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## Title Page

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## **Executive Summary**

The purpose of this report is study and get insights into impact of COVID-19 on the economies of BRICS nations. As we know and have seen, COVID has been plaguing our society for more than a year and a half now and has impacted the economies of almost every country in the world. It is a highly contagious disease hence the growing nations or the emerging economies with booming population and fast paced urbanization are more vulnerable to it. That is why we are studying the impact of coronavirus on the emerging economies of BRICS nations. These countries account for almost half the world population. These countries are growing economies with good growth rates recorded in past decades. How coronavirus will impact these economies, different sector of economies, some exceptions to estimated impact are all looked upon in this study.

For this study to materialize, I first divided economies into sectors and then went over individual industries of each sector to draw conclusions about how the future will be and how the current global scenario magnified/lessened the impact due to the pandemic. All of these findings, conclusions and insights are documented inside.

## BRICS

BRICS is an acronym used for 5 major emerging economies in form of Brazil, Russia, India, China and South Africa. These countries have influence in the regional politics and representatives from each nation have met in a formal annual meet every year since 2009. In 2020, they met virtually for the first time due to COVID pandemic plaguing the world currently. The 2021 annual meet is supposed to take place in India.

BRICS nations account for a huge chunk of global population and geographical area. Combined population of these nations is around 3.21 billion which accounts for 41.53% of global population with China and India being top 2 most populous countries in the world. Talking geographically, 4 of these 5 nations excluding South Africa are in top 10 list of largest countries by land with total area of these nations combined accounting for more than a quarter of World land surface.

Needless to say, these countries possess considerable amount of influence both regionally and internationally. All of these nations are part of G20 countries. Both Russia and China are two of the most influential nations in the world and have much presence at the United Nations. India has been growing rapidly and is on its way to become a superpower. Brazil is the largest and most developed country in the South America and has most influence out of all countries in the continent. South Africa is second largest African economy and its location means it's an important location on the world map. The combined nominal GDP of these countries, as of 2018, is 19.6 trillion US dollars which is about 23% of gross world product. Combined GDP PPP stands at 40.55 trillion US Dollars accounting for 32% of world's GDP PPP with an estimated amount of 4.46 trillion US dollars in combined foreign reserves.

The headquarters of BRICS is located in Shanghai.

As the numbers of land surface and population suggest, population density in these economies is high with exception of Russia. Especially in India and Brazil where population density is really high. So, it's not a surprise that these countries were really badly affected by the pandemic of COVID-19. In fact, it originated from one of the BRICS nations, China.

From China it travelled to different parts of world and impacted global economy severely including the BRICS nations. COVID-19 is a highly infectious disease which has plagued the world since early 2020. The total recorded cases of COVID are 187 million worldwide with over 4 million deaths. A quarter of these cases is from nations constituting BRICS with India, Brazil and Russia amongst the top 5 worst hit nations in terms of cases recorded.

These unprecedented levels of pandemic caused severe damage to not only the human life in these countries but also damaged economies severely. We will in this report see how COVID impacted these nations.

## **Economy and Sectors of Economy**

In order to properly understand the impact of pandemic on these nations, we must first understand Economy and economic development.

The Wikipedia definition says that the Greek word Economy means 'An economy is an area of production distribution and trade as well as consumption of goods and services by different agents'. In more general view, it is defined 'as a social domain that emphasize the practices, discourses and material expressions associated with production, use and management of resources.' Economy of a nation is fruit of all transactions and processes involving culture, values, education, technological, socio-political structure, geography, natural resources etc. as key factors.

As we can see it's a wide concept and hence can't be talked about all at once. That is why economy is divided into sectors for easy understanding and to facilitate proper research and study of economy on a regional, national or international level. Economy is divided into 4 sectors which are briefly defined below.

### **1. Primary sector (raw materials)**

Primary sector includes extraction of raw materials and agriculture. The processes of mining, agriculture, fishing, animal rearing all fall under this sector.

### **2. Secondary sector (finished goods)**

Secondary sector consists of generation activities. Manufacturing, power generation (electricity, gas) and construction fall all are under bracket of secondary sector.

### **3. Tertiary sector (service)**

Tertiary or service sector is the third sector of economy dealing with activities of retail, Information Technology, hospitality and leisure, real estate, communication, financial services etc.

#### **4. Quaternary sector**

Quaternary sector includes the field of education, research and development and public sector.

Divided into these 4 sectors are the activities taking place in a nation. To properly understand the impact of pandemic of BRICS, we will see its impact on these sectors of each country one by one starting with Brazil, the south-American giant followed by Russia in order of countries in acronym.



## A Look into BRICS Nations

### 1. Brazil

Brazil is one of the worst affected countries in the world owing to large population density in cities and poor management. South America is not the most developed part of the world so the spread of a highly infectious disease like COVID is not a surprise.

The total cases of COVID 19 in Brazil as of this moment is more than 19 million with more than 530 thousand deaths. These harrowing numbers depict the huge catastrophic blow the disease has dealt to the country. The videos of people desperately looking for oxygen cylinders made headlines worldwide and was reported by likes of BBC. The current situation in the country is better than before but still is not good. The nation had the ability to host Copa America, the football tournament for South American teams without much breaches which showcases their strength. However, absence of fans in the stadiums throughout the tournament shows that the nation is still far from being in a position to return to normal lifestyle. Although Brazil's medical infrastructure is well built compared to Latin American counterparts, it is distributed unevenly across the country. The current vaccination drive has helped better the situation.

Moving over from huge loss of human life, the economic impact of COVID 19 has been quite huge. Brazil is in state of recession which has only worsened due to this pandemic. The unemployment rate hit record low as it touched 14.7% with around 15 million people jobless in the country. Informality rate also touched new high with 39.8% covering 34 million people.

The economy of the country shrank by 5.8% in the past year of 2020 alone.

- **Primary sector**

Talking about primary sector, agriculture suffered due to pandemic as country went into lockdown. Agricultural products with low shelf life were overlooked by general population in favor of longer lasting products like packaged foods. Social distancing protocols also served as hindrance to agriculture.

Although, there has been a positive for some farmers and animal rearers out of this recession prolonged by the pandemic. Brazil is one of the largest producers of soybean in the world and exports a lot of it. Brazil's chief agricultural exports also include beef raised by ranchers near Amazon. According to a report, Brazil exports 80% of its soybean produce and 20% of beef. As the crisis deepened and got prolonged, the prices of these commodities in global markets increased. The prices multiplied several times hence the farmers made reaped heavy profit on these two commodities.

- **Secondary sector**

The energy and power sector despite the crisis country is in has managed to secure investments in energy field due to strong steps taken by government. According to an interview with Minister of state of mines and energy, the new gas law set in motion by president, many companies have shown interest in investing in Brazilian Natural Gas sector. Brazil being largest producer of sugarcane ethanol and second largest of biodiesel is a promising industry for investors as Brazil looks towards biofuels.

Manufacturing industry showed different patterns for different products. Due to lockdown most of the industries suffered as people were advised to stay at home. This created

bottlenecks in several industries like glass packaging industry where lack of personnel hurt.

Electronics manufacturing was hurt quite a lot due to the lockdown and due to fact that trade with China stopped. Fashion industry which has not been doing well recently owing to crisis went into a deeper crisis. Harvest products saw a decrease in raw materials.

But not every manufacturing industry suffered. Even though bulk sales went down production of smaller capacity water bottles went up as people looked to hoard due to lockdown. Paper industry also saw an upward curve as toilet paper demand touched an all-time high. Industries of healthcare products like hand sanitizers, masks, disinfectants, vitamin tablets, medicines saw a surge in demand as people looked for immunity boosting and preventive products. As people prepared for lockdown, demand for non-perishable foods with long shelf life like pasta and other packaged foods grew, hence increasing the manufacturing of these products.

- **Tertiary sector**

Talking about service sector, there are couple few who didn't suffer as much as others. Retail sector saw big sales in drugstores and grocery stores due to hoarding by people. In other retail fields, it suffered but is expected to pick up as a result of pent-up demand.

But not every industry can say the same. Many industries like travel and tourism and restaurants will not improve suddenly. Delivery services in Brazil aren't as robust so they can't handle the entire load as restaurants suffer and are on government payroll.

Digital stores sales make up for only 8% of total sales as of now but is expected to grow in future with growth of IT.

Banking sector having gone through 2007-08 crisis and recent recession is in a position of strength. The banks have sufficient buffers and liquidity cushions to survive the pandemic.

Travel and tourism industry has been hit very strongly as foreign tourists amount dropped by more than 50%. It'll take time to recover.

- **Quaternary sector**

Education sector has suffered a lot in the past year. Access to internet and tools required for online education aren't available throughout the country. Due to it, many kids have not been able to study. According to a report more than 5 million kids had no access to education in November 2020. Many kids who were on verge of dropping out have dropped out in the past year as number of school dropouts increased. Aiding to this is the fact that teachers aren't trained well enough to use digital tools effectively hence ruining an entire year of school nationwide.

Many kids belonging to poor section to society got meals in schools which in lockdown have casted additional burden on their families and have dropped out of school to aid their families in growing poverty across nation. Loss of income for weaker section means more and more kids drop out increasing the child labor in the country. Government has rolled out few initiatives for public sector to keep it afloat but it has not dealt well with education industry at all.

## **2. Russia**

Russia is also one of the worst hit countries in terms of cases recorded. As of this moment, there are more than 5.7 million cases recorded with around 140 thousand deaths. The current situation is getting worse as the number of new cases and deaths touch new highs every day.

This situation is partly due to non-compulsory vaccination in the country. Even though Russia created one of the earliest vaccines in form of sputnik V, a very small percentage of population is actually vaccinated. Even though free vaccine jabs have been made available in the country since December of last year.

President Putin has urged people to get vaccinated as number of daily cases is above 25000 on a daily basis.

- **Primary sector**

The agricultural sector of Russia suffered in the earlier stages of pandemic. The agriculture workforce in Russia is mostly Migrant workers which proved to be a financial issue which had to be supported by the government as the food production went down in the country due to export halt within EU due to travel restrictions throughout the continent. Migrant workers from central Asia weren't able to get in Russia due to restrictions hence there was a lack of workers available in later stages of 2020.

Government decisions meant that agriculture sector was not only able to survive this but bounced back and became stronger than before. Government bought grains at a lower rate to prevent farmers from facing much loss. As EU placed trade restrictions on Russian federation,

Russia took it as opportunity to bolster its industry and was also able to make a separate ministry for cheese production in the country. The agriculture industry in Russia have grown resilient over years due to frequent floods and droughts so that added to this as well.

Russia's mining industry didn't suffer much either as the huge size of country meant that gold and nickel mines are located far away from population and have strong medical screening tests in place at work. This helped control spread of virus in mining locations.

- **Secondary sector**

Energy sector of Russia suffered as the demand in industries went down and the companies had to adapt a different load pattern as domestic consumption rose. Demand went down in quarter 2 and quarter 3 of 2020 resulting in drop of prices by 5%.

The cases of non-payment increased as several small manufacturers went bankrupt and were unable to pay for electricity. This increased debt of companies and can lead them to go bankrupt themselves while the situation of low demand persists.

Manufacturing industry took a huge hit from pandemic as production of several commodities went down. Clothing industry, leather suffered huge losses. Production of automobiles, automobile parts, machinery, electronics all suffered losses to pandemic and safety protocols. Construction activities throughout the country have also taken a huge hit due to COVID 19.

Although as seen in Brazil, manufacturing of essential items for pandemic like packaged food, hand sanitizers etc. went up. Due to Russian vaccine Sputnik V, production of healthcare and pharmaceutical products went up too.

- **Tertiary sector**

Banking sector seemed to have weathered the early stages but by the end of 2020, it was also suffering. According to Statista, there was decrease of 29.6% in terms of value added to Russian economy by finance and insurance sector.

Retail and real estate both suffered due to pandemic as they both displayed a negative change of 25.5 and 27.2% respectively in terms of value added to Russia economy. Employment packages and tax rebates for people employed in retail were pushed out to keep them afloat.

Travel and Tourism industry of Russia faced the biggest loss of all industries. At one point, in May 2020, there was little to no demand in tourism. 98% decrease saw tour operators lose jobs in several parts of country. Hotels and caterings saw a whopping 83.9% loss in terms of value added to Russian economy.

According to World Bank, estimated loss due to failure of tourism stand at about 4 billion US Dollars per quarter with about 400 thousand jobs at risk. It is said that it'll take about 3-5 years for full recovery of Russian tourism industry.

IT sector of Russia contrary to earlier estimates didn't suffer much. In fact, due to massive work from home movement in Russia, the demand for IT solutions increased. The urge by Russian prime minister to adapt technology boosted this transition. Russian IT industry had suffered in 2007-08 and 2014-15 so had measures in place. This also helped them weather the pandemic.

- **Quaternary sector**

Russian research and development sector showed good results as they were able to create a vaccine for COVID 19 named Sputnik V which was then shipped to different part of countries.

Russian government did roll out policies as well waived tax rebates to keep public sector afloat. License renewals were postponed and taxes were lowered to keep people employed.

Russian education sector didn't suffer much due to pandemic because of preparedness. Both teachers and students were used to digital tools. According to a report, more than 69% teachers were trained to use technology. 75% of teachers said that they were taught to use technology and digital tools to teach their students. This helped in transition from classroom to online classes intact and efficient while keeping learning effective.



### **3. India**

India is one of the worst hit countries in the world due to coronavirus pandemic. As of today, recorded cases of COVID 19 in India are 31 million with more than 400 thousand deaths. India after doing well when the first wave hit succumbed to wave 2 with new variant of the virus owing to huge mismanagement by the government. April saw new records of most deaths made every day with astronomical number of cases recorded every day.

The healthcare system was overloaded even in the NCR resulting in patient dying due to lack of oxygen all over the country. Videos of people not being able to attend funeral of their loved ones and not enough spaces for funeral pyres gained much traction all over the world and help from different parts arrived to help cope with this massive outbreak.

Vaccination drives post wave 2 has seen cases lowered with India preparing for wave 3 as per officials.

- **Primary sector**

Agriculture in India was badly affected by the pandemic. India recorded a decline of 2.5% in agricultural growth. Reverse labor migration due to pandemic meant there was a lack of workforce for next season of crops. Travel restrictions all over the country resulted in supply chain issues resulting in damaging of harvest. Many perishable goods were destroyed due to such bottlenecks which impacted the supply of nutrients to the weaker section of the society. Tonnes of food was wasted at different levels owing to supply chain complications and poor infrastructure of agriculture in the country. Products like milk and vegetables suffered most loss. Cyclones and locust infestation worsened the situation.

Mining sector was supposed to grow at high rate owing to fresh investments. However, COVID 19 disrupted all that. Mining of ferrous, non-ferrous and minerals was negatively impacted by the pandemic even though it was placed under bracket of national exemption. It was because mining companies found it difficult to operate due to lack of workforce, travel restrictions and fear of pandemic. This resulted in a huge decline for gross value added for first half of FY 20-21; 1238 billion INR for 20-21 compared to 1803 billion year on year.

- **Secondary sector**

Manufacturing sector has been adversely affected by the pandemic. Indian GDP contracted by around 24% in Quarter 1 of 2020-21 while gross value added by manufacturing for the same duration lowered from 17.5% to 13.8% year on year. Growth rate has declined to - 39.3% for Q1 of 20-21.

Lack of imports means machinery industries reliant on them have suffered. MSME have served as backbone of Indian manufacturing which is in ruts due to pandemic and lockdown. Metal products, chemical products, automobiles, machinery, textile all have shown decline.

While pharmaceutical products have seen growth due to vaccine production in the country, overall, the sector has suffered.

Energy sector in India has suffered too due to pandemic. Power demand have gone back to 2019 levels with decrease of 1.31% owing to industries shut down due to lockdown. However thermal energy has seen more demand year on year with NTPC, India's largest generator recording an increase of 8% in production. As India moves out of lockdown entirely, the demand will go up again.

Construction projects all over the country suffered due to COVID 19. Construction workforce is made up of mostly migrant workers and with travel restrictions and safety protocols made compulsory, construction projects were halted in most parts of country.

- **Tertiary sector**

Retail sector in India suffered just like other sectors due to pandemic. People preferred online shopping and hygiene, packaged food products all had high sales. The other industries have seen low demand with people prioritizing essential goods only. However, it's supposed to increase in some industries due to pent up demand.

Tourism sector suffered a lot due to prolonged pandemic situations in the country. March 2020 saw number of foreign tourists go down by 66 %. The prolonged pandemic with wave 2 meant most countries placed India on not suitable for travel lists resulting in new lows for tourism industry in India. India's foreign exchange has gone down due to this change. People employed in travel and tourism industry are said to have lost 9 million jobs due to pandemic.

India financial sector has surprisingly not been affected much by pandemic. Especially by the second wave. Stock market has been resilient to pandemic and is expected to become stronger as vaccination proceeds. Insurance sector will face tough times owing to large number of healthcare claims which is said to be around 14,738 crores.

Real estate will also struggle as the prices stagnate due to second wave of pandemic.

Indian IT sector suffer from pandemic as chief exporter of IT solutions in India namely TCS, Infosys and HCL Technologies will be impacted due to restrictions around the world.

- **Quaternary sector**

India's research and development shone brightly in pharmaceutical industry as India created vaccine of itself. This has led to surge in pharmaceutical industry as it grew rapidly in 2021.

Education sector in India has been adversely impacted due to pandemic. Institutions throughout nation are closed due to pandemic and hence have shifted to online mode. However, internet and digital tool accessibility is not uniform across the country. Government schools are ill equipped to shift to online teaching leading to more dropouts. Mid-day meal schemes fed lot of kids throughout nation which suffered due to pandemic.

Even though there's positive of digital transition in education sector, overall, it has suffered a lot due to this pandemic.

## 4. China

The coronavirus COVID 19 originated in Wuhan district of Hubei province of China. The first sighting was in late 2019 after the annual celebrations of Chinese New Year. Chinese New Year celebrations is the largest global movement of people which puts in perspective as to why the virus was able to spread all over the world as quickly as it did. Despite the fact that it originated from China and was a new virus altogether, China is one of the least affected countries in terms of cases recorded with less 100 thousand cases and 4500 deaths.

China's quick response resulted in just 92 thousand cases and was able to bounce back really quickly from the setback it suffered. It has not recorded any significant number of cases and is corona free for the most part. Wuhan was the first recorded case of city-wide lockdown in the world and the videos of Chinese officials controlling outspread in Wuhan made headlines all over the world.

- **Primary sector**

Chinese agricultural sector didn't suffer much due to pandemic. It recorded a decline of 3.2% in first quarter but jumped back up by 3.3% increase in quarter 2 and 3 of 2020. Hubei province being the epicenter suffered the most while Zhejiang also suffered due to workforce being migrant workers from other parts of the country. Agricultural produce with low shelf life was damaged in parts of the country as people chose products with longer durability. Food market instability was also noticed due to hoarding of food materials.

China is the biggest producer and exporter of pork in the world. The industry was already suffering due to African swine flu and the pandemic put even more pressure on it. It suffered big losses especially in quarter 1.

Mining industry in China also showed decline due to pandemic. China is largest producer and exporter of gold in the world which was down in quarter 1 of 2020 due to pandemic and trade war with US. China is 5th largest producer of Iron Ore whose production was down by 2% due to restrictions placed. Imports increased over this period and travel restrictions meant that lot of extra cost was incurred as material was stored at ports.

- **Secondary sector**

Energy sector in China showed decline during the first quarter of 2020. As the country was put in lockdown, both consumption and demand of electricity lowered as industries shut down. It picked up bit of pace in April. Oil demand was also low during quarter 1 of 2020. Travel restrictions all over the country meant ore required for energy production suffered. Transport through rail, air and road all recorded a decline thus lowering the energy production.

They tried to scale up energy production after pandemic but pollution in Beijing increased above 2019 level so they had to scale it down.

Manufacturing industry of China suffered a lot from the coronavirus pandemic. Chinese goods were in less demand all over the world due to pandemic hence lowering the sales. Travel restrictions meant that several bottlenecks in seemingly perfect supply chain appeared.

20% of China's GDP is from exports which took a major hit due to pandemic. Be it electronics or activators for pharmaceutical companies or automobile parts, every product suffered due to trade restrictions placed on China by the world resulting in 6.1% GDP growth rate for 2020 which is lowest recorded in 3 decades.

Construction also saw decline as huge projects all over in Africa were halted temporarily due to pandemic.

- **Tertiary sector**

Retail in China suffered as the sales went down due to several reasons. Majority of businesses reported losses up to 60% in quarter 1 due to a smaller number of customers and less exports. Logistic and transportation issues due to travel restriction, Lack of sales and service personnel, businesses shutting down and decline in customer demand were the main reasons for poor showing of retail in 2020.

Even though online sales remained pretty much unaffected, malls recorded 60% decline and 37% businesses showed 50% decline on revenue.

Tourism in China was badly affected. According to report on Statista, number of domestic tourists went down by 43% for the year of 2020 resulting in 52% revenue reduction compared to 2019. These figures have taken into account the increase in tourism in second half of 2020.

IT industry of China showed acceleration just as in Russia due to the pandemic. According to a report about 765 million people or half the population uses digital payments through smartphones which is double the percentage in US. Chinese companies digitalized them completely allowing them to transition to work from home scenario. AI for medical CT scans, apps for learning all increased due to pandemic.

- **Quaternary sector**

Education sector in China was able to transition quickly to online mode thanks to digital literacy in common population of the country. Education apps reported an increase of 79 million users further reflecting the quick transition.

However according to a study, several mental health issues have popped up due to lockdown in the country in children of age group 7-15. According to a report 1 out of 14 kids in China suffers from depression arising from pandemic on top of post-traumatic stress disorder (PTSD) reported in every 5th child. Many have not been able to shift to online mode hence resulting in such cases.

This pandemic resulted in lowest growth rate recorded in China in past 3 decades and has recorded upward curve in unemployment.



## 5. South Africa

South Africa is the least affected country out of BRICS nations excluding China in terms of cases recorded. South Africa is 18th on the worldwide list with 2.2 million cases and 64,289 deaths so far. However, this doesn't tell the true or the full story. South Africa has seen more cases than highly populous countries of South and South East Asia like Malaysia, Bangladesh and Pakistan. The ongoing vaccination movement in the country is currently facing stagnation which is worsening the situation and ruining the good work done by the country's government in the earlier stages of pandemic.

- **Primary sector**

Agriculture sector in South Africa has not been working at full capacity due to pandemic. South Africa is known for producing and exporting citrus fruits. Limpopo province in South Africa produces most of citrus of the country. The virus spread to Limpopo in June of 2020 which negatively impacted harvest to a degree. South African ports of Cape Town etc. were not working at full capacity to control the spread of virus. However, even with these limitations, the citrus production in 2020 was better than in 2019 owing to good governance.

Government of South Africa organized online conferences and meets and opened up agricultural markets of South Africa to the world. Many parties showed interest in South African produce hence making way for better exports. To comply with ports not working at full capacity, other ports were opened hence dividing up workforce to control the spread.

However, the production of tobacco suffered due to pandemic and recorded low harvest and sale. Production of agricultural products with low shelf life also went down due to pandemic as people chose products with higher shelf life.

Mining in South Africa was quite affected due to COVID 19. Mining operations were suspended for a long period of time due to virus as they were not equipped well enough to deal with the pandemic. The mining workforce in South Africa is migrant workers who travel throughout the country and across the Lesotho belt for work. Such movement across country was not possible due to travel restrictions. Also, the average age of workforce is above 40 and coronavirus is shown to be more dangerous for older people hence making it all the more difficult for mining to be brought back to normalcy. Although mines have solid health infrastructure as it dealt with spread of AIDS and tuberculosis in the past so it can bounce back quickly. Still given then importance of mining in the country, autonomous operations are seen as alternative.

- **Secondary sector**

Energy sector in South Africa suffered from over production at times. The demand of electricity in country went down as industries shut down due to safety protocols. The largest producer of electricity in Africa, Eskom is located in South Africa and suffered from over generation. Private investments in energy sector which were once booming were ruined due to government failure and suffered even more due to pandemic. Private investment in South Africa went down by 39% in 2020.

Manufacturing industry showed huge decline as production of various commodities went down astronomically. Production of automobiles automobile parts and accessories, showed a staggering decline of 98%. Machineries and other metal products showed a decline of 65%. Wood and paper industries reported 49% decrease while the petroleum industry showed

decline of 41%. Since alcohol was mandated to be produced only for medical uses like hand sanitizers, it's production also went down by 19%.

A big reason for this was dependence on China. As the trade stopped, manufacturing of commodities stopped because of absence of parts and materials shipped in from China.

- **Tertiary sector**

Retail also showed similar results. South Africa reported unemployment rate of 30% which is very high. The spending power of people went down as unemployment and poverty rose due to pandemic. South Africa has one of the highest income inequalities in the world which resulted in 26.5% decline in sales and 4% decline in trade.

IT industry was supposed to gather much hype and investment in 2020 but due to pandemic that didn't materialize. It suffered from low demand of Chinese products amongst other setbacks resulted in much less private investment in IT field as expected.

Tourism industry suffered from huge setback due to pandemic. Closed borders meant that there was very less tourism activities. Once again dependence on China hurt the industry. There are 2 million Chinese in Africa due to current Chinese projects in Africa. Due to which there is air travel between the two. A lot of airlines are in danger of going bankrupt as closed borders means huge losses for them.

Private aviation industry improved as the rich wanting to avoid crowds opted for private airplanes.

- **Quaternary sector**

Education sector was badly hit by the pandemic in South Africa. The access to internet and digital tools is not available in all parts of country meaning a lot of kids were not able to get access to education for long periods of time.

A lot of children hailing from weaker sections of society only used to get meals at schools. They're likely to drop out of school in order to aid their families for income. Lots of kids were free from domestic abuse at schools which is no longer possible for them. Children have reportedly lost an entire year of studies due to such conditions in the nation.

Even for the kids who were able to study online or had textbooks delivered to them suffered from mental health issues resulting from lockdown and improper learning in absence of right atmosphere for growth and education.

## **Conclusion**

To conclude its safe to say that COVID pandemic have affected the countries all around the globe. Emerging nations even more so. World without much global trade brought misfortunes for many and highlighted the importance of being able to produce for self. It brought around some huge changes as to how businesses are conducted and how they will be conducted in near future. It provided the impetus required to take that step towards development of sectors.

## **Learnings and Insights**

There were a lot of learnings from this research as I looked into economies of different countries. I will try to summarize these below.

1. The biggest learning and insight from this has been the limitations of global economy. Countries that are too dependent on either export (China) or import (South Africa) have seen big negative impacts due to the pandemic where global trade stopped. Importance of finding a balance between self-production and import/export has never been higher before.
2. One of the key learning has been an insight in the different ways of how countries dealt with pandemic and how the different sectors of economies fared. There were many instances of resilience and preparedness like Energy in Brazil, agriculture in Russia and South Africa, IT in China and Research and Development in India.

These sectors took this adversity and worked hard to create it an opportunity to excel. This was a great insight as to how countries bounce back from such an unprecedented situation.

3. Another learning would be importance of quick response from the authorities as we saw in China. Less than 100 thousand cases nationwide even though dealing with a never seen before pandemic is commendable while response of governments in other BRICS nations wasn't satisfactory enough.

4. Another learning has been research tools like Statista and Denton which makes research much more convenient.

5. This study gave me an insight into how the global trade works and impacts economies. The importance of Chinese infrastructure projects in Africa or Russian influence in EU was a good learning experience.

6. Another interesting fact was how several sectors function. The dependence of South Africa on China for manufacturing, migrant workers across EU and Central Asia for Russian agriculture were new and informative facts.

7. The digital revolution accelerated by this pandemic is one of the biggest takeaways from this research. The future is here and it's up to the current and older generations to adapt to it to maintain their livelihood.

8. Another intake although smaller in comparison is mental health issues seen in new generation due to shift in online mode. Lack of human contact can't be replicated by digital revolution and how that impacts the productivity of future generations in digital scenario needs to be seen.

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**3rd July 2020**

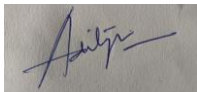
**Completion Letter/ Certificate**

This is to certify that **Mr. Dheeraj Kumar Mishra** enrollment no. 201309 of **Institute of Management Nirma University in Finance** has successfully completed his Institute-assisted Internship Programme.

The period of his project was from 3<sup>rd</sup> May 2021 to 30<sup>th</sup> June 2021 and for this duration, he worked on the project “**Impact of COVID-19 on economic development of BRICS nations**”.

We wish him every success in life.

Warm Regards,

A rectangular box containing a handwritten signature in blue ink. The signature appears to be 'Aditya' followed by a horizontal line.

Aditya Sharma

(Name)

Authorized Signature