

# COVID-19 Regional Safety Assessment Using Evaluation Based on Distance from Average Solution (EDAS) Method

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**Abstract:** The process of assessing the safety and risk level of a particular region or area in respect to the COVID-19 pandemic is known as COVID-19 Regional Safety Assessment. It involves analyzing various factors, such as the number of active cases, testing and reporting capabilities, vaccination rates, healthcare system capacity, implementation of public health measures, travel restrictions, presence of variants of concern, and localized outbreaks. A complete evaluation of regional safety is necessary for public health professionals, legislators, and residents to successfully prevent the spread of COVID-19 and protect public health and wellbeing. Authorities may identify areas of concern, distribute resources wisely, and put targeted measures in place to restrict the virus's spread by performing a thorough examination. In order to restrict the virus's spread and protect the health and welfare of communities, it is crucial for guiding decision-making processes, identifying problem areas, and effectively allocating resources. The research carried out through regional safety assessments advances our knowledge of the pandemic, guides public health initiatives, and encourages the use of evidence-based decision-making in order to effectively battle COVID-19. Distance from Average Solution-Based Evaluation (EDAS)The evaluation based on distance from the average solution approach assesses the efficacy or quality of individual solutions or data points by comparing each solution or data point to the average or mean solution. This approach is commonly employed in various fields, including optimization, data analysis, and decision-making. In this evaluation method, the average solution serves as a reference point or baseline. It is crucial to remember that the evaluation's specific context and goals may influence the choice of the average solution and distance metric. Additionally, other evaluation criteria or metrics may be employed in conjunction with the distance-based evaluation to obtain a more comprehensive assessment of the solutions. China, Denmark, Germany, Hong Kong, Hungary, Israel, Australia, Austria, Canada, and Efficiency of the government, monitoring and detection, and quarantine Emergency Preparedness, regional resilience, and healthcare readiness .Ranking of the nation based on the Covid-19 Regional Safety Assessment survey. Hungary is shown as occupying the last slot, whereas China is listed as occupying the first spot. It has been noted that China has a significant influence on COVID-19.

**Keywords:** COVID-19, Assessment of regional safety, Virus, Quarantine.

## 1. INTRODUCTION

The movement of medical professionals and materials needed to stop the virus's spread and save lives has been significantly disrupted as a result of the Covid-19 outbreak. There have been a lot of difficulties caused by unprecedented border closures and aero plane cancellations .Around 90% of commercial passenger flights have been cancelled, and more than 130 nations have enacted a range of travel restrictions, including screening procedures, quarantine measures, and bans on travel from high-risk regions. These extended border closures contradict the World Health Organization's (WHO) recommendation against imposing trade or travel restrictions on countries facing COVID-19 outbreaks. When COVID-19 was first designated as a Public Health Emergency of International Concern in January 2020, Dr. Tedros Adhanom Ghebreyesus, the Director-General of WHO, emphasized that there was no need for pointless intervention with international travel and trade.. The International Health Regulations (IHR), an international treaty on collective action, state that health measures taken by countries should not excessively restrict international travel or intrude on individuals more than reasonably available alternatives, according to a group

of authors writing in The Lancet in February. The IHR, last revised in 2005 and accepted by 196 countries, provides the WHO with a legal framework to lead global efforts in combating infectious diseases. However, 7.1 billion people, or at least 90% of the world's population, live in nations that have put limits on non-native or non-citizen visitors, according to research by the Pew Research Centre. This highlights the widespread adoption of travel restrictions by nations in response to the pandemic. David Heymann, the director of the WHO infectious disease division, highlighted concerns about countries doing their own risk assessments outside of the oversight of the WHO in 2002–2003 during the epidemic of severe acute respiratory syndrome. He emphasized that airline shutdowns due to safety and insurance constraints posed a significant problem. The WHO advised against travel restrictions because they could impede the delivery of vital aid and technical assistance, while giving governments a false sense of security. Instead, member nations were urged to focus on strengthening healthcare systems and disease surveillance. The global shutdown necessitated extraordinary efforts to mitigate the unintended consequences of travel restrictions. The COVID-19 pandemic was predicted to have adverse effects on blood system operations, reducing blood supply due to limitations on blood donation activities. Although the chances of influenza and coronaviruses being transmitted through blood transfusions were minimal, the impact on blood donation was expected to be significant. During the severe acute respiratory syndrome pandemic, Beijing experienced a serious disruption in blood supply as public blood drives were halted and potential donors were hesitant to visit donation centers. Consequently, blood had to be transported from less affected areas. According to a Japanese study, during the influenza A (H1N1) pandemic, there was a 21% drop in blood donors in just one week, prompting mobilization measures to ensure an adequate supply. Blood facilities faced additional challenges during such a pandemic, including finding healthy donors, ensuring the safety of workers, donors, and recipients, and managing inventory. As early as March 2020, students and their families became involved in the country's fight against the COVID-19 outbreak. If parents were fortunate enough to retain their jobs during school closures, they started working from home. Public school educators were required to adapt to alternative forms of virtual education and service delivery. This shift presented a significant change for educators. The User COVID-19 Regional Safety Assessment is a crucial tool for assessing the safety and risk levels of certain regions or places during the COVID-19 pandemic. Individuals are given the knowledge and tools they need to assess their personal safety and well-being through this examination. By analyzing factors such as active cases, testing capacity, vaccination rates, healthcare system capacity, public health measures, travel restrictions, variants of concern, and localized outbreaks, the assessment helps users understand the level of risk in their area and the effectiveness of control measures. With this information, people can make the proper safety preparations, follow instructions, and contribute to the broader effort to stop the virus's spread. The User COVID-19 Regional Safety Assessment empowers individuals to prioritize their health and make informed decisions based on the changing circumstances in their own region.

## 2. MATERIALS AND METHODS

**Australia:** The Australian continent's mainland, Tasmania, and numerous other smaller islands make up the country of Australia, which is located in the southern hemisphere. It is also known for its diverse flora, gorgeous scenery, and vibrant cities like Sydney, Melbourne, and Brisbane. Australian landmarks like Uluru (Ayers Rock), the Great Barrier Reef, and the Sydney Opera House are well-known worldwide.

**Austria:** Central Europe's only landlocked nation is Austria. It is renowned for its illustrious cultural legacy, breathtaking Alpine landscapes, and iconic towns like Salzburg, Vienna, and Innsbruck. Mozart, Beethoven, and Strauss are just a few of the well-known classical music composers with significant ties to Austria. In addition, it is also known for its palaces, coffeehouses, and ski resorts.

**Canada:** Canada is the 2<sup>nd</sup> largest country in the world, located in North America. It is known for its vast landscapes, including the Rocky Mountains and Niagara Falls. Canada has a multicultural society, with English and French as its official languages. Major cities include Toronto, Vancouver, Montreal, and Ottawa (the capital). Canada is famous for its friendly people, outdoor activities, and diverse cultural scene.

**China:** China, which is in East Asia, has the largest population in the entire planet. It is well-known for its cultural relics, including the Terracotta Army, the Forbidden City, and the Great Wall of China. It has a long history spanning thousands of years. The topography of China is varied, ranging from thriving megacities like Beijing and Shanghai to charming locales like Guilin and Zhangjiajie. It is well-known for its cuisine, martial arts, and ancient celebrations.

**Denmark:** In Northern Europe, it is a Scandinavian nation. It is renowned for its excellent quality of life, cutting-edge architecture, and liberal social policies. Copenhagen, the capital, is famous for its bike-friendly culture and historic sites like the colorful Nyhavn waterfront. Denmark is also known for its castles, Viking heritage, and the concept of "hygge" which emphasizes coziness and well-being.

**Germany:** Germany is a country in Central Europe known for its strong economy, rich history, and cultural contributions. It is famous for its castles, Oktoberfest celebrations, and technological advancements. Germany has many vibrant cities such as Berlin, Munich, Hamburg, and Cologne, each offering a unique blend of historical landmarks, modern architecture, and thriving arts and nightlife scenes.

**Hong Kong:** China's Hong Kong Special Administrative Region is situated on the nation's southeast coast. It is renowned for its stunning skyline, active street markets, and exciting culinary scene. Hong Kong has a unique blend of Chinese and Western influences, and it is a major global financial hub. The city is also famous for its modern architecture, Victoria Harbour, and its stunning hiking trails.

**Hungary:** Central Europe's landlocked nation of Hungary. It is known for its beautiful architecture, including the iconic Parliament building in Budapest. Hungary has a rich cultural heritage, and Budapest is often referred to as the "Pearl of the Danube." The country is famous for its thermal baths, delicious cuisine (including goulash), and its contributions to art, literature, and music.

**Israel:** Israel is a Middle Eastern nation that is situated on the Mediterranean Sea's eastern shore. It has a rich history and is regarded as a vital centre of Judaism, Christianity, and Islam's religious and cultural life. The capital, Jerusalem, Tel Aviv, and Haifa are all significant cities. Israel provides a variety of modern attractions, a thriving nightlife, and historical and religious monuments including the Western Wall, the Dead Sea, and Masada.

#### **Evaluation parameters:**

**Quarantine Efficiency:** This refers to a country's ability to efficiently implement and manage quarantine measures during public health emergencies. It involves having robust protocols for isolating and monitoring individuals who may have been exposed to a contagious disease to prevent its spread. Factors such as the effectiveness of quarantine enforcement, the availability of adequate facilities, and the efficiency of contact tracing contribute to quarantine efficiency.

**Government Efficiency:** Government efficiency relates to the effectiveness and competency of a country's government in various aspects, including policy implementation, service delivery, and decision-making. An efficient government is capable of making timely and well-informed decisions, implementing policies effectively, and providing efficient public services. It often involves transparency, accountability, streamlined bureaucracy, and effective use of resources.

**Monitoring and Detection:** Monitoring and detection capabilities refer to a country's ability to identify, track, and respond to health threats, including infectious diseases. This includes early detection systems, surveillance mechanisms, diagnostic capabilities, and the ability to gather and analyze health data. Effective monitoring and detection help in promptly identifying outbreaks, implementing control measures, and preventing the spread of diseases.

**Healthcare Readiness:** Healthcare readiness encompasses the capacity and preparedness of a country's healthcare system to respond to public health emergencies. It includes factors such as the availability of healthcare facilities, medical equipment, trained healthcare professionals, and access to essential medicines. Adequate healthcare readiness ensures that a country can handle increased healthcare demands during crises and provide timely and quality care to affected individuals.

**Regional Resiliency:** Regional resiliency refers to a region's ability to withstand and recover from adverse events or emergencies. It involves factors such as diversified economies, strong infrastructure, effective governance, and social cohesion. A region with high resiliency can better absorb shocks, adapt to changing circumstances, and recover quickly after a crisis.

**Emergency Preparedness:** Emergency preparedness relates to a country's readiness and capacity to respond to emergencies effectively. It involves creating emergency management systems, creating emergency response plans, and training staff to deal with different kinds of emergencies. Preparedness also involves conducting drills, simulations, and public awareness campaigns to ensure a swift and coordinated response during crises. These factors are crucial in assessing a country's or region's ability to handle public health emergencies, natural disasters, or other critical events. Governments and relevant organizations often work towards improving these aspects to enhance their overall preparedness and response capabilities.

#### **Evaluation Based on Distance from Average Solution (EDAS):**

From average settlement assessment (EDAS) based on distance a new efficient MCDM is correct. In this way alternative choices are theirs averaged over distance the solution is determined. EDAS multi-criteria solution approach, a gap in the literature EDAS to overcome the shortcomings of approaches, interval newly adapted for type data. Bank branches to solve the problem for sorting, EDAS is a multi-criteria solution for sorting, EDAS is a multi-criteria solution a new change in approach is cashovers first proposed by gorabai et al (2015). This change is due to ren et al toniolo (2018) proposed interval EDAS it's important to consider the approach corrects weaknesses. In this segment, sec EDAS a new change of the interval kind data technique for solving the trouble is proposed. In this section, first the classical EDAS technique is defined a new gap after which the proposed EDAS technique is supplied [12]. This the most important objective of observation is speleothem development and relative importance of

governing parameters also study seepage dynamics in karst environments is to understand. EDAS device European geo a earth is the result of physicists' demands environmental parameters in physics laboratory a system was developed to monitor [13]. Average settlement rating (EDAS) from in terms of distance a recently developed several criteria is one of the decision making techniques. It is similar to EDAS techniques, because it's measurements is based on however, EDAS methodology is positive and negative at its best better than solutions based on average solution selects an alternative. Distances to the best solution simplifying the calculation and the final result it has the advantage of getting faster [14]. Encephalo dura arteriosynangiosis (EDAS) is a commonly used indirect process, which is on the surface of the brain replaces the scalp artery. This is some relatively simple with complications has advantages and established co does not cause any damage to the cycle. Recently, a standard treatment for children with mms EDAS is widely used. Additionally, EDAS adults with mms good medical practice for patients showed results. A long EDAS by park et al long-term outcome is better than direct blood flow reconstruction proved to be. However, some additional surgery after EDAS in patients other studies suggest that treatments are needed, this is due to poor collateral vessel formation [15]. EDAS method of positive and negative distances limits indicate limits. Additionally, different risk of selection makers approaches can be taken into consideration this manner. So, four-branch EDAS for MCDM in fuzzy environment a through problem paper method creates a new model. In the model, with a deviation stability analysis incorporating the entropy weighting technique, the quant the interval of the package the weight vector is a deterministic one the weight vector is integrated. And a composite weight vector is a non-multiobjective linear control is determined by programming [16]. EDAS (from the average settlement estimate based on distance) method by keshaverskorapai et al proposed. Mcdm's efficient and as a relatively new method, initially inventory dealing with classification. Gradually, it is other mcdm is extended to handle problems, lately including engineering issues [17]. The average solution (EDAS) developed by ghorabae et al of distance from method based on assessment.a new multi-criteria for inventory classification decision making method (MCDM) a compromise is that mcdm is perfect. EDAS method by peng and chongneutrosophic extended to soft decision making. Kalina et al. Multiple criteria for decision making introduced 11 measurements in edas system. Liang et al. The purest of gold mines elimination and choice to evaluate productivity with translating reality (electre) approaches integrated edas. Li et al. Ambiguous lot criterion to solve group decision-making problems average solution under linguistic neutrosophic conditions (EDAS) method based on distance evaluating power aggregation operators developed an integrated approach [18]. The EDAS method measures the advantageous distance from the mean, and poor distance considers mean, uses the average solution to evaluate alternatives. To consider conflicting criteria this method is very useful when needed will be the method was detected by the authors as claimed, various scale weights EDAS method is stable when with methods used and others are compatible. In add, of the proposed method the simplicity and benefits are immediate the computation is, in particular, these advantages are computational does not affect accuracy [19]. Efficient data for IOT integration program (EDAS). Construction of EDAS like bilinear coupling without using any complicated math operations based on elliptic curve cryptography has IOT terminal, identification and location privileges can be dynamically changed to achieve both pseudo-identity and private key and private key to issue for compromise problem and privilege escalation countermeasure against data using communicates with the center also using 0/1-code technique for solving nodes' partial secret key and dummy introducing an expiration date on tokens [20].

- The decision matrix X, which displays how various options perform with certain criteria, is created.

$$D = \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2n} \\ x_{31} & x_{32} & \dots & x_{3n} \end{bmatrix} \quad (1)$$

- Weights for the criteria are expressed in equation 2.

$$w_j = [w_1 \quad \dots \quad w_n], \text{ where } \sum_{j=1}^n (w_1 \quad \dots \quad w_n) = 1 \quad (2)$$

- Next criteria vice average solutions are calculated

$$AV_j = \frac{\sum_{j=1}^n k_{ij}}{n} \quad (3)$$

- PDA is expressed in equation 4

$$PDA_{ij} = \begin{cases} \frac{\max(0, x_{ij} - AV_{ij})}{AV_{ij}} & | j \in B \\ \frac{\max(0, AV_{ij} - x_{ij})}{AV_{ij}} & | j \in C \end{cases} \quad (4)$$

- The NDA is expressed in equation 5

$$NDA_{ij} = \begin{cases} \frac{\max(0, (AV_{ij} - x_{ij}))}{AV_{ij}} & | j \in B \\ \frac{\max(0, (x_{ij} - AV_{ij}))}{AV_{ij}} & | j \in C \end{cases} \quad (5)$$

- Using equation 2 multiplied by factors 4 and 5, respectively, the weighted sum of the positive and negative distances from the average solution for all options is normalised.
- Weighted sums of the positive and the negative distance are calculated by the equation

$$SP_i = \sum_{j=1}^m w_j \times PDA_{ij} \quad (6)$$

$$SN_i = \sum_{j=1}^m w_j \times NDA_{ij} \quad (7)$$

- Equations 8 and 9 are used to normalise the weighted sum of the positive and negative distances from the average solution for all alternatives.

$$NSP_i = \frac{SP_i}{\max_i(SP_i)} \quad (8)$$

$$NSN_i = 1 - \frac{SN_i}{\max_i(SN_i)} \quad (9)$$

- The final appraisal score (AS<sub>i</sub>) for each alternative is calculated as the normalised weighted average of the positive and negative distances from the average solution for all alternatives.

$$AS_i = \frac{(NSP_i + NSN_i)}{2} \quad (10)$$

where  $0 \leq AS_i \leq 1$ .

### 3. RESULTS AND DISCUSSION

TABLE 1. Covid-19 Regional Safety Assessment

Parameters	Quarantine Efficiency	Government Efficiency	Monitoring and Detection	Healthcare Readiness	Regional Resiliency	Emergency Preparedness
Australia	59.59	82.21	77.03	62.18	68.7	78.83
Austria	55.62	85.52	81.16	68.26	63.5	73.17
Canada	58.92	78.02	88.96	57.58	69.25	66.42
China	54.63	78.02	88.33	61.33	56.68	92.33
Denmark	62.41	69.53	85.91	61.35	71.09	52.92
Germany	59.45	88.13	91.97	78.82	81.1	52.92
Hong Kong	61.61	75.4	88.84	53.45	59.06	77.92
Hungary	57.01	66.31	81.33	50.42	59.14	79.83
Israel	57.98	86.6	95.38	65.38	68.46	75.43
<b>AVJ</b>	<b>58.58</b>	<b>78.86</b>	<b>86.55</b>	<b>62.09</b>	<b>66.33</b>	<b>1087.83</b>

Following details are shown in Table 1: Alternative stipulations: Israel, Hong Kong, Hungary, Australia, Austria, Canada, China, Denmark, and Denmark. evaluation standards: Efficiency of the quarantine process, effectiveness of the government, monitoring and detection, healthcare readiness, regional resilience, and emergency readiness.

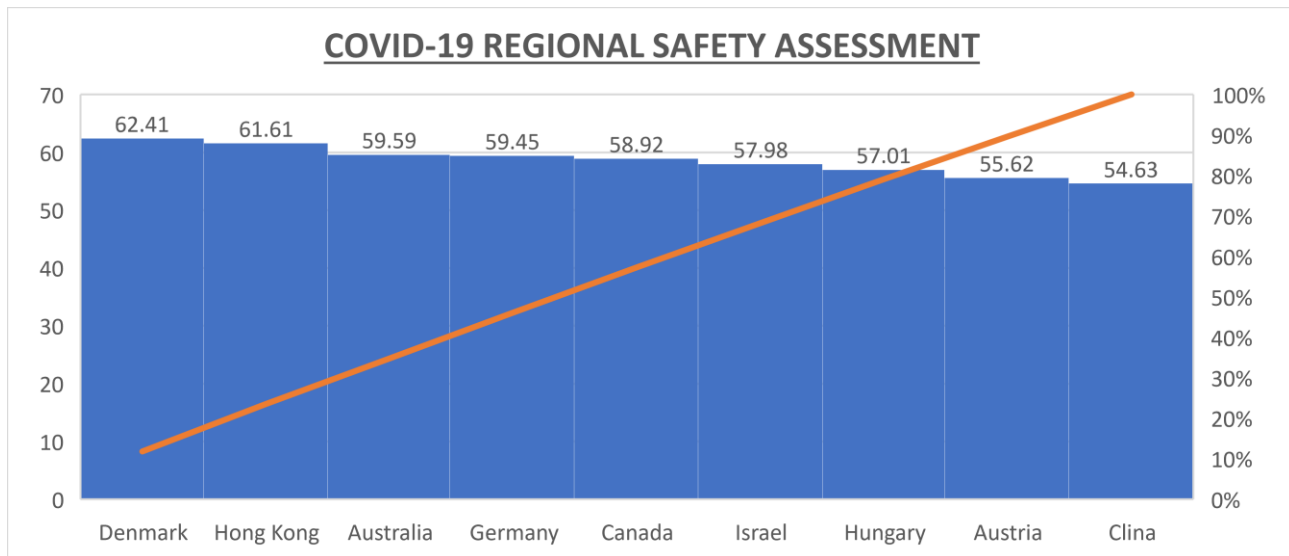


FIGURE 1. Covid-19 Regional Safety Assessment

The following data is shown in graph 1: Alternative stipulations: Israel, Hong Kong, Hungary, Australia, Austria, Canada, China, Denmark, and Denmark. evaluation standards: Efficiency of the quarantine process, effectiveness of the government, monitoring and detection, healthcare readiness, regional resilience, and emergency readiness.

TABLE 2. COVID-19 REGIONAL SAFETY ASSESSMENT

Positive Distance from Average (PDA)					
0.0172	0.0425	0.0000	0.0015	0.0357	0.0000
0.0000	0.0845	0.0000	0.0995	0.0000	0.0000
0.0058	0.0000	0.0279	0.0000	0.0440	0.0000
0.0000	0.0000	0.0206	0.0000	0.0000	7.4876
0.0654	0.0000	0.0000	0.0000	0.0717	0.0000
0.0149	0.1176	0.0627	0.2695	0.2227	0.0000
0.0517	0.0000	0.0265	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0981	0.1021	0.0531	0.0321	0.0000

This table 2 shows the positive distance from average of the survey of covid-19 regional safety assessment.

TABLE 3. Negative Distance from Average (NDA)

Negative Distance from Average (NDA)					
0.0000	0.0000	0.1099	0.0000	0.0000	0.9275
0.0505	0.0000	0.0622	0.0000	0.0427	0.9327

0.0000	0.0107	0.0000	0.0726	0.0000	0.9389
0.0674	0.0107	0.0000	0.0122	0.1455	0.0000
0.0000	0.1183	0.0073	0.0118	0.0000	0.9514
0.0000	0.0000	0.0000	0.0000	0.0000	0.9514
0.0000	0.0439	0.0000	0.1391	0.1096	0.9284
0.0268	0.1591	0.0603	0.1879	0.1084	0.9266
0.0102	0.0000	0.0000	0.0000	0.0000	0.9307

This table 3 shows the negative distance from average of the survey of covid-19 regional safety assessment.

**TABLE 4.** Weighted PDA (SPI)

Weighted PDA						SPI
0.0029	0.0071	0.0000	0.0003	0.0060	0.0000	0.0162
0.0000	0.0141	0.0000	0.0166	0.0000	0.0000	0.0307
0.0010	0.0000	0.0046	0.0000	0.0073	0.0000	0.0130
0.0000	0.0000	0.0034	0.0000	0.0000	1.2479	1.2514
0.0109	0.0000	0.0000	0.0000	0.0120	0.0000	0.0229
0.0025	0.0196	0.0104	0.0449	0.0371	0.0000	0.1145
0.0086	0.0000	0.0044	0.0000	0.0000	0.0000	0.0130
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0164	0.0170	0.0088	0.0053	0.0000	0.0476

This table 4 shows the Weighted PDA and SPI of the survey of covid-19 regional safety assessment.

**TABLE 5.** Weighted NDA (SNI)

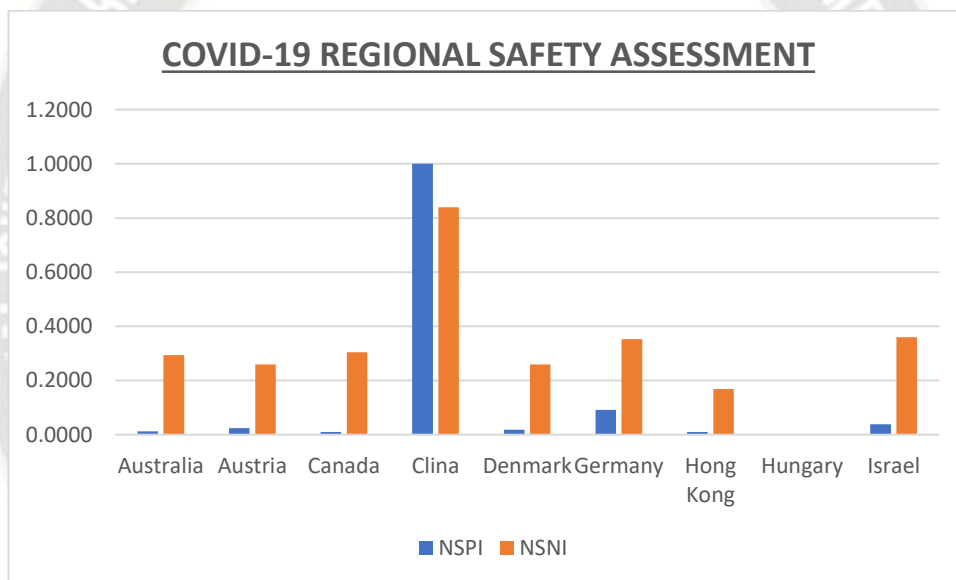
WEIGHTED NDA						SNI
0.0000	0.0000	0.0183	0.0000	0.0000	0.1546	0.1729
0.0084	0.0000	0.0104	0.0000	0.0071	0.1555	0.1814
0.0000	0.0018	0.0000	0.0121	0.0000	0.1565	0.1704
0.0112	0.0018	0.0000	0.0020	0.0242	0.0000	0.0393
0.0000	0.0197	0.0012	0.0020	0.0000	0.1586	0.1815
0.0000	0.0000	0.0000	0.0000	0.0000	0.1586	0.1586
0.0000	0.0073	0.0000	0.0232	0.0183	0.1547	0.2035
0.0045	0.0265	0.0100	0.0313	0.0181	0.1544	0.2449
0.0017	0.0000	0.0000	0.0000	0.0000	0.1551	0.1568

This table shows the Weighted NDA and SNI of the survey of covid-19 regional safety assessment.

**TABLE 6. COVID-19 REGIONAL SAFETY ASSESSMENT**

	NSPI	NSNI
Australia	0.0129	0.293811
Austria	0.0245	0.259306
Canada	0.0103	0.304238
China	1.0000	0.839531
Denmark	0.0183	0.258844
Germany	0.0915	0.352438
Hong Kong	0.0104	0.168926
Hungary	0.0000	0
Israel	0.0380	0.359551

This table shows the NSPI and NSNI of the survey of covid-19 regional safety assessment.



**Figure 2. COVID-19 REGIONAL SAFETY ASSESSMENT**

This graph shows the NSPI and NSNI of the survey of covid-19 regional safety assessment.

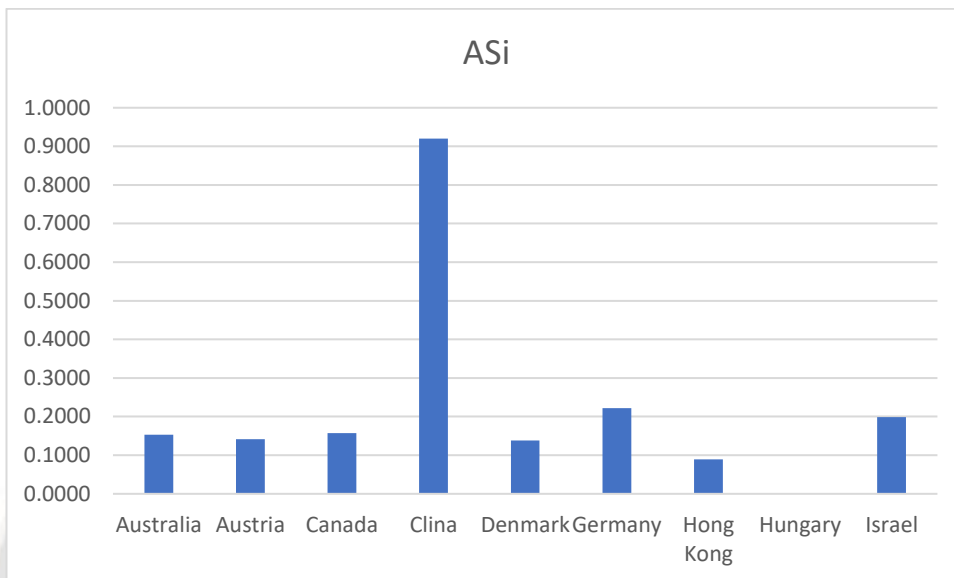
**TABLE 6: COVID-19 REGIONAL SAFETY ASSESSMENT**

	ASI
Australia	0.1534
Austria	0.1419
Canada	0.1573
China	0.9198
Denmark	0.1386
Germany	0.2220
Hong Kong	0.0897



Hungary	0.0000
Israel	0.1988

This table shows the ASI of the survey of covid-19 regional safety assessment.



**Figure 3. COVID-19 REGIONAL SAFETY ASSESSMENT**

This graph graphically shows the ASI of the survey of covid-19 regional safety assessment.

**TABLE 7: COVID-19 REGIONAL SAFETY ASSESSMENT**

	Rank
Australia	5
Austria	6
Canada	4
China	1
Denmark	7
Germany	2
Hong Kong	8
Hungary	9
Israel	3

This table shows the ranking of the country according to the survey of covid-19 regional safety assessment. It clearly states that the first spot is occupied by China and the last spot is occupied by Hungary. It's been observed that the China has a great impact of covid-19.

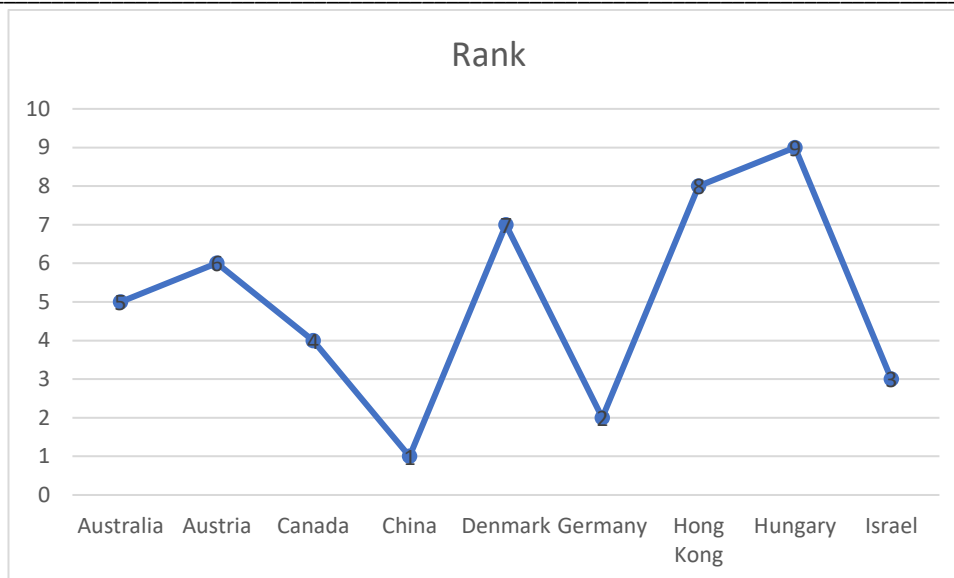


Figure 4. RANK

Graph 4 shows the graphical representation Material selection the final result of this paper the Australia is in 4<sup>th</sup> rank, the Austria is in 6<sup>th</sup> rank, the Canada is in 4<sup>th</sup> rank, the China is in 1<sup>st</sup> rank, the Denmark is in 7<sup>th</sup> rank, the Germany is in 2<sup>nd</sup> rank, the Hong Kong is in 8<sup>th</sup> rank, the Hungary is in 9<sup>th</sup> rank and the Israel is in 3<sup>rd</sup> rank.

#### 4. CONCLUSION

To summarize, the assessment of COVID-19 regional safety considers various factors such as the effectiveness of quarantine measures, government response, monitoring capabilities, healthcare readiness, regional resilience, and disaster preparedness. Providing a comprehensive evaluation for the mentioned countries or areas (Australia, Austria, Canada, China, Denmark, Germany, Hong Kong, Hungary, and Israel) without specific statistics or assigned weights for each aspect poses a significant challenge.. It is important to note that the COVID-19 situation is constantly evolving and can change over time. To accurately evaluate regional safety, it is essential to rely on up-to-date information from reliable sources and consult official reports and expert opinions. Each country or region may have implemented different measures and strategies to combat the pandemic, making it necessary to consider their specific actions and policies. Continuous monitoring, evaluation, and learning from best practices can help improve regional safety and strengthen preparedness for future public health emergencies. It is important to note that the COVID-19 situation is dynamic and can vary over time. Each country or region has implemented its own strategies and measures to mitigate the spread of the virus, and these efforts can have varying degrees of success. Evaluating COVID-19 regional safety requires in-depth analysis of specific data, the current situation, and the effectiveness of implemented measures. To obtain an accurate assessment, it is recommended to refer to official sources, such as government health agencies, that provide up-to-date information and guidance on the COVID-19 situation in each country or region. Additionally, expert opinions and scientific research can provide valuable insights into the safety and preparedness of different regions. It is crucial for individuals to stay informed, follow recommended guidelines, and prioritize their health and safety, regardless of the regional assessment. It is possible to lessen the transmission of COVID-19 and ensure personal safety in any location by taking personal measures such as maintaining excellent cleanliness, using masks, keeping a physical distance, and becoming immunized when accessible.

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