction

On 4<sup>th</sup> January 2020, World Health Organization (WHO) first publicised the information about spread of a new pneumonia like disease in Wuhan, China. After almost two months on 11<sup>th</sup> March 2020, WHO declared this disease a global pandemic and named it as Covid-19 pandemic. Now the worldwide cases of Covid-19 pandemic have crossed more than 10 million along with the death toll higher than 5

lac. This widespread is due to the highly contagious nature of the virus. WHO estimates that the Ro (basic reproduction number) of coronavirus is between 2 to 2.5 which means that on average one infected person can infect 2 to 2.5 other persons. Another reason behind this global widespread is the asymptomatic people. According to Iceland's lab testing, 50% of positive cases showed no symptom (John, 2020). Currently, U.S. and European countries are most effected in terms of cases and deaths. USA alone has reported more than 125,000 deaths so far.

All the countries of the world have been deploying different policy tools to control the outbreak and 'flatten the curve'. These strategies to control virus includes social distancing, lockdown, the suspension of air travel and closure of boarders (Thunström et al., 2020). However, the economic repercussions of such measures are not ordinary. It is estimated that the magnitude of the coming recession may be worst since the great depression of 1930s. The situation is even worse for the emerging and developing economies due to decrease in exports, remittances and international credit (Hevia and Neumeyer, 2020).

Pakistan is currently 12<sup>th</sup> most affected nation according to the coronavirus tracker of Johns Hopkins University. Pakistan has witnessed more than 213,000 cases so far, along with 4,395 deaths (Government of Pakistan coronavirus tracker). While the loss of precious lives is a tragedy but there is a massive financial fallout of this pandemic. In 2019, the GDP growth rate of Pakistan was 3.3% and according to the projections of State Bank of Pakistan, even without coronavirus, it was expected to decline further in 2020. In the beginning of 2020, the economic indicators began showed favourable trends but the outbreak of Covid-19 pandemic affected Pakistan economy adversely. The government of Pakistan took several measures like suspension of international travel, closure of educational institutions and province-wide lockdowns to mitigate the outbreak that affected the process of economic development adversely.

The initial estimates show that there is a \$1.3 trillion loss to the economy. One-third of the population was already living below poverty line before the outbreak and this number is expected to increase over 40% by June 2020. Pakistan is also facing negative spillover from the global economy. As exporters face cancellation of orders as textile demand around the world has plunged. The spillover from Chinese economy on the textile sector alone has been estimated to be \$44 million which caused a massive layoff in textile sector (UNCTAD, 2020).

The government of Pakistan has announced Rs. 1.3 trillion economic package relief for reducing financial burden. The biggest initiative introduced by the government through the Ehsas program in which \$900 million were allocated to be distributed among the poor household. Pakistan Workers Federation reported that till 28th March 2020, 5 lac workers belonging to the textile industry have become unemployed. The government has announced a 'green stimulus' project, in which the recently unemployed workers can work in 10 billion tree tsunami programme. Exporters and small-scale industries are also given financial aid. Furthermore, State Bank of Pakistan (SBP) has come up with cutting the policy rate from 13.25% in March to 8% in May, 2020 (Monetary Policy Statement, 2020).

All these measures have proved insufficient to compensate for the economic losses as all the sectors of economy have been tumbling under the massive financial losses. Poverty and unemployment rates are at all-time high. Many industrial units have been closed either due to unavailability of inputs or low demand. Textile sector of Pakistan have lost billions in domestic and foreign sales and also millions of workers associated with this sector have lost their jobs. Large Scale Manufacturing (LSM) sector has shown massive growth shrinkage. Furthermore, the small business owners and daily wage

earners are on the verge of poverty.

The main objective of this study is to review the impact of Covid-19 pandemic on Pakistan's economy. The study intends to reveal the impact of demand side and supply side shocks faced by Pakistan economy due to pandemic. Furthermore, it will identify the sectors that require urgent assistance of government for speedy recovery from the sever damages of Covid-19 pandemic.

The rest of the paper is organized as follows. Section II presents review of literature. Section III provides the intensity of Covid-19 pandemic in Pakistan. Section IV presents supply and demand shocks in Pakistan due to Covid-19 pandemic. The last section concludes.

## **2. Review of Literature:**

Pandemics are rare but highly destructive marvels of nature that destroy the lives and livelihood of people in its wake. Humanity has gone through many global pandemics and somehow it has managed to come out stronger. Jordà et al. (2020) attempt to check the long run economic consequences of pandemics. The results of the study reveal that pandemics are followed by decade long periods of sustained natural rate of interest that helps easing the fiscal burnout during pandemic. Pandemics are known for not only killing millions but also for glooming the economies. Recent global pandemics such as MERS and SARS are known for their economic disruption (For details, see Chou et al., 2003; Siu and Wong, 2003; Hanna and Huang, 2004; Joo et al, 2019). Although the economic impact of these outbreaks was not as severe as the covid-19 pandemic (Fernandes, 2020). Estrada et al. (2020) fears that economic impact of Covid-19 pandemic can be 3-fold than that of SARS.

The current Covid-19 pandemic is feared to be scathing pandemic as compared to 1918 Spanish Flu pandemic (Ferguson et al., 2020). Asian Development Bank (ADB) reveals that the global cost of this outbreak could reach to 8.8 trillion or 9.7% of global GDP. These estimates are higher than the previous estimates of the impact on global GDP by World Bank (2% to 4%) and IMF (6.3%). This drastic difference occurs because the rampant nature of this pandemic has made it impossible to credibly predict the economic costs. However, all researchers and policymakers are agreed on the effectiveness of the restriction measures in curtailing losses. World Health Organization (WHO) pointed out that lockdown and social distancing are the best strategies to halt the spread of Coronavirus in all the countries of the world. Barnett-Howell and Mobarak (2020) suggest that we should look for alternative options as lockdown policy might be ineffective in the poor countries. They argue that these countries have a larger informal sector and the people are more susceptible to poverty.

Pakistan is among those countries where informal sector is a very large. According to International Labour Organization (ILO), more than 73% of the total employment in Pakistan is in the informal sector. This puts Pakistan into a very difficult position as the country face a dual edge sword of hunger and coronavirus. The medical structure of country is not very strong as the current number of hospitals and quarantine centres are not sufficient to tackle the medical emergency (Waris et al., 2020). In the absence of restrictive measures the system may collapse and if the lockdown persists longer then millions of workers may lose their jobs. This calls for rigorous research on these aspects for balancing between saving lives and saving economy so that the losses from Covid-19 pandemic may be minimized.

## **3. Intensity of Covid-19 Pandemic in Pakistan**

Pakistan confirmed its first case of coronavirus on 29, February and this number reached to 10,000 on 22 April. The next 10,000 cases came in just 11 days and the next one took only 8 days.

Figure: 1 shows the log incidence curve of cases from day one to one hundred days. The graph reveals an upward trajectory. The rate of growth of cases was very high in early days which indicates that the virus has been spread rapidly and the country was unable to contain it due to lack of information about virus and proper controlling strategies. However, after 50 days the graph indicates a decline in the rate of confirmed cases. From day 75 to 100 it can be observed that the curve has started bending and which means in coming weeks Pakistan may be successful in flatten the curve.

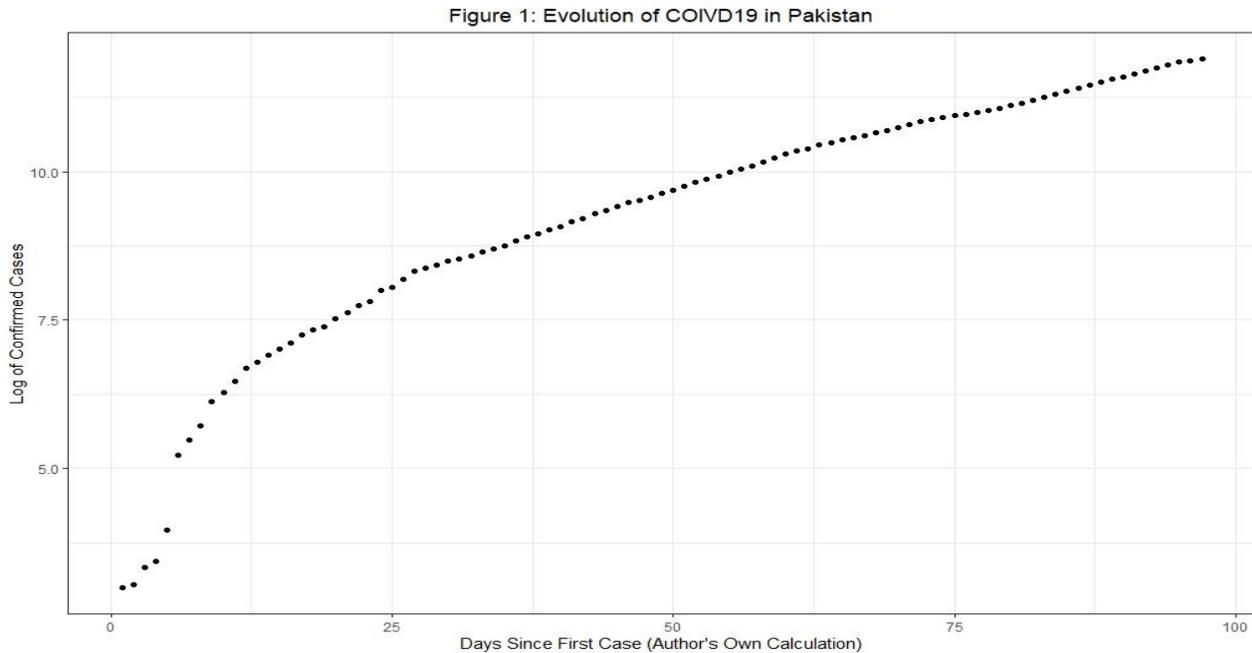


Figure 2 shows that an increase in the testing capacity and simultaneous increase in the incidence go hand to hand in Pakistan. It helped the country in capturing the hot spots of virus and reduce its spread.

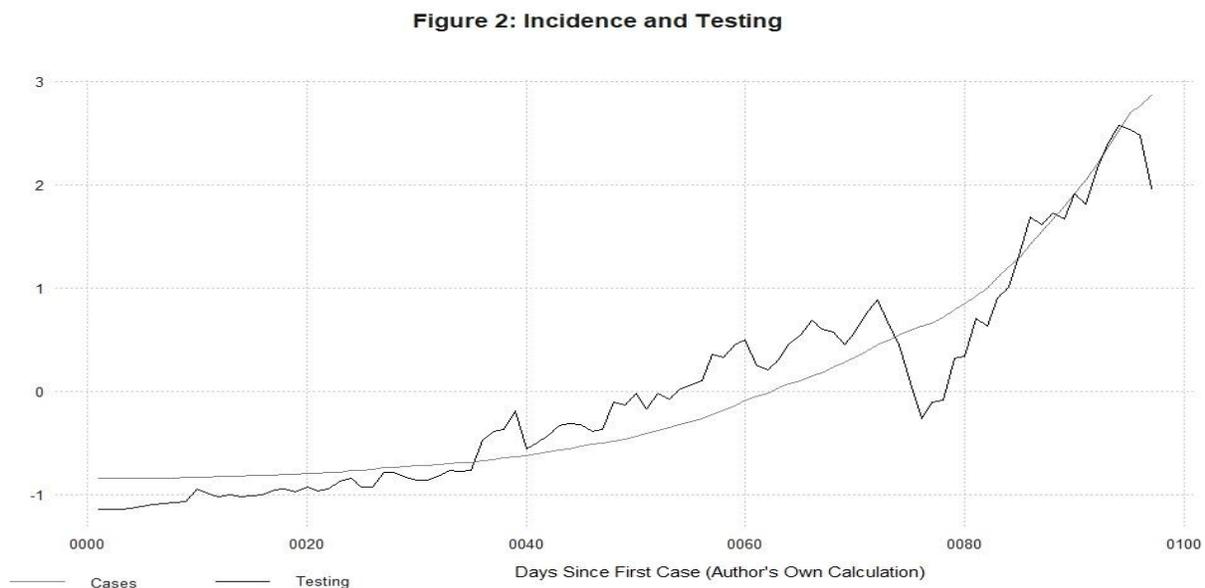


Figure 3 deals with the comparison of recovery and mortality rates. Recovery is measured by the ratio of recovered with respect to confirmed cases and mortality shows deaths w.r.t. confirmed cases. It can be observed that in the beginning, the mortality rate was higher than recovery rate but over time, the mortality rate became lesser than recovery rate due to success of plasma and other treatment strategies. This wedge between mortality and recovery rate is a hopeful indicator but this difference needs to increase in order to reduce the strain on medical system of country

**Figure 3: Normalized Recovery and Mortality Rate**

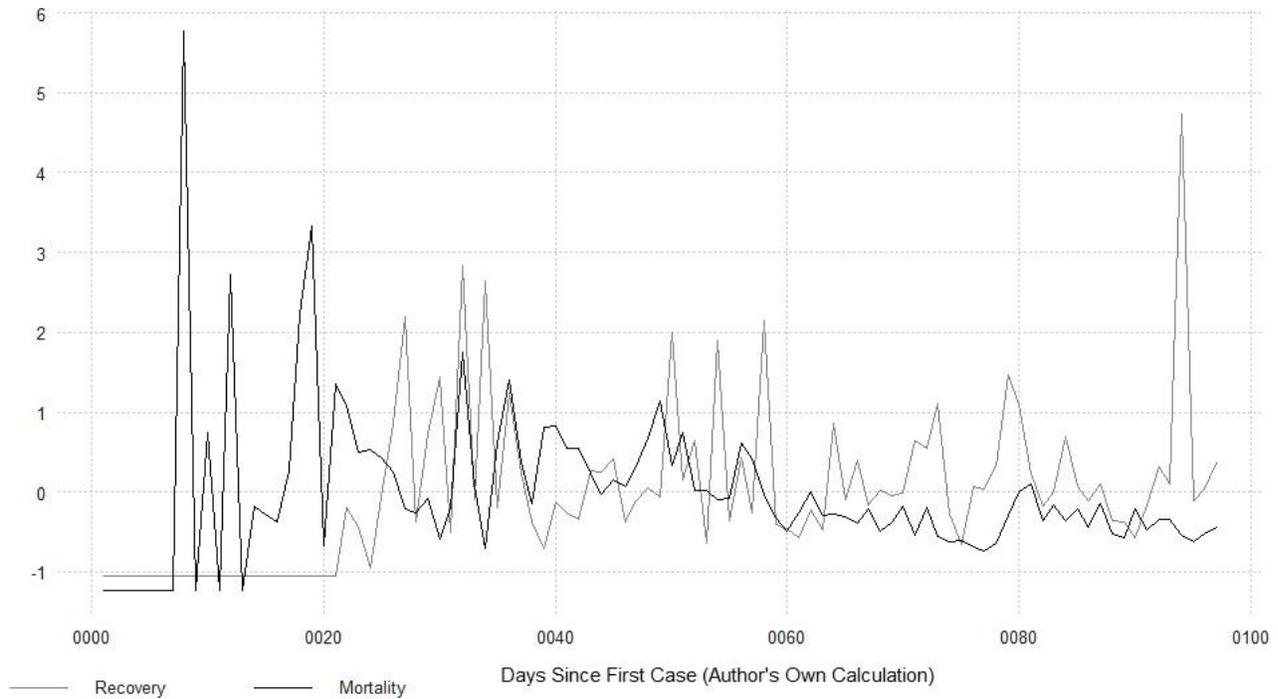


Figure 4 reveals that in the starting days, country witnessed a high mortality rate as shown by the spike in the above graph where the mortality rate was well over 6%. However, later on, the mortality rate is hovering around 2% to 3%. But it is feared that this number is grossly under reported as many infected people prefer to stay home rather than seeking medical help. It means they are not in the radar of government and this number may not reflect the true picture (Tanzeem, 2020).

Figure 4: Incidence of Mortality Rate

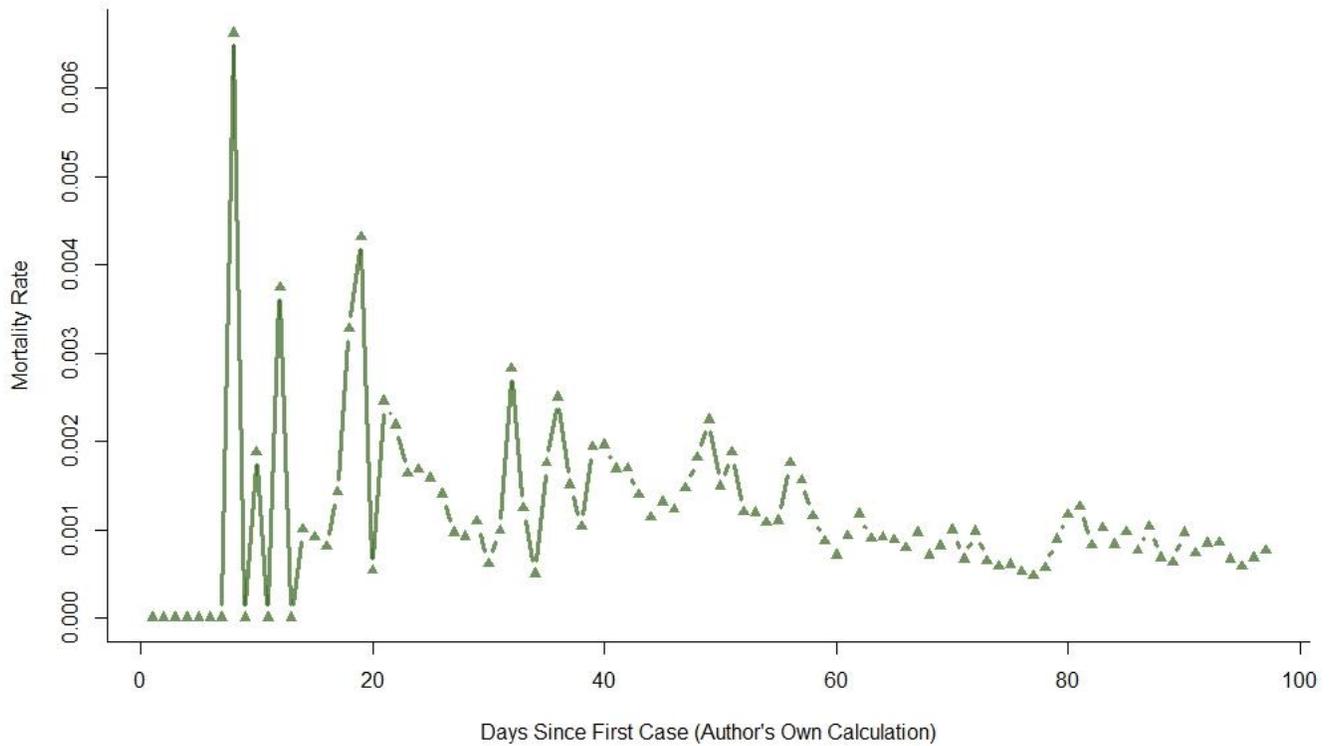
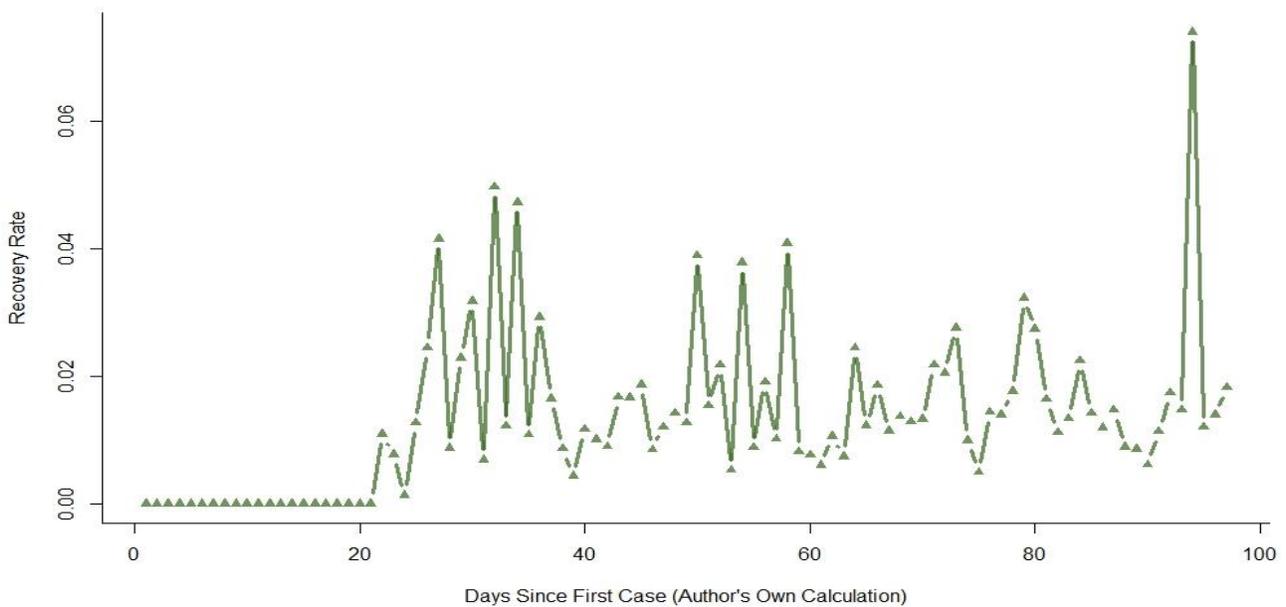


Figure 5 shows that in Pakistan in first 20 days the recovery rate was low which increased steadily due to success of plasma therapy and availability of better medical facilities. As of 4<sup>th</sup> July, more than 1 lac patients have recovered from Covid-19 pandemic which makes the recovery rate almost 55.53%.

Figure 5: Incidence of Recovery Rate



#### 4. Supply and Demand Shocks in Pakistan Economy due to Covid-19 Pandemic

Before pandemic, the GDP growth rate of Pakistan economy was forecasted at 2.4% by IMF whereas the inflation rate was in double digits. This indicates that the Pakistan economy was trapped by various economic problems related to twin deficit. The government of Pakistan had taken several measures in past few years to come out of the trap of these economic problems. The lockdown and global spill over of negative economic shocks worsened the economic situations. The country’s growth rate for FY2020 is expected to go into negative digits in between -2.2 to -1.3% (World Bank). The economic impact of covid-19 pandemic is devastating as it hits severely both the supply side and the demand side of the economy.

The Supply side shocks are related to the production process. The Covid-19 pandemic affected both production and distribution of goods. Being an open economy, Pakistan was affected badly as its major trade partners were influenced severely by Covid-19 pandemic. As the pandemic expanded, most of the countries enforced lockdown, suspended international travel and cancelled export orders which result in the disruption of global supply chains. Pakistan’s imports of almost all the sectors have declined that halted the production process in the country. Table: 1 presents comparison of imports of selected commodities in April 2019 and April 2020. Non-availability of necessary inputs such as machinery, raw material, metal and fertilizers has adversely affected production of all the sectors of the economy.

**Table 1: Comparison of imports of Selected Commodities (in Rs. Million)**

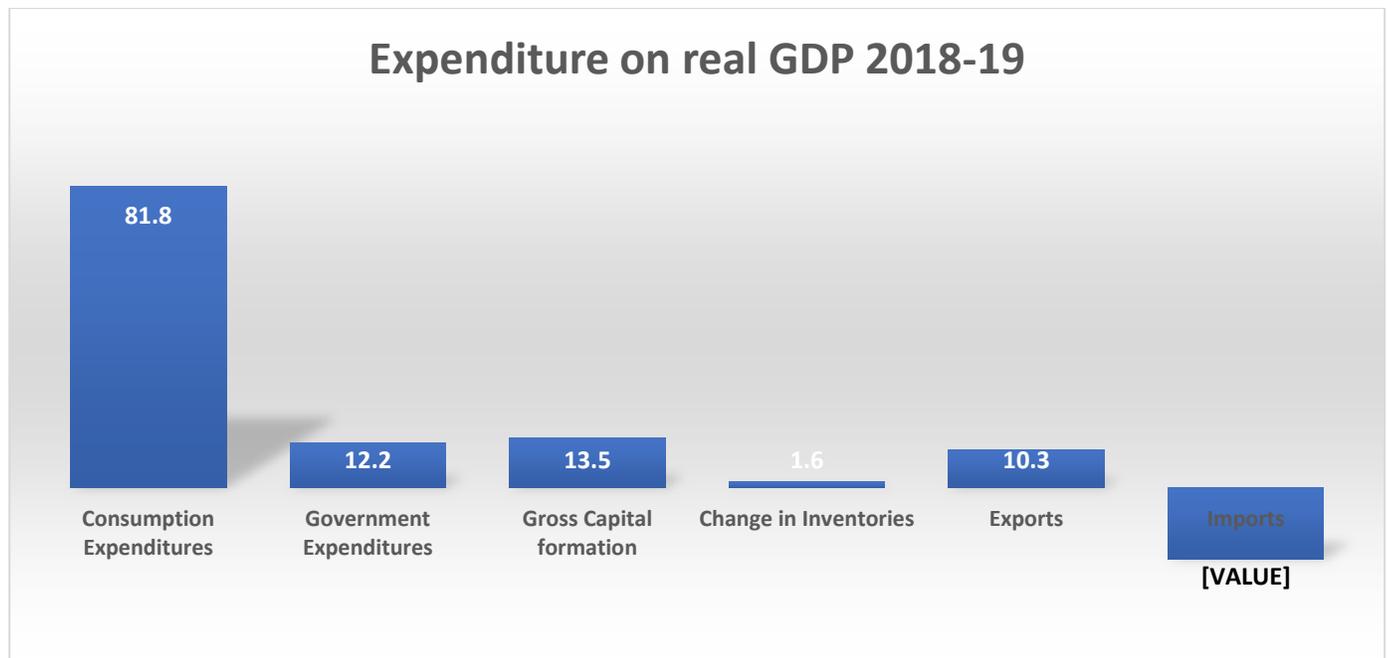
Import Commodity Group	Imports (April 2019)	Import (April 2020)	Percentage change
Food	62,266	85,306	37.00
Machinery	110,620	80,646	-27.10
Transport	28,882	19,937	-30.97
Petroleum	188,488	95,429	-47.42
Textile	50,643	38,257	-24.46
Agriculture and other chemical	112,063	101,933	-9.04
Metal	54,396	49,827	-8.40
Miscellaneous	12,169	10,020	-17.66
All Other	52,891	45,524	-13.93
Grand Total	665,418	526,880	-20.82

**Data source:** Pakistan Bureau of Statistics

Lockdown and transportation suspension have resulted in the absence of labour from their workplaces. In this situation, some professions have adopted the policy of ‘working from home’. However, Pakistan economy was not digitalized and all types of work cannot be performed from home. Industries and manufacturing sectors were highly affected by lockdown which resulted in the closure of factories and industrial plants in the country. Furthermore, the restriction on interprovincial movements caused distortions in the supply chain of the country. One and probably the only positive impact of Covid-19 pandemic on Pakistan’s economy was a decline in the oil prices due to low demand of petroleum products which reduced imports bill of the country and mitigate some of the trade deficit. A sudden increase in the demand for consumer goods in some urban areas created a shortage of necessary items. Although no acute shortage of necessities has occurred so far in Pakistan but it is

feared that a prolonged viral outbreak may create food shortage in the country.

The impact of Covid-19 pandemic on Pakistan economy has resulted in a decline in consumption expenditures as millions of low-income workers who lost their jobs, are forced to struggle to meet their both ends. Middle income groups have also curtailed their discretionary spending for enhancing their savings and assurance of financial security. Furthermore, people were unable to spend due to closure of shopping centres, restaurants and ban on transportation and travel. The figure 6 reveals that in Pakistan consumption accounts for 82% of the total GDP and any change in consumption expenditures may have drastic implications for the GDP growth rate. Lockdown and fears of prolonged recession have made people to reduce spending on nonessential items.



**Figure 6:** Author’s own calculations based on data from Pakistan Bureau of Statistics.

The Table 2 given below shows a comparison of the volume of exports of different commodity groups in April 2019 and in April 2020. It can be observed that exports value has shrunk to half and no commodity group is safe from decline. Textile sector has been hit hard and faced a 59% decline. Around \$1.3 billion worth of textile orders have been cancelled or suspended so far due to decrease in global demand. It puts millions of workers associated with textile industry at risk of losing their jobs.

**Table 2: Comparison of Exports of Selected Commodities (in Rs. Million)**

Export Group	Commodity	Export (April 2019)	Export (April 2020)	Percentage change
Food		64,796	55,822	-13.85
Textile		160,694	66,405	-58.68
Petroleum & Coal		8,046	1,780	-77.88
Other manufactures		44,426	24,108	-45.74
All other items		16,921	9,297	-45.06
Grand Total		294,883	157,412	-46.62

**Data source:** Pakistan Bureau of Statistics

Figure 7 shows that since the outbreak in January, the remittances have been declining over time which may disrupt the external balance of country. It creates an adverse demand shock as many families depend on the foreign remittances to finance their expenditures.

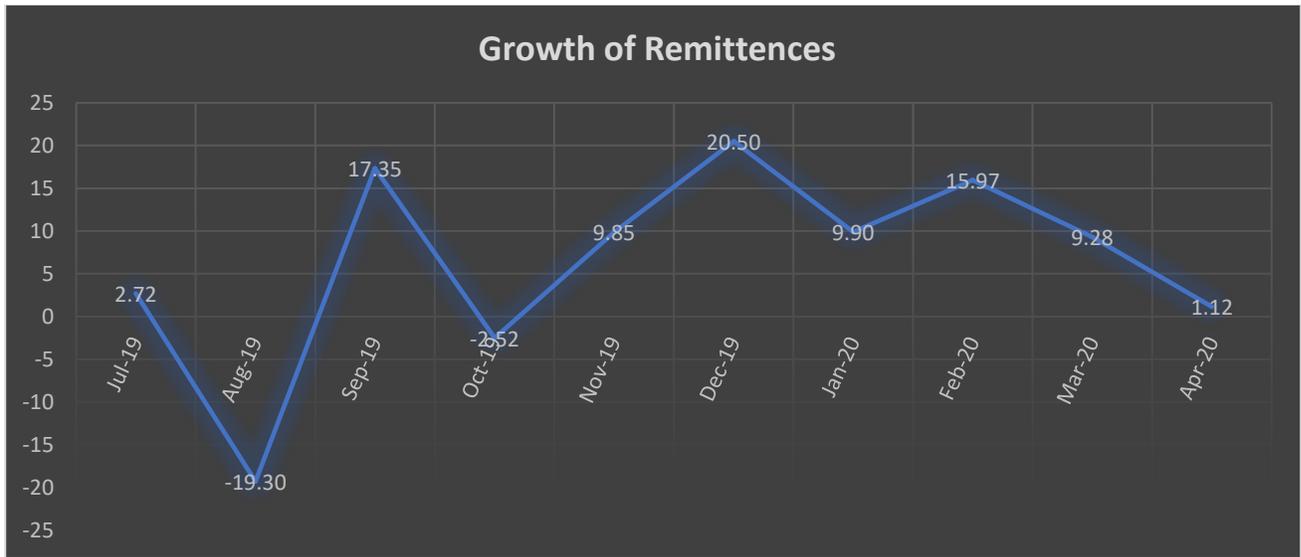


Figure 7 Source: State Bank of Pakistan

The downward trend of growth of remittances can be short lived due to the fact that global production is halted right now and once it resumed the remittances flow will start.

Pakistan has been facing severe budget deficit for years and the tax-to-GDP ratio of country is yet to meet international standard. Figure 8 depicts a comparison of government expenditures and revenue from 2015 to 2020. It can be observed that government revenues have always been lower than the expenditures that resulted in budget deficit. This gap is expected to expand for FY20 due to massive increase in government spending for several relief packages and decrease in revenue collection due to smart lockdown.

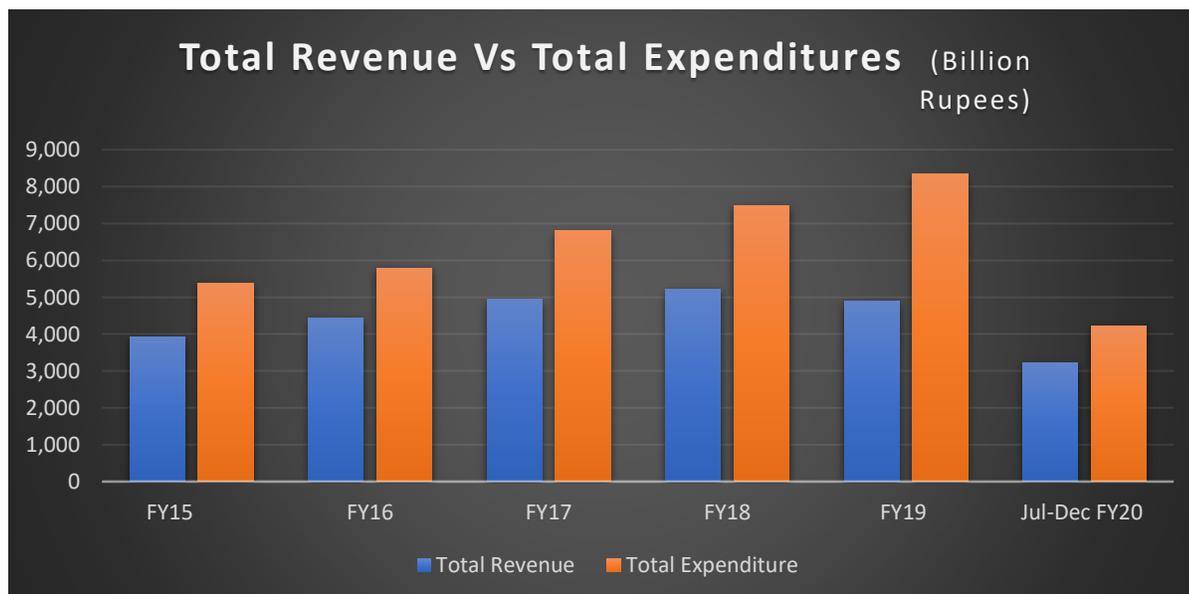


Figure 8 Source: Ministry of Finance Govt. of Pakistan

Currently the government expenditures are on rise in order to provide relief programs to masses affected by the lethal pandemic and on the other hand, Federal Board of Revenue (FBR) has witnessed a colossal decline in revenue collections. In March 2020, FBR faced a 31% decline in sales tax revenue from local manufactures due to low production. According to the press release by FBR, tax collection in April 2020 was almost 40 billion less than the tax collection in April 2019. The latest regional economic outlook report released by IMF projects that budget deficit of FY2020 can reach to all time high of 9.2% of GDP. This massive budget deficit may open a Pandora box of problems to the country.

The relief packages introduced by the government of Pakistan are financed by external debt for protecting its citizens from hunger and poverty. It exerts huge burden of debt on Pakistan economy which may lead to an alarming situation to the already debt-riddled economy of Pakistan.

Table 3 presents a comparison of government’s debt in March 2019 and March 2020 which indicates a 23% increase in government debt. It means that in coming months the amount of debt servicing is expected to increase sharply.

**Table 3: Government Debt (in Rs. billion)**

<b>March 2019</b>	<b>March 2020</b>	<b>Percentage Change</b>
18,170.6	22,477.7	23.70
7,900.0	16,706.2	111.47
10,270.6	5,771.4	-43.81
9,625.7	11,658.1	21.11
9,469.4	11,210.6	18.39
156.4	447.5	186.17
27,796.3	34,135.8	22.81

<b><i>A. Federal Government Domestic Debt (a+b)</i></b>
<i>a. Long Term</i>
<i>b. Short Term</i>
<b><i>B. Federal Government External Debt<sup>7</sup></i></b>
<i>a. Long Term</i>
<i>b. Short Term</i>
<b><i>Federal Government Debt (A+B)</i></b>

**Source:** Ministry of Finance Budget Wing

State Bank of Pakistan has also slashed the policy rate by 525 basis points in 2 months. This expansionary monetary policy provided relief to the households and businesses with much needed liquidity and credit flow. Furthermore, SBP has announced a relief package for easing the conditions of borrowers and lenders.

## **5. Conclusion and Recommendations**

The researchers, policy makers and practitioners are of opinion that an active role of government is indispensable in balancing between the conflicting objectives of saving lives and saving economy. For this purpose the government needs to enforce smart lock down and allocate more resources to provide better medical facilities to the masses. Furthermore, the responsibility lies with the government to assure the continuous supply of essential services, provision of financial aid to those who lost their jobs, prevent the disruption of economy and directs SBP to ensure the liquidity through using its tools.

The developing countries like Pakistan are prone to demand and supply shocks and these shocks have exerted adverse impact on the development process of the economy. The major objective of this study is to explain the impact of Covid-19 pandemic on Pakistan's economy using current available data. The analysis reveals that country is on the verge of recession and millions of workers may become unemployed. This indicates that recession seems to be inevitable but proper implementation of effective policies may reduce its duration, intensity and effects on Pakistan economy.

The important step of returning towards normality is controlling the infection rate. The government of Pakistan has to pay proper attention to the health sector and allocate more resources for the provision of continuous and better medical facilities to the masses. In the beginning the top priority of government of Pakistan was to save the lives through nationwide lockdown. But later on, government realized the danger of poverty and hunger and moved to "smart lockdown" allowing economic activities partially. The prevailing situation in Pakistan calls for the need of implementing appropriate and consistent policies which ensure balancing in saving lives and saving economy. For the revival of economic activities the government should take steps for promoting exports which was badly hit by the Covid-19 pandemic. These circumstances bring up the significance of product diversification and capturing of new markets. The future export strategies should protect the interest of exporters through a sufficient stimulus package. The formulation and implementation of bold, consistent and proper government policies is the key to take Pakistan economy away from the future losses of Covid-19 pandemic. The proper utilization of existing resources may assist the revival of service sector of the country.

## **References**

- Andersen, A. L., Hansen, E. T., Johannesen, N., & Sheridan, A. (2020). Consumer responses to the COVID-19 crisis: Evidence from bank account transaction data. Available at SSRN 3609814.
- Barnett-Howell, Z., & Mobarak, A. M. (2020). The Benefits and Costs of Social Distancing in Rich and Poor Countries. arXiv preprint arXiv:2004.04867.
- Chou, J., Kuo, N.-F., & Peng, S.-L. (2004). Potential Impacts of the SARS Outbreak on Taiwan's Economy. *Asian Economic Papers*, 3(1), 84-99. <https://doi.org/10.1162/1535351041747969>
- COVID-19 Map - Johns Hopkins Coronavirus Resource Center. Retrieved July 2, 2020, from <https://coronavirus.jhu.edu/map.html>
- Economic Survey of Pakistan 2018-19. Ministry of Finance, Government of Pakistan.
- Estrada, M. A. R., Park, D., Koutroufas, E., Khan, A., & Tahir, M. (2020). The Economic Impact of Massive Infectious and Contagious Diseases: The Case of Wuhan Coronavirus. Available at SSRN, 1-18. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3533771](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3533771)
- Ferguson, N. M., Laydon, D., Nedjati-Gilani, G., Imai, N., Ainslie, K., Baguelin, M., & Dighe, A. (2020). Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. 2020. DOI, 10, 77482.

- Fernandes, N. (2020). Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3557504>
- Gupta, A. G., Moyer, C. A., & Stern, D. T. (2005). The economic impact of quarantine: SARS in Toronto as a case study. *Journal of Infection*, 50(5), 386–393. <https://doi.org/10.1016/j.jinf.2004.08.006>
- Hanna, D., & Huang, Y. (2004). The Impact of SARS on Asian Economies. *Asian Economic Papers*, 3(1), 102–112. <https://doi.org/10.1162/1535351041747978>
- Hevia, C., & Neumeyer, P. A. (2020). A perfect storm: COVID-19 in emerging economies, VOX, CEPR Policy Portal. <https://voxeu.org/article/perfect-storm-covid-19-emerging-economies>
- Household Integrated Economic Survey (HIES) 2018-19 | Pakistan Bureau of Statistics. Retrieved July 1, 2020, from <http://www.pbs.gov.pk/content/household-integrated-economic-survey-hies-2018-19>
- Huang, Y., Lin, C., Wang, P., & Xu, Z. (2020). Saving china from the coronavirus and economic meltdown: Experiences and lessons. Available at SSRN 3570696.
- IMF (2020). Regional economic outlook. *Regional Outlook: Southeast Asia*, 99–105. <https://doi.org/10.1355/9789814279543-017>
- International Labour Organization. (2015). Informal economy in Pakistan (ILO in Pakistan). Retrieved July 1, 2020, from <https://www.ilo.org/islamabad/areasofwork/informal-economy/lang-en/index.htm>
- Javid, M., Arif, U., & Qayyum, A. (2012). Impact of remittances on economic growth and poverty. *Academic Research International*, 2(1), 433.
- Johnson, N. P., & Mueller, J. (2002). Updating the accounts: global mortality of the 1918-1920" Spanish" influenza pandemic. *Bulletin of the History of Medicine*, 105-115.
- Jones, K. (2020). How has coronavirus changed consumer spending? World Economic Forum. <https://www.weforum.org/agenda/2020/05/coronavirus-covid19-consumers-shopping-goods-economics-industry>.
- Joo, H., Maskery, B. A., Berro, A. D., Rotz, L. D., Lee, Y. K., & Brown, C. M. (2019). Economic Impact of the 2015 MERS Outbreak on the Republic of Korea's Tourism-Related Industries. *Health Security*, 17(2), 100–108. <https://doi.org/10.1089/hs.2018.0115>
- Jordà, Ò., Singh, S. R., & Taylor, A. M. (2020). Longer-run economic consequences of pandemics. Federal Reserve Bank of San Francisco Working Paper 2020-09. FEDERAL RESERVE BANK OF SAN FRANCISCO. <https://doi.org/10.24148/wp2020-09>
- Karlsson, M., Nilsson, T., & Pichler, S. (2014). The impact of the 1918 Spanish flu epidemic on economic performance in Sweden. An investigation into the consequences of an extraordinary mortality shock. *Journal of Health Economics*, 36(1), 1–19. <https://doi.org/10.1016/j.jhealeco.2014.03.005>
- Morens, D. M., Taubenberger, J. K., & Fauci, A. S. (2009). The persistent legacy of the 1918 influenza virus. *New England Journal of Medicine*, 361(3), 225-229.
- Nishtar, S. (2020). COVID-19: Using cash payments to protect the poor in Pakistan | World Economic Forum. <https://www.weforum.org/agenda/2020/05/using-cash-payments-protect-poor-pakistan/>
- Pakistan Bureau of Statistics. Retrieved July 1, 2020, from <http://www.pbs.gov.pk/>
- Patton, M. (2020). The Approaching Coronavirus Debt Crisis: How Excessive Debt Reduces Economic Growth. <https://www.forbes.com/sites/mikepatton/2020/04/28/the-approaching-covid-19-debt-crisis-how-excessive-debt-reduces-economic-growth/#62518d4c6e94>
- Peters, M. A. (2020). The disorder of things: Quarantine unemployment, the decline of neoliberalism, and the Covid-19 lockdown crash. *Educational Philosophy and Theory*, 0(0), 1–4. <https://doi.org/10.1080/00131857.2020.1759190>
- Siu, A., & Wong, Y. C. R. (2004). Economic Impact of SARS: The Case of Hong Kong. *Asian Economic Papers*, 3(1), 62–83. <https://doi.org/10.1162/1535351041747996>

- Thunström, L., Newbold, S. C., Finnoff, D., Ashworth, M., & Shogren, J. F. (2020). The benefits and costs of using social distancing to flatten the curve for COVID-19. *Journal of Benefit-Cost Analysis*, May, 1-27. <https://doi.org/10.1017/bca.2020.12>
- Waris, A., Atta, U. K., Ali, M., Asmat, A., & Baset, A. (2020). COVID-19 outbreak: current scenario of Pakistan. *New Microbes and New Infections*, 35(20), 100681. <https://doi.org/10.1016/j.nmni.2020.100681>