حكومة عجمان
Government of Ajman

مركز الإحصاء والتنافسية
Statistics and Competitiveness Center

Global Practices in combating the Novel Coronavirus

Statistics and Competitiveness Center
Government of Ajman
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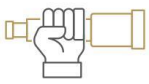
ABOUT ASCC

Ajman Statistics and Competitiveness Center has been established pursuant to the Amiri Decree No.28 of 2017. The Center is the competent local authority in Ajman and the main source and the sole reference in respect of statistical and competitiveness affairs prescribed in this Decree.

The Center aims at realizing the following objectives:

1. Organization and development of statistical activities, so that the interests of the UAE and the Emirate are achieved.
2. Development of an integrated local statistical system.
3. Upgrading the competitiveness of the Emirate in various sectors.
4. Contribution to the promotion of the Emirate's status in the local and international competitiveness reports.
5. Supporting the decision making system of the government through providing accurate and up-to-date data and information.



The Vision :

To enhance Ajman›s future through the use of Knowledge

The Mission :

To promote statistical and competitive efforts through the application of best practices and following the scientific and statistical methodologies as well as internationally recommended standards to meet the needs of data users and decision makers in the Emirate

The Values :

Quality/Fairness/Professionalism/Credibility/Creativity and Innovation/ Confidentiality/Transparency

In case of quotation, please refer to the publication as follows:
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Introduction

The Novel Coronavirus disease (COVD-19), as defined by the World Health Organization (WHO), is: “An infectious disease ", caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. The most common symptoms of COVID-19, are fever, tiredness, and dry cough. People may catch COVID-19 from others, who have the virus which spreads through different means. Harvard University researchers believe that 20% to 60% of the global population could be infected, and cautiously estimate that 14 million to 42 million people may lose their lives. In fact, The virus outbreak has become one of the biggest threats to human lives, causing a human tragedy, affecting hundreds of thousands of people, as well as impacting their health and wellbeing, thus forcing governments around the world, to act rapidly and effectively, to protect vulnerable citizens and decrease the damage to their lives.

The extent to which the direction and magnitude of mortality is curbed depends on how swiftly countries can reduce the new infections, isolate the sick personsand actuate health services, and on how long setbacks can be stopped and contained. Also the possible exit strategy for the Coronavirus pandemic could occur, when enough people have developed immunity to the outbreak through infection. This argumentative concept is known as “herd immunity.” (Sam Meredith 2020).

This report highlights some actions taken by counties, to slow down the spread of the virus outbreak and bring it down to a standstill, to finally come up with the best practices, in containing the virus spread, to be presented as examples for other countries to follow suit. However, this report is not an inclusive review of the available literature, but rather it provides a broad review of actions taken by countries to contain the virus outbreak.

Global Practices

One of the best successful global practices in combating the Novel Coronavirus outbreak and curbing its speedy spreading, are those of South Korea, Singapore and China. The credibility of this argument is solidly supported by the following information about these countries and their ranking in Deep Knowledge Group assessment, as well as, highlighting their actions during this period.

Coronavirus cases in South Korea dropped sharply, whereas case counts and deaths were soaring in Italy, Spain, France, and Germany, and many other countries, which imposed lockdowns and closed borders. Amid these horrific trends, South Korea emerged as a symbol of hope and a model to follow suit. The country of 50 million population, appears to have successfully slowed down its pandemic, reporting only 74 new cases compared to 909 at its climax on February 2020. South Korea had done so without locking down total cities or taking some oppressing measures.

Behind this success, lies the most expansive and well organized testing program in the world, combined with thorough efforts to isolate infected patients , trace and quarantine their contacts. South Korea has tested more than 270,000 people, which amounts to more than 5200 tests per million inhabitants, more than any other country, compared to the United States, which has carried out 74 tests per million inhabitants.

As for Singapore, its Coronavirus Cases amounted to 3,699, with 447 new cases confirmed and the deaths were10 only, while those recovered amounted to 693. Comparing these figures with other several countries, especially in Europe, supports taking Singapore practice as a model.

China, which is the origin of Novel Coronavirus outbreak, has succeeded in curbing the spread of the virus, compared to many other countries. For instance, the cases of those infected equaled 82,295,

compared to 98,476 in UK, 133,209 in Germany, 147,863 in France, 165,155 in Italy, 177,633 in Spain and 622,923 in USA.

Countries Ranking

In fact, the Coronavirus Outbreak data are not yet fully analyzed in an efficient manner to provide insights, as the pandemic is a complex system involving many components, and it is influenced by healthcare, socioeconomic, governance, and political factors. However, in this regard, Deep Knowledge Group, has developed advanced analytical frameworks to analyze these data, to help countries make right decisions that maximize fruitful outcomes for their people. To this end, a ranking system was developed, to rapidly assess the changing situation in countries, as they strive to mitigate the health and economic negative consequences of the virus.

However, some countries proved very effective in early combating the virus, by focusing on early prevention through deploying quarantine measures, before the number of confirmed cases soars, and using efficient methods for treating hospitalized patients. A best example of these countries comprises South Korea, Singapore and China, which rapidly mobilized emergency efforts to contain the virus and increase hospital capacity. They utilized technologies including big data analysis, jointly with medical treatment and healthcare management techniques, all being structured in a sophisticated way.

Each country was ranked with a numerical score constructed using a well-defined methodology, giving a specific importance factor, to evaluate the ongoing situation in mitigating the health and economic consequences of the virus. These rankings include, Safety Rank, Risk Rank and Treatment Efficiency Rank, as explained below:

1. Safety Ranking

The **safety ranking**, determines levels of health and safety for each country during the pandemic, through four distinct categories, namely; Quarantine Efficiency, Government Management

Efficiency, Monitoring and Detection, and Emergency Treatment Readiness. South Korea, Singapore and China, did well in the Safety Rank, scoring the third , fifth and eighth places, respectively, as shown in the following Figure1:

Figure 1: Safety Ranking

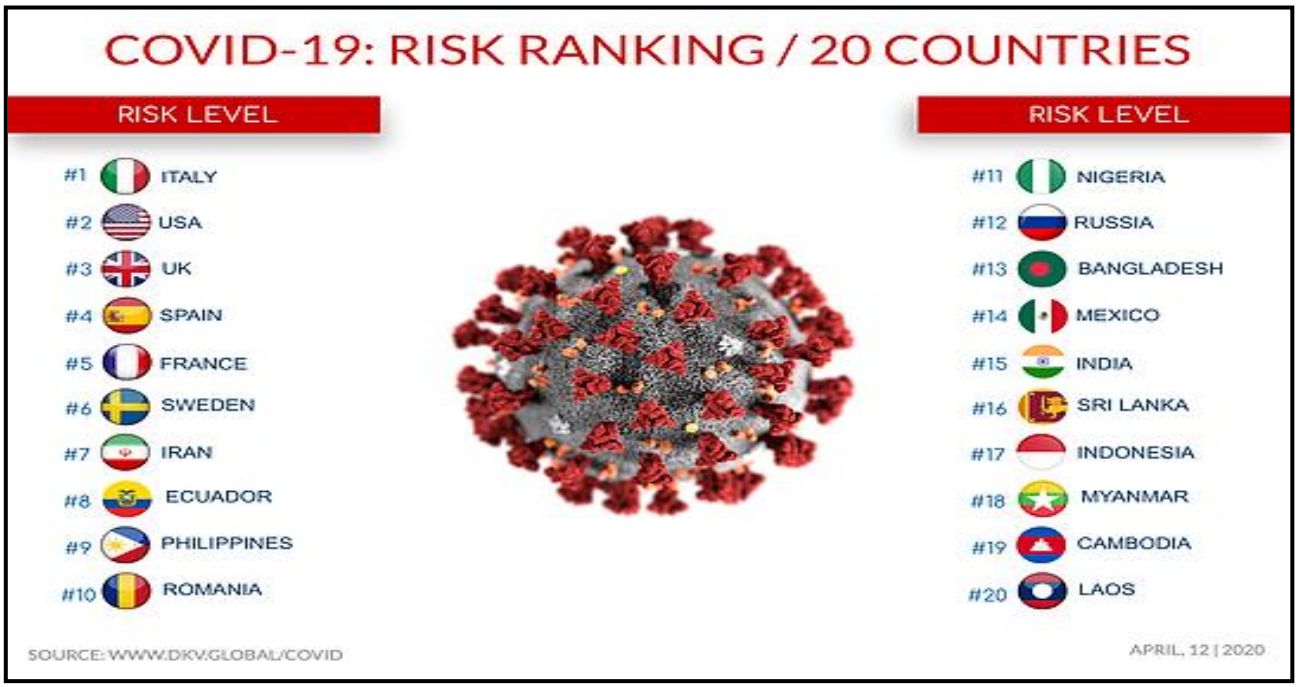
2. Risk Ranking

Countries are benchmarked according to their levels of risk, according to a variety of medical and non-medical factors, including risk of infection, hospitalization, death and lasting health conditions, as well as the country's risk of negative economic, quality-of-life and other issues resulting from the pandemic.

This risk rank is based on information, where citizens will have the greatest likelihood of positive outcomes, during the global pandemic outbreak, across the factors impacting the general safety, wellness and quality of life, utilizing 4 distinct categories, namely; Infection Spread Risk, Government Management, Healthcare Efficiency and Regional Specific Risks.

South Korea, Singapore and China, did well in the Risk Rank, as they are not included among the 20 leading countries, as shown in the following Figure2:

Figure2: Risk Ranking



3. Treatment Efficiency Ranking

The Treatment Efficiency Rank, benchmarks countries' performances, through 4 distinct categories. These categories include: monitoring infection outbreak, handling critical cases, managing non-critical cases and developing tests, vaccines and effective virus treatments, as well as, novel approaches to treatment researches and development (R&D).

China, South Korea and Singapore, did outstandingly in the Treatment Efficiency Rank, scoring the 2nd, 3rd, and sixth places, respectively, as shown in the below Figure 3. (Deep Knowledge Group 2020).

Figure 3: Efficiency Ranking

The Individual Practices of South Korea, Singapore and China, in curbing COVID 19

To shed more light on the practices of these countries, each will be considered separately as shown below:

The South Korean Experience

The South Korean experience with combating Novel Coronavirus outbreak, emerges as an outstanding practice, due to the following effective actions and measures taken by the government:

- Carrying out strict quarantine measures and testing campaigns, which helped to effectively curb the virus spread. South Korea was effective in controlling its mortality rate, through the widespread of rigorous measures, taken by its biotech team, in directing

their labs to work to stop the virus's inevitable spread. However, within days, they developed detection kits, which are highly demanded around the world now.

- In this regard, South Korea immediately began testing hundreds of thousands of people, even those not showing symptoms of the virus disease. They developed tracking application that can detect people with corona, within 100 meters' distance. Besides, the government provided a small subsidy for citizens, particularly those who are self-isolated, to cover their basic living expenses. The backbone of South Korea's success was the mass, indiscriminate testing, followed by rigorous contact tracing and the quarantine of anyone, whom the carrier has come into contact with.

- South Korea has universal healthcare facilities, which accounts for double the number of hospital beds in any of the OECD countries, and trible that of the UK and costs half of what Americans pay for similar medical procedures (Dudden A and Marks A, 2020)

The Singapore Experience

The Singapore experience stands as an effective practice, in curbing the coronavirus outbreak. Singapore is characterized by having a top world-class health system, with strict tracing and containment measures.

Singapore's number of cases is still on the rise, but it is no longer among the worst hit nation worldwide. It seems that, willingness of the citizens to place the community and society needs over individual liberty, helps in containing public health crisis. Singapore was very aggressive in this regard and continues to be so. It was one of the first countries to impose restrictions on anyone with recent travel history to infected countries. It has a strict hospital and home quarantine rules for potentially infected patients and is extensively tracing anyone who might have been in contact with any one of them. Moreover, it penalizes those who give false information on their travel history and will not hesitate to take strong action against rule breakers, through swift and decisive response.

Singapore made good use of its early infections to establish an advanced contact tracing system, which allows authorities to map out the infected patients. A study by Harvard University's Center for

Communicable Disease Dynamics estimates that Singapore detects almost three times more cases than the global average due to its strong disease surveillance and fastidious contact tracing.

The country's experience with the previous outbreaks , meant that precautions were already in place, including ready-made government quarantine facilities and a 330-bed, state-of-the-art national center for managing infectious diseases.

The Chinese Experience

China used many disease-fighting tools and actions to end the spread of the new coronavirus. However, their success in managing the Coronavirus crisis could be attributed to the following three factors:

1. The nature and peculiarity of the Chinese political and socio-cultural systems in implementing a strict system to prevent the spread of the virus, including a package of tough measures to curb the spread of suspected cases, detect infections and impose group mandatory isolation, with high efficiency.

2. The availability of huge financial and technical resources and their prompt deployment, within a short period of time. The Chinese government and large companies demonstrated a high capability to promptly deploy artificial intelligence techniques, which are available, to a number of large Chinese companies, in managing the crisis, such as the autonomous mobile droids, used to provide food and medical supplies and disinfect hospitals. These played a significant role in reducing contact and direct human interaction with infected patients and heavily infected places.

3. Awareness of Chinese big companies of their social responsibility, particularly information technology and electronic commerce companies, which played an important role in the following two main fields:

a) Contributing to the provision of accurate and updated information on the nature of the virus and the map of its spread, the method of access to the necessary medical services, and the map of medical centers.
b) Some of those companies played a role in supporting medical research and development activities, as did Alibaba Company in offering free use of its artificial intelligence computing capabilities to state research institutions, to support research and development activities to learn the genetic composition of the virus and the processes of developing the necessary vaccine.

In fact, the role played by the Chinese big companies in these two fields, had a significant impact on the effectiveness of managing the crisis and curbing the virus outbreak. (Mohamed Fayez Farahat 2020).

***Summary*: The overall top Practices of South Korea, Singapore and China, in curbing COVID 19**

The top outstanding measures and actions, taken by the three countries in successfully combating COVID19 and curbing its outbreak, could be summarized as follows:

- Created networks of numerous public and private laboratories to test for coronavirus.
- Managed to design and create tests and set up networks of labs across their countries.
- Testing is widely available, as hundreds of thousands of people are being sampled every day.
- The governments are making information public, as the GPS locations of people confirmed for COVID-19, are made available on an app., so that others can avoid those areas.
- These countries relied more on communication through Social Media, mass messaging, with cellophanes vibrating with emergency alerts, whenever new cases are discovered in their districts. Websites and Smartphone apps., detail hour-by-hour, timelines of infected people's travel — which buses they took, when and where they got on and off, even whether they were wearing masks.

- Television broadcasts, subway station announcements and Smartphone alerts provide endless reminders to wear face masks, pointers on social distancing and the day's transmission data.

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