

How a Similar Problem Faced by the World can be Dealt through Multiple Ways? Various Countries Response to Fight COVID-19

Kushal Mohta

11th Grade IB

Dhirubhai Ambani International School

Abstract—As rightly said by Travis Kalanick, CEO of Uber, “Every problem has a solution. You just have to be creative enough to find it.” COVID-19 is none other than a problem for the world, to which a lot of countries been ingenious enough to find a solution to, yet a lot others continue struggling to cope with this highly contagious virus. This paper attempts to traverse through and analyse the path taken by several different countries, and reach a conclusion about what countries should do to suppress a future virus from becoming a pandemic. It is imperative to highlight both the successes and failures of multiple countries in order to learn from the mistakes of the countries who failed, but at the same time try to emulate what the successful countries did. This research paper used only secondary data as based on the current circumstances, and the vastness of the problem being explored getting primary data was not feasible. Some of the countries who were successful in mitigating this coronavirus early on were New Zealand, South Korea, Taiwan, and Hong Kong. Countries which were devastated by the virus, and still might be include USA, Brazil, Italy, Spain, UK, India, Russia, and India. After meticulously going through the approaches of most of these countries, a clear and simple solution has been found out while dealing with such kinds of virus in the future. Firstly, and the most important of them all, is that the government should never take the virus lightly. It is necessary for the government to always be vigilant and immediately curb the spread of the virus. Had the Chinese government taken the COVID-19 seriously in the initial stages, this situation would never arise. Secondly, after this pandemic gets over it is necessary for countries to boost the investment in hospitals and systems that help in tracking the spread of a virus. Countries who had faced the SARS in 2003, did way better to stop COVID-19 as compared to those who had no experience. This was primarily because of the state of art technologies installed by those countries following the SARS outbreak. For example, South Korea had an AI powered software that speeds up tracing. Furthermore, most of the countries that faced SARS had an excellent and efficient testing system. However, at the same time there were countries who took care of this pandemic without having any previous experience with outbreaks. A perfect example of such a country is New Zealand. New Zealand’s response underlines two extremely important things needed for a pandemic to be subdued. Firstly, following a simple three step ‘mantra’ has proved to be extremely effective. Countries must test, trace, and isolate. Doing this successfully can stop the spread of the virus even without the need of imposing a lockdown. The second thing that New Zealand’s response showed is the need of a strong and confident government that has the trust of the people. This clearly lacked in Brazil and partially in the USA. Consequently, as of June 24th they had more cases than the other countries in the ‘top 10’ combined. On the other hand, New Zealand with its positive, reliant, and self-assured Prime Minister became the first country in the world to declare itself COVID-19 free. As proven throughout this research paper, if countries stringently follow the above steps, it seems doubtful that mankind will ever experience a pandemic of this scale.

Introduction

On 31st December 2019, WHO was notified about an unknown cause of pneumonia in Wuhan City, China. On January 7th 2020, it was identified as a novel coronavirus case, which has come to be known as COVID-19. This virus has rampaged across the world, completely devastating the most powerful countries of the world. On March 11th 2020, this outbreak was characterised as a pandemic. The map on the right shows the spread of the coronavirus across the world as of June 20th.

As can clearly be seen the virus has affected every continent except Antarctica. However, some countries are way worse affected than others. This research paper aims to explore and evaluate the different methods used by several countries, and understand what is the perfect method to tackle a pandemic in the future, while at the same time giving a detailed perspective on how one common problem can be dealt with in multiple ways.

Being the country that was affected first by the virus, China’s response to this outbreak was lethargic at the start. However, they soon stepped up to the task, and took extremely strict measures to contain the virus. Let’s start by evaluating China’s response to this pandemic.

China

Being the country where the COVID-19 originated, the entire world was looking at how China will respond to such an adverse situation. Having dealt with a similar coronavirus, SARS, in 2003, China had experience in dealing with pandemics. Some of the measures taken by China in 2003 were activating their Emergency Operations Center, having more than 800 medical officials to help with the SARS response, helped other countries such as the USA to detect possible cases, and conducting in depth research to identify the cause of the disease. While these worked effectively to fight out SARS, COVID-19 was a relatively humungous challenge. China took several bold steps to contain the virus. However, it made several erroneous decisions that has lead to COVID-19 being a global pandemic.



What China did wrong?

The first signs of a new virus on the horizon was on December 14th, when a case of severe, and untreatable pneumonia was reported in a hospital in Wuhan. This continued to become even more evident as mysterious cases of pneumonia continued to be reported over the next 2 weeks. On December 30th, an ophthalmologist (a specialist in the branch of medicine concerned with the study and treatment of disorders and diseases of the eye) Li Wenliang told colleagues via a chatroom that there recently have been several SARS like cases. The Chinese Communist Party (CCP) immediately traced down Li and suppressed him by making him sign a document, which accused him of spreading lies. This is exactly where China went wrong.

In an attempt to end this new virus in a covert and clandestine manner, the CCP withheld all information from the people about the dawn of a new virus. This lead to be one of the biggest flaws China could have ever made while dealing with a possible epidemic. The doctors had rightly identified a new virus and had also successfully traced it to the Huanan seafood market. However, instead of enforcing strict lockdowns in the areas surrounding the market, the government chose to take this lightly. This virus, which could have been easily contained within a kilometre radius of the market, cost China 1.38 trillion yuan (US\$196 billion) in just the months of January and February.

To cover up the virus China also created an entire tale for the public. In the first week of January they finally accepted that there had been a new virus. However, intentionally or unintentionally spread inaccurate data about the virus. They said that the virus can only be spread by animals and not by human contact. This cannot be majorly blamed on the government though as WHO also endorsed this statement on their twitter page. They also said that all the cases have been isolated, and are being treated successfully. This hoax assured the citizens of Wuhan that there was no need to take any precautions except stopping to visit “wet markets.” During the vital first 2 weeks of January- where in an aggressive measures would have prevented the outbreak- the virus spread all across Wuhan completely independent of any seafood market. According to statistical models used by

researchers at the Imperial College of London, the virus would have already infected about 1732 people in Wuhan itself by January 12th.

Finally, on January 23rd Wuhan was placed under lockdown. However, this was a bit too late to stop the outbreak. Between 31st December and 23rd January it is estimated that 7 million people came and left Wuhan, hence spreading the virus to other provinces in China. The spread of the virus was further accentuated due to the Chinese Lunar New Year as numerous people returned home from Wuhan or to their homes in Wuhan during this time. Moreover, the initial containment measures of China were based on the assumption that the virus could only spread from one person to another if the source had fever. Later on researchers realised that this assumption was actually false, as there was the occurrence of asymptomatic patients (patients who test positive for the virus but show no symptoms).

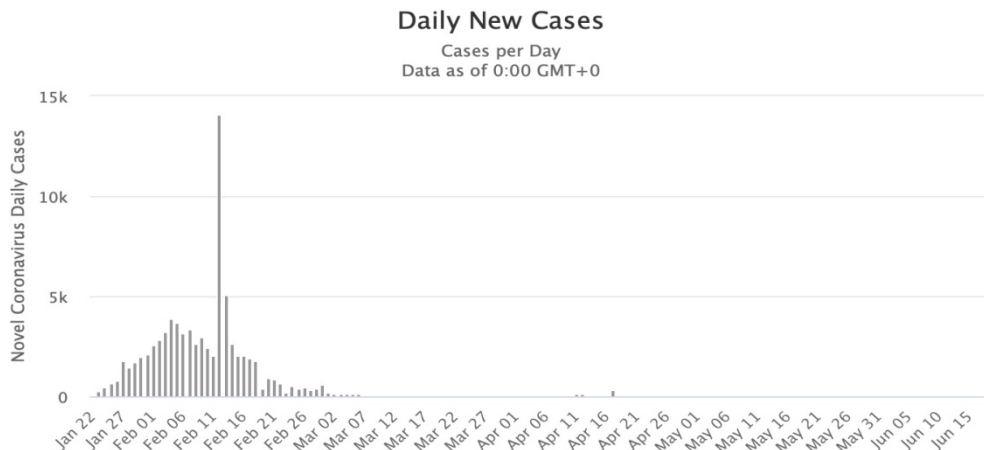
Once China imposed the lockdown in Wuhan, and eventually the entire nation, there were shortages of diagnostic kits in hospitals as people rushed to get themselves tested. This led to the creation of cheap and fast testing kits that had an accuracy of 50%. This means that 1 out of 2 people were falsely tested positive and sent to government run quarantine facilities. Since these facilities had shared toilets and several other facilities, the virus spread from the infected people to those who were falsely tested positive, thus increasing the number of cases drastically.

Another major mistake that China committed, and one that hasn't often come to light, was not effectively using their technologically advanced system that they developed at the end of the SARS outbreak. The system was designed to detect new viruses, and immediately detect a source of the same so that an epidemic can be prevented. This system helped tackle the avian influenza (H7N9) in 2013 and was also used to detect a pneumonic plague in Inner Mongolia after only 2 cases had emerged. Hence, this system had proved its efficiency in the past. Despite being trained multiple times to report unusual viruses immediately on the system, doctors in Wuhan hesitated till the 30th December, when in fact they detected an unusual virus around the December 14th. This hesitation might have been due to suppression by the government or pure lethargy on the part of the doctors. Whatever the case, the all so tech-savvy system failed when it was required the most.

Even though China's initial responses were extremely laid back, casual, and ineffective, the actions they took starting January end, helped control the outbreak from soaring into more dangerous realms (this is assuming that data released by China as of April 2020 is accurate). What statisticians predicted could have resulted in more than 5 million cases in China , itself, by the end of February, was controlled to 79,824.

So how did China keep it under control?

According to the WHO's official report about the COVID-19 published in February, China carried out its lockdown in three stages. The first stage focused on preventing the virus from pervading all across China. Though China were very late for this response as millions had already travelled out of Wuhan, the city wide lockdown imposed on January 23rd undoubtedly slowed down the spread of the virus. However, the government was soon to realise that more aggressive measures were required. In stage 2 and 3, the government focused on slowing down the increase of cases and identifying all the possible cases. Hence, starting February 2nd a more systematic quarantine was put into place: all people with mild fever or suspected symptoms were immediately isolated in government run quarantine facilities. Furthermore, all those who had come into close contact with such people were also isolated. These steps proved to be extremely beneficial as the outbreak was starting to come under control. As can be seen in figure 1 below, a bar chart of daily new cases, after the February 12th huge spike in cases, there has been a consistent drop of cases to a negligent amount by the end of April.



As can be seen the measures taken by China were quite draconian, and can quite truthfully be implemented by only communist governments. There is no way that democratic countries can force people out of their houses and isolate them even if they aren't showing symptoms. The government in democratic countries can just "advise" self-quarantine at home. Therefore, while the measures used by China were extremely effective they can't really be implemented by countries in the West, and other democratic countries like India.

"We have the opportunity to do something no other country has achieved: elimination of the virus."

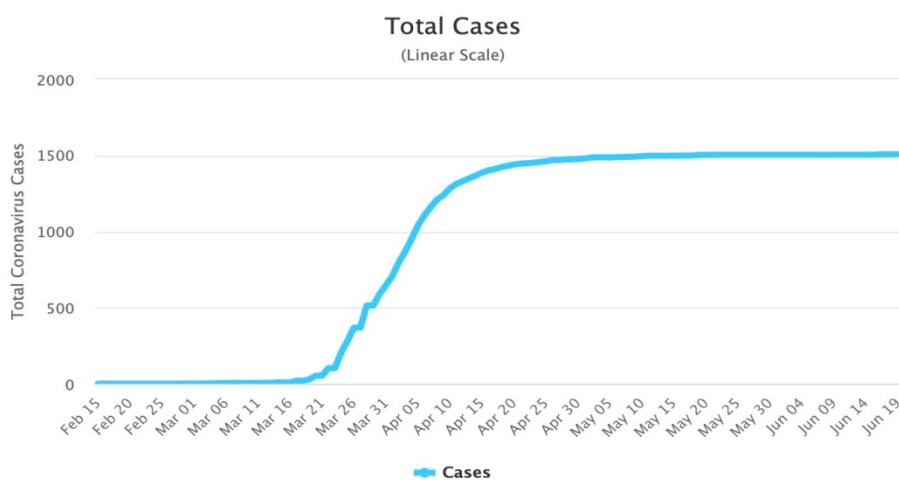
-Prime Minister Jacinda Ardern

Though China faced the real wrath of the virus, it eventually brought it under control. However, unlike China, there were several countries who made sure to contain the virus right from the start and were hence successful in avoiding any social or economic damage.

Successful Countries

New Zealand

This island country with a population of 4.9 million has clearly been the "bright spot" in the global response to this pandemic. As of June 20th, it was the only country in the world to declare itself COVID free. With an overall of just above 1500 cases and 22 deaths as of June 20th, New Zealand has proven to the world the fruits of good leadership.



The country didn't ban travel from China until February 3rd, a day after the USA. The country then enforced a strict quarantine of 14 days for all visitors from March 15th. It was the strictest policy in the world at that time. The country then proceeded to enforce a country wide lockdown, only allowing essential commerce such as groceries, supermarkets, and pharmaceuticals to stay open. Domestic travel was prohibited and social interaction was limited to within the household. Furthermore, the government also boosted its testing capacity, and currently has one of the highest test rates per capita in the whole world. In the crucial months of April and May, New Zealand carried more daily tests than countries such as USA and South Korea who were a lot worse affected.

In addition to the aforementioned policies, the Prime Minister Jacinda Ardern and her government should be given equal credit for the eradication of the virus. The government carried out effective communication to make sure the citizens are always kept upto date. A day before the lockdown, the government sent text messages to each person, informing them about the expectations of the lockdown. Moreover, Ardern continued to give daily speeches and remained optimistic yet clear with her goals. Her clear instructions to the citizens made the people have faith in the government. In one of her briefings Arden said, "We have the opportunity to do something no other country has achieved: elimination of the virus." This kept the public motivated, and hence resulted in no one flouting lockdown regulations. From the first day of the lockdown the streets were deserted, and all non essential shops were shut. Thus, there was complete cooperation by the public.

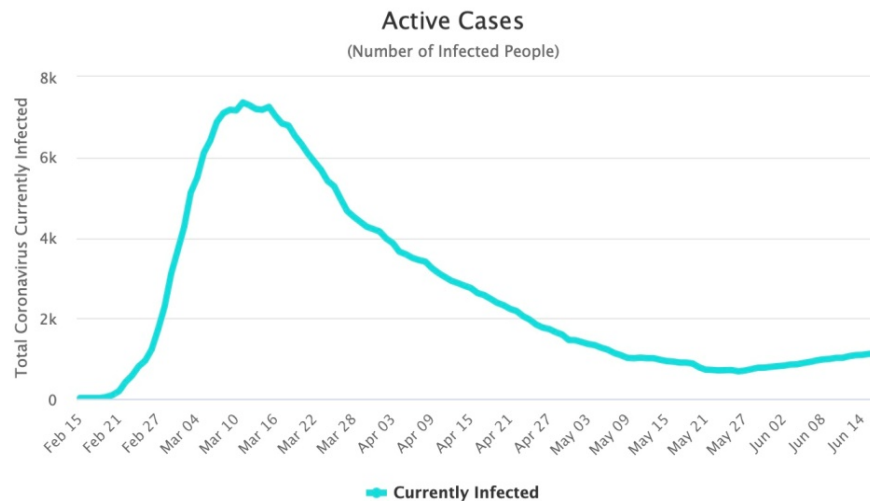
New Zealand's response was completely based on facts, and was well organised and controlled. The country did not hesitate to impose strict rules and regulations, and by continuously keeping its citizens informed, it earned the trust of the public. This further aided the fight against the virus as without the support of the people, the policies will not be effective at all. Therefore, New Zealand acts like the perfect model to the world of what a good government along with public faith can achieve.

South Korea

At the start of February South Korea and USA had the same number of cases. Today, the numbers speak for themselves, thus highlighting the effective response used by South Korea. COVID-19 became a major problem in South Korea when the Shincheonji Church of Jesus in Daegu had a massive outbreak that eventually spread across the country. At one point South Korea had the highest number of cases outside China, but from there it has clearly turned the tables. As of June 20th, it has 12,373 cases and 280 deaths.

So one wonders what saved South Korea from doom. It was the effective implementation of 3 simple steps: test, trace, isolate. As proven through several other countries, this is the magic mantra to controlling a pandemic until a vaccine has been developed. Immediately, after the outbreak in Daegu, government officials obtained a list of all the members of the church, and reached out to each and everyone to self-isolate themselves. Officials went through hours of CCTV footage and carried out several interviews to trace all those who had close contact with the infected.

After this incident, South Korea created and manufactured an accurate and fast test, and distributed it all across the country. Moreover, these tests were free, hence leading to more people coming forward to getting tested. The government also has a state of art tracing system that it developed to beat the Middle Eastern Respiratory Syndrome (MERS) in 2015. The system include keeping track of a person's route, whether the house has been disinfected or not, were the contacts wearing masks, amongst a lot others. This helped in curbing the spread of the virus, as almost each and every contact of the infected person could be identified and made to quarantine. This quarantine is mandatory and there is no escaping it. The government ensured that no one was breaking self isolation norms by using an app that all visitors had to download on arrival. All those who violated self isolation rules faced steep fines, and if the person is a foreigner then he/she is immediately deported. Lastly, along with stringently following the test, trace, isolate mantra, the public briefings in South Korea were lead by experienced scientists, and not politicians. This made the information spread more reasonable and believable by the public.



One can say that South Korea responded so well because of the number of epidemics it has faced before such as the SARS in 2003, H1N1 in 2009, and MERS in 2015. However, it is actually the government being ever prepared and learning from their previous mistakes. Indeed South Korea had the edge over other countries while preventing the pandemic due to their experience, but that does not take anything away from their stupendous response.

Taiwan and Hong Kong

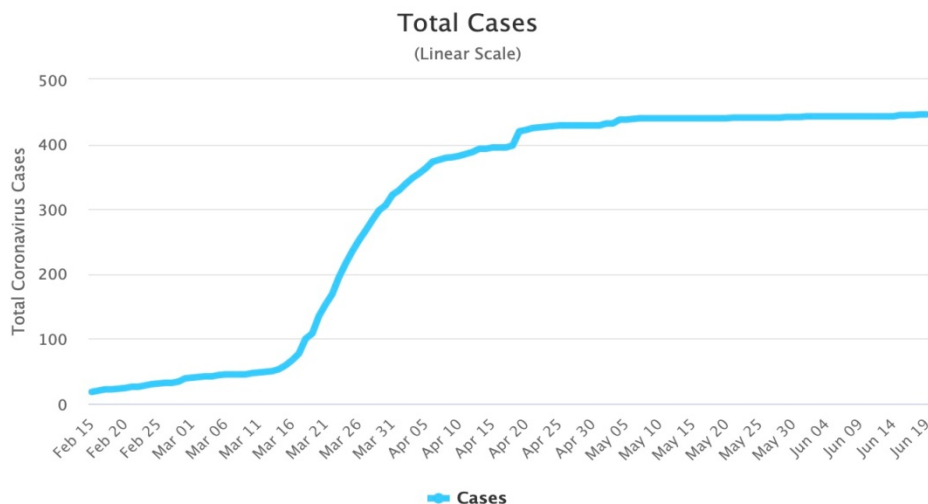
Both these regions were extremely close to China, yet they tackled the virus without having a lot of damage. Moreover, both these countries used similar methods to curb the spread of the virus.

Taiwan

17 years after being hit by the Severe Acute Respiratory Syndrome (SARS) outbreak, Taiwan has been in a constant speed of readiness to counter a contagious disease. This is seen in the government's swift implementation of successful policies. As of June 20th Taiwan had only 446 cases and 7 deaths, and it ranked 198 out of 213 countries in cases per million people. This highlights Taiwan's successful and aggressive measures to contain the virus.

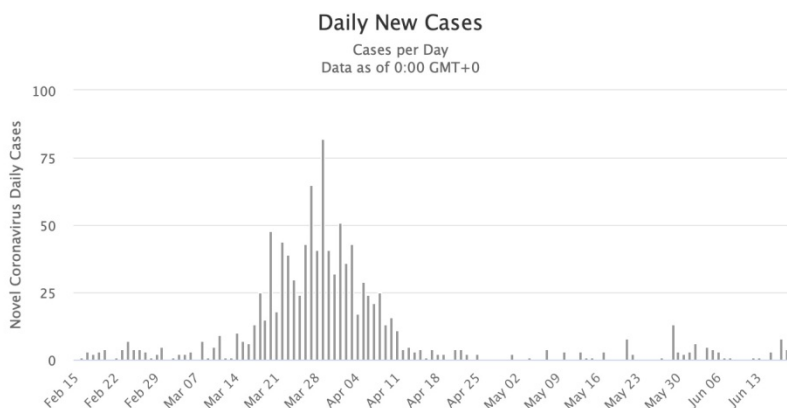
So, what exactly did Taiwan do?

Immediately when information about a novel pneumonia outbreak was confirmed Taiwan started quarantine of passengers on direct flights from Wuhan. On January 2, 2020, the government formed a response disease team and activated the Central Epidemic Command Center (CECC) on January 20th. The CECC helps in overall integration of resources and effective communication to deal with an epidemic. Moreover, Taiwan used technology astutely to help in controlling the pandemic. Passengers arriving from infected countries had to fill-in medical information using their mobile phones, and then the government continuously updated them using text messages. The government is also collaborating with telecom operators to allow them to use GPS to track those on self quarantine, and hence making it easier to fine the offenders. Taiwan also expanded its laboratories and hospitals for faster testing and better treatment. Lastly, Taiwan managed mask distribution extremely well. It banned the export of surgical masks, and distributed the masks using a name-based rationing system. This helped ensure that all the citizens have enough masks and that the masks are distributed in a fair manner.



Hong Kong

Hong Kong just like Taiwan was severely affected by the SARS outbreak and was thus a lot more prepared than several other countries in the world. Even though it is one of the most densely populated areas, and a popular tourist destination, it controlled this pandemic without enforcing any lock down. As of June 20th, Hong Kong had 1128 cases and 4 deaths.



The authorities implemented a combination of border restrictions, social distancing, quarantine and isolation of cases and contacts to curb the spread of the virus. Furthermore, all visitors from infected countries had to undergo a 14 day quarantine even if they did not show symptoms. This technique proved to be extremely effective as there are not only a lot of asymptomatic patients but also it takes 5-6 days for symptoms to show.

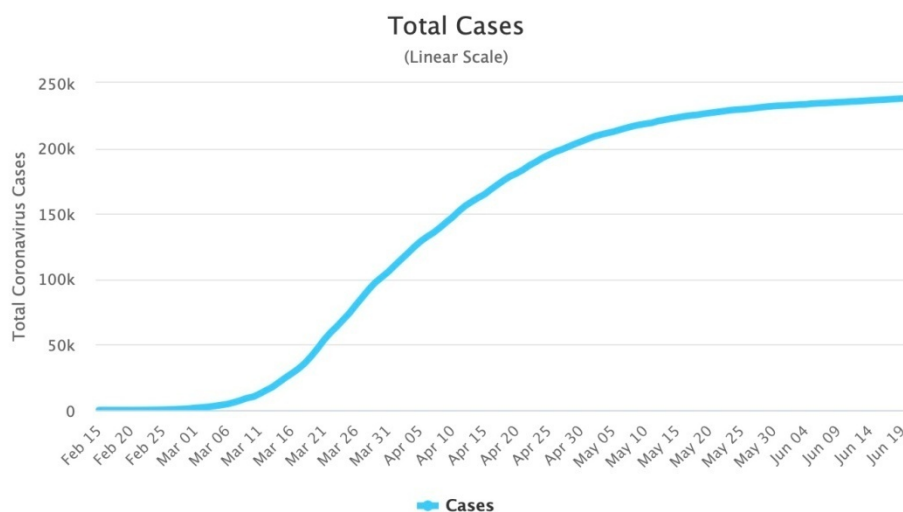
Furthermore, Hong Kong, similar to Taiwan, used technology to help track self quarantine, and social distancing offenders. Starting March 19th, it distributed electronic wristbands to all arriving passengers to help in containing the virus. The wristbands had a built in GPS feature that sent an alarm to the officials if someone breached quarantine norms. Furthermore, the city also used artificial intelligence to monitor the vital statistics of infected patients. Such

state-of-the-art technologies were crucial to improve efforts by Hong Kong to tackle the pandemic. As can be seen, both Taiwan and Hong Kong used similar approaches to successfully stop the pandemic in their respective areas. This underlines the importance of acting early, using strong policies, and using technology to ones benefit. Thus, the actions taken by these governments can act as a model for countries looking to flatten the curve.

Unsuccessful Countries

Italy, Germany, France, UK, and Spain

As Italy moves closer and closer to completely flattening the curve and eradicating the virus, it is imperative to evaluate their response to COVID-19, and learn from their mistakes. Italy was one of the first European countries to get the virus, primarily because of the large number of workers returning from China, and soon it became one of the worst affected amongst the European countries. As of June 20th, it had 238,011 cases, and 34,561 deaths.



Between February 21 and March 22, Italy transformed from having its first COVID-19 case to a nation wide lockdown that forbid all non essential movement of people. This was undoubtedly the toughest challenge this country has faced after the World War 2. However, there were several lapses in the government's response.

Firstly, Italy made a mistake that several other countries, such as Spain and Germany, did too: not take the virus seriously from the first case. As rightly said by the Harvard Business Review, during a pandemic it is most effective to take strong action immediately when the first case is detected, as once it passes the initial stages, the growth is exponential. However, the problem that arises here is that if these extreme actions work, then the public will term the government's response as an overreaction. Thus, politicians hesitated acting immediately at the start of the pandemic. Even though their late reaction can be justified by political constraints, and not having enough information, the ministers were not the right role model for the citizens. The warnings of this contagious virus had pervaded the world, yet Italian ministers continued to engage in handshakes. This made the citizens completely care free, thus leading to the failure to contain the virus. Italians hugged and welcomed all their 30000 Chinese immigrants in fears of being called racist. The first cases in Italy were indeed those of 2 tourists coming from Wuhan. Had they shut off their borders to China, this pandemic might not have ever reached Italy. Moreover, even after the first cases of virus were detected, Italy continued to have large social gatherings and parties instead of implementing social distancing norms.

A second lesson that must be learned by the Italian response is to not indulge in partial, progressive solutions. The Italian government dealt with the pandemic by initially locking down only certain areas and calling them "red zones", to finally extending the lockdown to the entire country. This approach backfired for mainly two reasons. Since the virus has an exponential growth, and the numbers of a particular day cannot predict the future, Italy followed the virus rather than preventing it. Moreover, this approach helped in facilitating the spread of the virus. When the government announced the lockdown of northern Italy, there was a huge exodus to southern Italy, indubitably spreading the virus to new regions. This portrays a clear point that

an effective response to this virus needs to be implemented as a coherent system of action taken simultaneously. The results of this approach has been proven effective when looking at South Korea’s response. What made their policies so effective was the multifarious actions they took at the same time. Testing is effective when used in conjunction with thorough contact tracing, and tracing is successful as long as it is combined with an efficient communication network that gathers and disseminates information about the possibly infected, and so on.

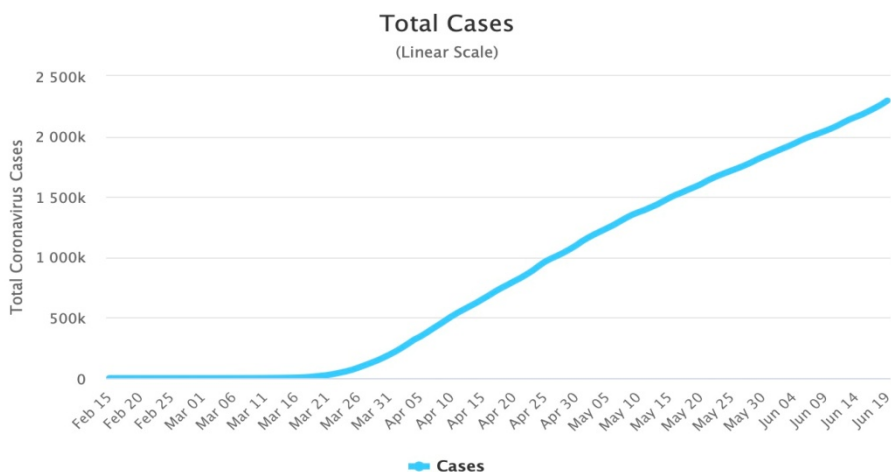
Lastly, Italy faced major communication problems. Firstly, if the demographics of Italy are analysed, one notices that two neighbouring regions Veneto and Lombardy had contrasting responses, and thus contrasting effects. While Veneto had minimal damage, Lombardy was one of the worst affected regions in Italy, even though both regions have similar socioeconomic status. Due to ineffective communication, the government could not broadcast and implement Veneto’s approach efficiently in other regions. Had this communication problem not existed, the spread of the virus could have been efficaciously controlled. Also, Italy maintained two data sets of the of the cases and the number of deaths. One was maintained by the central government, while the other was maintained by the local governments. There was often a lot of discrepancies between these two data sets. These discrepancies significantly exacerbate the management of the pandemic since, in the absence of truly comparable data (in and across countries), it is much more difficult to allocate resources and comprehend what works where (for example, what inhibits effective population tracing).

Although Italy eventually flattened the curve, it made several mistakes on its road to success. As can be seen, the pandemic could have been easily controlled throughout the country had it not been for the initial rash decisions. This would have reduced the impact on both the economy and the citizens.

Just like Italy, several other European countries made the same mistakes as Italy. Countries such as Spain, France, UK, and Germany were also completely wrecked by the virus. However, the death toll of all these countries except UK is significantly lower than that of Italy. This is because Italy has one of the world’s oldest population. This caused a higher mortality rate in Italy. Furthermore, as compared to other European countries with similar cases, the deaths in Germany are significantly lower. This once again is mainly related to population as only 20% of Germany’s population is above the age of 60, as compared to Spain which has about 50% above the age of 60. On the other hand, one thing that made UK's approach stand a little apart from that of the other countries was a direct implementation of a 6 month lockdown. While based on numbers this must have seemed ineffective, the result would have been far worse had this lockdown not been imposed.

USA

Being the richest country in the world with some of the best laboratories and scientists, the world looked up to the United States of America as they battled COVID-19. However, no one was impressed to see the country’s response to this new virus. As of June 20th, the country had 2,297,360 cases and 121,407 deaths. It sits on top of all the other countries once again, but this time for bad reasons. So one wonders what went wrong in a country with such high technological prowess, and power.



The problem with the USA wasn’t that they did not have enough intelligence or weren’t prepared for the pandemic. In fact, the country had started its response on January 7th itself by setting up an “incident management team”, and by January 20th the CDC (Centers of Disease Control and Prevention) had developed a test of its own based on the genome released by the Chinese. The CDC distributed this test of its own to state labs to start initial testings. However, soon it was found that these tests were faulty, and gave “inconclusive results.” Thus, the manufacturing of these tests had to be stopped and a new one had to be

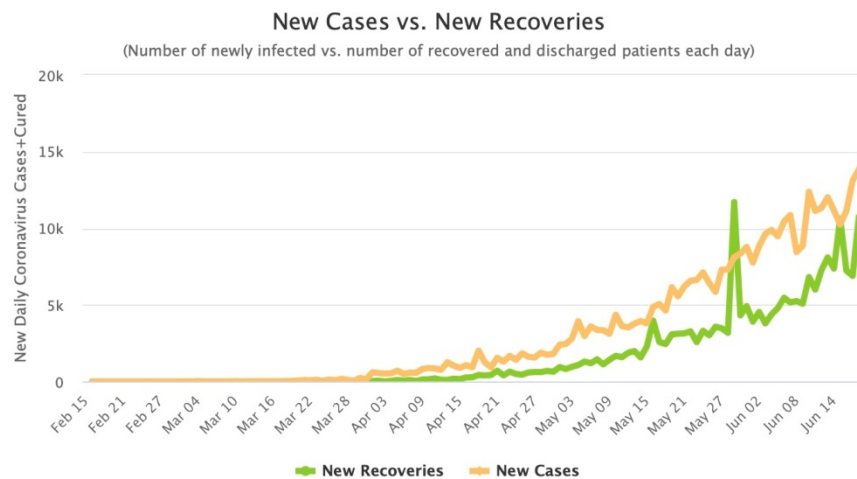
developed. This startling setback disrupted the CDC's efforts to track the virus when it was most critical to do so. While the virus was spreading rampantly across the country, the country could carry out only 100 tests a day. Moreover, these tests were only limited to those returning from China or those in close contact with someone infected. So by the time the new test was developed and approved, the virus had pervaded almost every corner of the country. When the country should have been excessively testing, tracing, and selectively quarantining those who were in close contact with the infected, it instead had its attention on approving a feasible test due to previous technical failures.

While this was the major reason the virus spread infected in the USA, it was coupled with a lack of direction given by the President. Trump was hesitant in enforcing a lockdown as he was afraid of the economic damage that it would cause. Thus, he just told his citizens to social distance and keep a six feet distance as he believed the virus is "going to disappear" on its own just like a "miracle." This delusional thinking led to the unnecessary deaths of thousands of citizens, and at the same time also hit what he was trying to protect the most: the economy. Moreover, instead of reducing or completely banning the exports of surgical masks like Taiwan, Trump did nothing about it. This caused a massive shortage in masks when the country needed it the most. Lastly, Trump opened the meat factories, terming it as an essential service. No doubt food is an extremely essential good, what he did not consider is that meat factories are the perfect breeding grounds for this virus. They have a cold environment, with employees standing shoulder to shoulder along the packaging lines. These factories not only flouted the social distancing norms, but at the same time forced all its workers to come as if it was a normal working day. Later on, researchers found out that meat processing factories were primarily responsible for higher outbreaks in their proximity.

Though Trump took stronger actions later on, it was too late as the toll continued to surge. USA might have been well prepared but technical setbacks and a lack of guidance by the President made this country a perfect breeding zone for the corona virus. Had USA simply used the test provided by WHO instead of developing their own, their current state would have certainly been a lot better.

India

India, the largest democracy in the world, had to deal with the coronavirus relatively late as compared to other European countries. Thus, India had the opportunity to learn from the mistakes of all the other countries that had suffered because of COVID-19. Being the second largest populated country in the world, the government had to be very cautious when the first few cases of the virus started erupting. The government went onto implement several lockdowns, but in the end their endeavours proved to be abortive. As of June 20th, India had 396,661 cases and 12,971 deaths, and ranked 4th in the world in terms of cases. However, the massive population of India must be taken into account. If seen through cases per million, one can assume that India is doing really well as out of 213 countries it ranks at 122 with 277 cases per million as of June 19th.



Even though there is some hint of success in India's coronavirus response, it does not cover up the things the government did wrong. Normally countries use lockdown as a last resort, however India started off with it early. Modi, the Prime Minister of India, announced a nation wide long down when India was only at about 550 cases. Though this was an excellent step to control the virus, it failed to have a major impact due to one major reason: the lack of time given to citizens to prepare. Countries such as New Zealand, where in the lock down worked wonders, gave citizens at least 4 days to prepare for the lockdown. Here in India though, citizens were given just 4 hours. This sent panic waves across the country, and affected mainly the poor migrant workers. The middle class and rich were still able to survive the lock down, however migrant workers were forced out of their shanties as

they had no money to pay the expensive rents in urban cities such as Mumbai. With migrant workers all over the road, and some even choosing to walk to their villages, the virus didn't exactly get contained. Due to several protests, and unhygienic living conditions the virus spread even faster in these poor communities. When they were finally allowed to board trains/buses to their villages, the damage had already been done. As they returned to their villages, they became harbours for the virus, carrying it from the cities to the more rural and secluded parts of India. Had the Indian government given the migrants, and other citizens some more time to prepare for the lockdown, this situation could have been certainly avoided, and India's numbers might have been a lot lower.

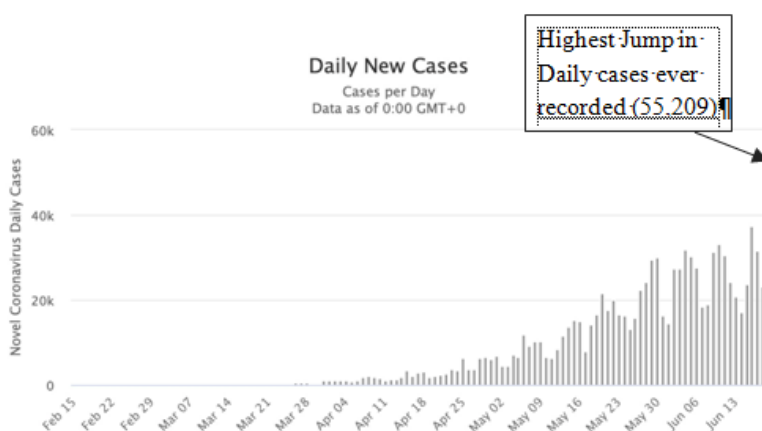
Another problem that India faced was that a lot of people did not take the lock down very seriously. Days after the announcement of the lockdown, people continued to roam the streets as if nothing had happened. The most notable incident of breaking the lockdown rules was in the city of Nizamuddin. Inside this building a group of 2400 Sunni muslims had gathered for annual preaching sessions. They continued to live in a building of 6 floors even after the lockdown was announced. When this crowd finally dispersed, it was found that 24 of the preachers had tested positive for the virus. Moreover, cases around the country were getting linked back to this same incident. Though the government carried out contact tracing, it was already too late as the crowd had taken 21 buses all across India.

Finally, India went wrong with the quarantine of arriving passengers from worst affected countries such as USA and Italy. The government should have taken New Zealand or Hong Kong's example and isolated each and every passenger in government facilities/hotels for 14 days upon arrival. However, it opted to only isolate those who had symptoms. This was a grave mistake as several asymptomatic patients thereby entered the country. Furthermore, several people took high dosages of medicines to reduce their body temperature upon arrival, thus eventually being allowed to enter the country.

Though India implemented policies early on, tiny slips in each of them allowed the virus to devastate the country. As of June 19th, most of the daily cases in the country are erupting in the urban cities, while the rural areas are considerably safe. This is still positive as the virus has still not spread into every corner of the country. Moreover, India's high number of cases should not mislead people as the cases per million is extremely small. Therefore, though the country has had to suffer several social costs, worse effects of the virus have been prevented by the government.

Brazil

It can be said that corona caught Brazil at the wrong time. The largest country in South America was in the middle of a political dilemma, when the first cases of the virus started to emerge. Since then, the country has gone into a downward spiral. As of June 20th it has the second highest cases in the world (1,038,568) and records the most number of daily deaths in the world. The sad truth is that this country is far from its peak, and is about to become the next COVID-19 hotspot. On June 19th, it had the highest daily jump in cases ever recorded in the whole world: 55,209 new cases.



The problem in Brazil stems from the political crisis it is facing. As the number of people against the current president, Jair Bolsonaro, his supporters become more fervent in their demonstrations. Currently, in Brazil millions of people refuse to socially isolate themselves. MrBolsonaro calls this a "little flu", and when Brazil crossed the 5000 death mark, he responded with a "so what?". He has encouraged all the people in Brazil to get back to work and forget about social isolation, a direct contradiction of what the local governors and scientific experts are saying. This has lead to crowded banks, packed metros, and buses filled with supporters of the President as they encourage others to get out of their house and start working. The President also holds massive rallies for his supporters and still shakes hands with his supporters. The President continues to spread his delusional thoughts to

the public, claiming that if Brazilians do not get back to work, unemployment will become a bigger problem, and everyone will be left hungry “like a country in sub-Saharan Africa.” He openly calls lockdowns a path to failure. Thus, these thoughts of his causing nothing but an increased burden on hospitals.

In addition to this, Brazil is well behind in testing. At a single time, it is processing more than 93000 tests. Other than slow testing, the government is not carrying enough tests as the number of test per thousand is noticeably lower as compared to similarly affected countries such as USA. According to a Reuters report, Brazil most probably has 12 times more coronavirus cases than the official count. Furthermore, the government is trying to meddle with the official data just like “totalitarian regimes.” After Brazil crossed the 10,000 death mark, the government took down the official website where they were maintaining the count of the cases and deaths. A few days later a new official site for the number of cases emerged, but with all the data about previously infected unavailable. This is a desperate attempt by the government to hide the wide scale damage that has already happened.

As Mr Bolsonaro refuses to change his stand on the virus even as Brazil is about to officially cross a million cases suggests that the country is all ready to fall into a deep pit. It is soon expected to overtake the USA unless the President starts taking the virus seriously, though it seems to be extremely unlikely. All the Brazilians can hope for is a miracle as people around the country continue to break social distancing norms and horde public places.

Conclusion

After looking at the response of all the above countries, a clear list of do’s and don’ts have been highlighted. To curb a pandemic in the future, it is necessary for countries to be vigilant and act immediately or even before the virus has entered the country. Testing must be boosted up, manufacturing of masks should be increased, all close contacts of patients must be traced, and self isolation must be mandatory for those who have the slightest of chances of carrying the virus. If this itself is done efficiently, then a lockdown might not even be required. However, if things start to get out of control a strict lockdown must be immediately imposed to mitigate the virus. Moreover, a strong government is required that is extremely vocal and can gain the trust of the public. If this is not done, there will be a lot of disobedience amongst the people, and hence the policies enforced by the government will be ineffective. Most importantly countries need to invest heavily in health care systems, so that even in the future if a pandemic of this scale arises, doctors won’t have to choose who dies and who lives. If these steps are followed by a country, then indubitably any virus can be eradicated from a country. Hopefully, this pandemic will act as a learning experience for countries all over the world, so that in the future we can control an outbreak even before it becomes a pandemic.

Bibliography

- [1] About the virus. (n.d.). Retrieved from <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov>
- [2] Bringing a pandemic to heel. (2020, June 12). Retrieved from <https://www.cnn.com/2020/06/12/health/coronavirus-heel/index.html>
- [3] Coronavirus to cost China's economy US\$196 billion, ex-IMF official says. (2020, February 24). Retrieved from <https://www.scmp.com/economy/china-economy/article/3051909/covid-19-likely-slash-us185-billion-chinas-economy-january>
- [4] COVID-19 Coronavirus - Supporting our customers and employees. (n.d.). Retrieved from <https://www.pickerrelay.com/covid-19-coronavirus/>
- [5] COVID-19 Map. (n.d.). Retrieved from <https://coronavirus.jhu.edu/map.html>
- [6] Covid-19: Nizamuddin markaz says 1500 members broke away before quarantine. (2020, March 31). Retrieved from <https://www.hindustantimes.com/india-news/covid-19-nizamuddin-markaz-says-1500-members-broke-away-before-quarantine/story-8fHWdVtOkRwSibZcFyR7pO.html>
- [7] Garrett, L. (2020, February 15). How China's Incompetence Endangered the World. Retrieved from <https://foreignpolicy.com/2020/02/15/coronavirus-xi-jinping-chinas-incompetence-endangered-the-world/>
- [8] Gary P. Pisano, S. (2020, April 17). Lessons from Italy's Response to Coronavirus. Retrieved from <https://hbr.org/2020/03/lessons-from-italys-response-to-coronavirus>
- [9] Haseltine, W. A. (2020, April 04). Why America Is Losing To COVID-19. Retrieved from <https://theasianpost.com/article/why-america-losing-covid-19>
- [10] Act, P. (Producer). (2020, June 1). *How Coronavirus Broke America | Patriot Act with Hasan Minhaj | Netflix* [Video file]. Retrieved from <https://www.youtube.com/watch?v=nrKxOnNaGhc>
- [11] How Hong Kong controlled the coronavirus without a lockdown. (n.d.). Retrieved from <https://news.cgtn.com/news/2020-04-20/How-Hong-Kong-controlled-the-coronavirus-without-a-lockdown-PQb3c6N4KQ/index.html>
- [12] Jeremy Rossman Honorary Senior Lecturer in Virology and President of Research-Aid Networks. (2020, June 02). Coronavirus: Why is Germany's fatality rate so low? Retrieved from <https://theconversation.com/coronavirus-why-is-germanys-fatality-rate-so-low-135496>
- [13] Keren Landman, M. (2020, June 01). What We Can Learn From South Korea's Coronavirus Response. Retrieved from <https://elemental.medium.com/what-we-can-learn-from-south-koreas-coronavirus-response-97a4db5c9fef>

- [14] Londoño, E., Andreoni, M., & Casado, L. (2020, May 16). Brazil, Once a Leader, Struggles to Contain Virus Amid Political Turmoil. Retrieved from <https://www.nytimes.com/2020/05/16/world/americas/virus-brazil-deaths.html>
- [15] Londoño, E. (2020, June 08). Furious Backlash in Brazil After Ministry Withholds Coronavirus Data. Retrieved from <https://www.nytimes.com/2020/06/08/world/americas/brazil-coronavirus-statistics.html>
- [16] Michael. (2020, March 28). The Lost Month: How a Failure to Test Blinded the U.S. to Covid-19. Retrieved from <https://www.nytimes.com/2020/03/28/us/testing-coronavirus-pandemic.html>
- [17] Milhorange, M. S. (2020, May 15). Brazil Risks Being Overwhelmed by Coronavirus Outbreak. Retrieved from <https://time.com/5837434/brazil-coronavirus-covid-19-latin-america/>
- [18] Myers, S. L. (2020, March 29). China Created a Fail-Safe System to Track Contagions. It Failed. Retrieved from <https://www.nytimes.com/2020/03/29/world/asia/coronavirus-china.html>
- [19] Page, J. (2020, March 24). China's Progress Against Coronavirus Used Draconian Tactics Not Deployed in the West. Retrieved from <https://www.wsj.com/articles/the-west-is-misinterpreting-wuhans-coronavirus-progress-and-drawing-the-wrong-lessons-11585074966>
- [20] SARS. (2017, December 06). Retrieved from <https://www.cdc.gov/sars/about/fs-sars.html>
- [21] Schwoerer, P. B., & Walter, P. B. (2020, April 30). New Zealand has 'effectively eliminated' coronavirus. Here's what they did right. Retrieved from <https://www.nationalgeographic.com/travel/2020/04/what-new-zealand-did-right-in-battling-coronavirus/>
- [22] Sharma, N., Dwivedi, S., & Ghosh, D. (2020, March 30). 300 In Hospitals For Coronavirus Test, Many More Quarantined After Delhi Mosque Gathering. Retrieved from <https://www.ndtv.com/delhi-news/coronavirus-india-at-delhis-nizamuddin-75-tested-2-000-quarantined-after-mosque-event-2202935>
- [23] Shih-chung, C. (2020, May 02). Taiwan's coronavirus protocol shows how it is done. Retrieved from <https://www.thehindu.com/opinion/op-ed/taiwans-coronavirus-protocol-shows-how-it-is-done/article31484681.ece>
- [24] Spring, J. (2020, April 14). Brazil likely has 12 times more coronavirus cases than official count, study finds. Retrieved from <https://www.reuters.com/article/us-health-coronavirus-brazil-cases/brazil-likely-has-12-times-more-coronavirus-cases-than-official-count-study-finds-idUSKCN21V1X1>
- [25] Thompson, D. (2020, May 06). What's Behind South Korea's COVID-19 Exceptionalism? Retrieved from <https://www.theatlantic.com/ideas/archive/2020/05/whats-south-koreas-secret/611215/>
- [26] Tulsi, K. (2020, June 01). Lockdown Couldn't Flatten Covid Curve, But Brought Indian Economy To Grinding Halt. Retrieved from <https://www.outlookindia.com/website/story/opinion-lockdown-didnt-only-fail-to-contain-virus-it-bent-the-growth-rate-and-impaired-economy/353971>
- [27] Varadharajan, P. (2020, June 13). New Zealand Became Coronavirus Free with an Uptight Lockdown! Retrieved from <https://www.inventiva.co.in/stories/priyadharshini/new-zealand-became-coronavirus-free-with-an-uptight-lockdown/>
- [28] Brazil. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/brazil/>
- [29] China. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/china/>
- [30] China, Hong Kong SAR. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/china-hong-kong-sar/>
- [31] India. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/india/>
- [32] Italy. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/italy/>
- [33] New Zealand. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/new-zealand/>
- [34] South Korea. (2020, June 20). Retrieved from <https://www.worldometers.info/coronavirus/country/south-korea/>
- [35] Taiwan. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/taiwan/>
- [36] United States. (n.d.). Retrieved June 20, 2020, from <https://www.worldometers.info/coronavirus/country/us/>