

A comparative study of the performance of Iran and G7 countries in the management of COVID-19

Vahid Pourshahabi

*Department of Management, Zahedan Branch, Islamic Azad University,
Zahedan, Iran*

Abstract

Purpose – The purpose of this paper is to compare the performance of Iran and G7 countries in the management of the COVID-19 crisis.

Design/methodology/approach – The indicators and statistics provided by the Oxford Government Response Tracker are used in this research. Sixteen indicators and their related items have been analyzed for eight countries including Iran, Canada, Germany, France, Great Britain, Italy, Japan, and the United States. For data analysis, Multivariate analysis of variance (MANOVA) and Tukey's post hoc test were applied, and structural equation modeling performed with the help of SPSS and Smart-PLS software.

Findings – The results show that 8 indicators of closing schools, cancellation of public events, restriction of gatherings, restriction of domestic travel, restriction of international travel, reduction of household debt, testing policy, and contact tracing, have an effect on the number of deaths in the countries under review. The results also showed that the countries exhibit behaviors outside their normal culture during the crisis.

Originality/value – This paper will be helpful for scholars, as well as policymakers when making policies on the appropriate responses to COVID-19 and similar pandemics.

Keywords Comparative study, COVID-19, Government performance, Iran, Group of Seven, Hofstede's cultural model

Paper type Research paper

Introduction

Throughout history, human societies have always faced many crises, both natural and unnatural, which have threatened the existence of mankind. But these threats have not been able to destroy the human race so far. Considering the crises facing humanity, it is necessary to learn from the past and the measures taken to fight crises. One of these threats is epidemic diseases that have continuously and significantly affected the course of human history (Jannetta, 2014). The oldest written sources show how ancient Mesopotamia responded to the constant threat of epidemics. On the one hand, they used spiritual practices and on the other hand, they separated people who showed the first symptoms of the disease from other people (Scott, 2017).

The crisis that the world is facing today is the COVID-19 disease. The COVID-19 pandemic, known as the coronavirus in the world, is a crisis that showed the weak points of crisis management in different countries of the world. Coronavirus disease is an infectious



disease caused by acute respiratory syndrome. This disease was first diagnosed in Wuhan, China in December 2019 and since then it has spread worldwide, resulting in a global disaster. The risk of contracting the people of society with this virus depends on the characteristics of that virus and the severity of the disease caused by it, medical measures to deal with and control it, and other measures (including vaccines or drugs that can treat the disease). In the absence of a vaccine or drug, non-pharmacological interventions are the most important rapid response strategy based on government intervention in quarantine and distancing, mask use, and personal hygiene. Research shows that these things can reduce the impact of this disaster, which appears unstoppable globally (Cvetkovic *et al.*, 2020).

A major challenge in the context of the current pandemic is the lack of sufficient information about the critical elements that should guide policymakers. In this regard, there have been problems not only in measuring the prevalence of the disease in the population; Rather, but governments have also been forced to make decisions with limited information to deal with this disease (Belot *et al.*, 2020). Different countries' responses to COVID-19 include a wide range of measures that reflect national values, politics, and the diversity of scientific advice provided by local experts. But what is noticeable in the performance of governments is that political considerations have often become more important than science (Middleton *et al.*, 2020).

Governments around the world have implemented numerous policies in response to the COVID-19 pandemic (Cheng *et al.*, 2020). This response to the COVID-19 pandemic has made significant changes in the way billions of people around the world live (Shah, 2017). Overall, reliable data collection helps advance the collective understanding of which policies are effective in curbing the effects of a given disease outbreak. It is important to understand why countries are adopting different policies. Preliminary analyzes show that the institutional and political factors of a country play an important role in this regard (Allcott *et al.*, 2020). These findings will not only help improve the global response to the current crisis but can also provide an effective knowledge base for responding to future disease outbreaks.

The purpose of this research is to compare the performance of Iran with the G7 countries (including the United Kingdom, the United States, Germany, Japan, France, Canada, and Italy, which are the leading countries with advanced economies in the world) in dealing with the COVID-19 crisis. Iran is included in this comparison because, in mid-February 2020, Iran became the second focal point of the spread of the coronavirus in the world after China, but at the time of conducting this research, it has shown good performance in curbing this crisis (Figure 1). Therefore, the main question of this research is: Is there a significant difference between the performance of Iran and G7 countries in the fight against COVID-19?

Background and theoretical foundations of research

With more than 551 million infections and more than 6 million deaths in the world, COVID-19 is one of the worst outbreaks of infectious diseases in history (Worldometers, 2022). With the rapid increase in the spread of the coronavirus worldwide, many countries have adopted non-therapeutic preventive measures, which include travel bans, remote administrative activities, in-country quarantines, and most importantly, social distancing (Anwar *et al.*, 2020). Considering the wide range of measures taken by different countries to deal with COVID-19, it seems necessary to examine the measures taken by different countries. This can help to determine the best measures in order to reduce the number of disasters if faced with such crises in the future. Therefore, in this research, Iran's performance in dealing with the COVID-19 crisis has been compared with the performance of the G7 countries.

Due to the actions and organizations related to this group, the G7 is a vital factor in global economic governance. Most of the norms, ideas, approaches and consensus principles that deal with the financial governance of the contemporary world were either written by the G7 or approved by this group (Baker, 2008). These norms bring the concept of "culture" to mind.

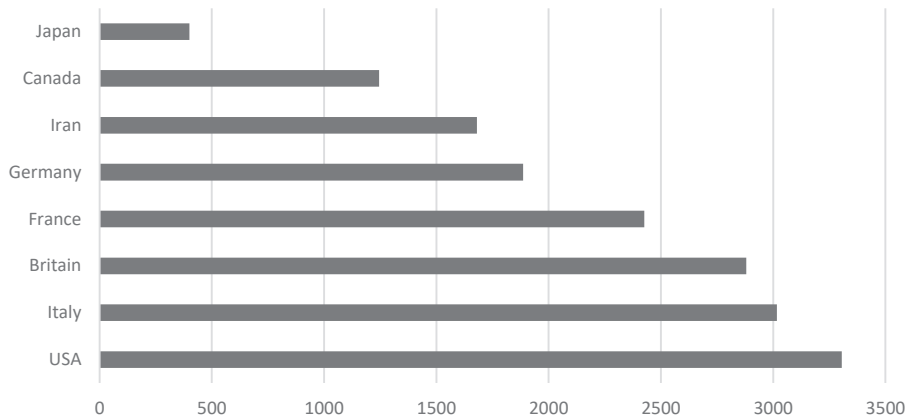


Figure 1.
Number of deaths per
million people
(Worldometers, 2022)

Culture can be seen as the collective programming of the mind that distinguishes members of a group or group of people from other people (Hofstede, 2011).

For the first time, Clyde Kluckhohn (1962) argued that there should be universal categories of culture and the life patterns of any society must provide approved ways to face global conditions. Regarding the COVID-19 crisis, research results have shown that countries' measures to deal with the Corona crisis are related to the cultural orientation of each country (Yan *et al.*, 2020). Therefore, the characteristics of the countries' national culture from the perspective of Hofstede's six-dimensional cultural model can justify how countries react to the COVID-19 crisis. According to this issue, in this research, Hofstede's model is used to examine how the countries under investigation reacted to the COVID-19 crisis (Appendix 1). Also, in this research, the performance of the countries has been examined using the data of the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project (GLOBE, 2020). The GLOBE project is a cross-cultural study of leadership and culture in 62 societies that aims to develop an empirically based theory that describes the relationships between social culture, organizational processes, and leadership. The GLOBE study empirically validates ten cultural clusters from a sample of 62 cultures in terms of nine cultural dimensions (Kabasakal *et al.*, 2012).

In the following, the countries investigated in this research were examined in terms of the number of population, the number of people infected with COVID-19, the number of deaths, and the number of recoveries. These statistics are obtained from Worldometers (2022). Also, information about the performance of each country is written in the composite indicators provided by Oxford (Oxford COVID-19 Government Response Tracker). These composite indicators include the overall government response index (the government's response to all indicators during the outbreak), the stringency index (the degree of strictness of quarantine policies that mainly restrict people's behavior), the containment and health index (measures such as the testing and tracing policy contact, short-term investment in health care, investment in vaccine production), and economic support index (income support and debt reduction). In order to make it possible to compare the performance of countries, the average of these indicators during the period under review has been calculated and considered for each country.

Iran

Iran, with a population of 86,022,837, has 87,881 cases of COVID-19 per one million people, and 1,681 per one million people in this country have died due to COVID-19. The number of

recovered patients is 7,335,266 people (Worldometers, 2022). In mid-February 2020, after China, Iran became the second focal point of the spread of the coronavirus in the world. The Minister of Health of Iran announced in early March 2019 after the epidemic of COVID-19 in Iran that health and treatment centers across the country should be ready to provide services to COVID-19 patients. Meanwhile, many places and public events, including schools, higher education institutions and universities, cinemas, concerts and theater performances, competitions, and national sports leagues in Tehran and cities were gradually closed and the office hours of government offices were reduced in several provinces (Lotfi *et al.*, 2022).

The data shows that during the period under review, the overall reaction of the Iranian government to COVID-19 ranked seventh among the eight countries under review. Therefore, the Iranian government has not had a strong response to the COVID-19 crisis. In terms of strictness and quarantine policy, Iran has the third-strictest rank. Also, in the indicators of containment and health, Iran ranked third and in the index of economic support, Iran ranked seventh and did not perform well (OxCGRT, 2022).

Canada

Canada, with a population of 38,388,419, has 114,833 cases of COVID-19 per one million people, and 1,245 per one million people have died due to COVID-19. The number of recovered patients is 4,305,116 people (Worldometers, 2022). The Government of Canada established dedicated legislation and funding for the federal response to COVID-19. Canada has adopted various public health measures to contain the spread of the coronavirus. The measures include hand hygiene, self-isolation, social distancing and quarantine, a strategy for identifying cases and finding close contacts of confirmed positive individuals, and global travel advisory measures (Urrutia *et al.*, 2021).

In terms of the overall response to the COVID-19 crisis, the Canadian government ranked second among the eight countries surveyed. This means that the Canadian government's response to the COVID-19 crisis has been strong. In the stringency index, the Canadian government, after Italy, is ranked second among the countries surveyed. In the health and containment index, the rank of the Canadian government is 7th. Therefore, the government of Canada is not strong in this index. In the economic support index, the rank of the Canadian government is 4th, and it performed almost average among the countries under review.

Germany

Germany, with a population of 83,883,596, has 435,817 cases of COVID-19 per one million people, and 1,886 per one million people in this country have died due to COVID-19. The number of recovered patients is 35,862,800 people (Worldometers, 2022). The first thing to pay attention to is medical preparation. In Germany, even before the COVID-19 crisis, the capacity of intensive care was very high. In addition, the government offered incentives to medical institutions to encourage them to significantly increase the number of ICU beds (Okina *et al.*, 2020). During the COVID-19 pandemic, Germany and its institutions, in general, have shown considerable flexibility (Rub *et al.*, 2021).

In terms of the overall index of the government's response, Germany ranks third among the countries under review. This means that the overall response of the German government to the COVID-19 crisis has been strong. In terms of stringency index, Germany ranks fifth and has performed almost averagely. Germany ranks sixth in containment and health index and economic support index. This means that it has performed below the average in these indicators compared to other countries under review.

France

France, with a population of 65,584,518, has 579,025 cases of COVID-19 per one million people, and 2,426 per one million people in this country have died due to COVID-19. The number of

recovered patients is 36,940,925 people (Worldometers, 2022). France's management of the pandemic crisis, its performance as well as its setbacks, can be placed in a larger context in two respects: first, when the pandemic struck France, the country was already feeling the effects of a certain number of past and current crises. Second, the effectiveness of government responses to the coronavirus pandemic has been hampered by systemic weaknesses (Meny *et al.*, 2021). Like many other countries in the world, France was unprepared when the pandemic broke out: there were not enough masks and test kits, and in addition, many public hospitals were on strike (Or *et al.*, 2022).

In the overall index of the government's response, France ranks fourth among the surveyed countries and has performed almost averagely in dealing with the COVID-19 crisis. France ranks fourth in stringency, containment and health indicators. In the index of economic support, France ranks fifth among the countries studied.

United Kingdom

The UK, with a population of 68,497,907, has 350,737 cases of COVID-19 per one million people, and 2,880 per one million people in this country have died due to COVID-19. The number of recovered patients is 23,747,479 people (Worldometers, 2022). The UK is facing several profound challenges due to the coronavirus pandemic, with high infection and death rates, as well as deep economic contraction. Some of this was due to factors largely outside the control of current governments at various levels in the UK. These factors include the infectiousness of the coronavirus (a legacy of previous governments, which did too little to implement recommendations related to previous pandemic drills), and insufficient supplies of personal protective equipment (PPE), resulting from austerity policies of the previous decade (Busch *et al.*, 2021).

In terms of the overall government response index, Britain ranks fifth among the countries surveyed. Thus, the UK's performance in responding to the COVID-19 crisis has been mediocre. In the stringency index, Britain ranks seventh and only Japan has shown more strictness. In the containment and health index, the UK ranks fifth and in the economic support index, The United Kingdom is ranked second and only has a lower performance than Japan.

Italy

Italy, with a population of 60,262,770, has 406,355 cases of COVID-19 per one million people, and 3,016 per one million people in this country have died due to COVID-19. The number of recovered patients is 23,799,178 people (Worldometers, 2022). The government's response, especially in the first wave, was confused and inadequate, plunging the country into an unprecedented public health crisis, leading to a national lockdown between March and May (Bull, 2021). The situation created in Italy by the COVID-19 pandemic has revealed the weaknesses and strengths of the Italian system. The health and economic effects on this country were severe; Because Italy was the first European country to be affected by this disease, and in 2019, the Italian economy had not yet fully recovered from the 2008 crisis (in fact, Italy is still in a slow growth phase) (Cotta *et al.*, 2021).

Italy has the first rank among the surveyed countries in the overall index of the government's response. But considering the high number of deaths from COVID-19, apparently these reactions of the Italian government were not appropriate. In terms of stringency index, Italy ranks first, and in terms of containment and health index, Italy ranks second, after Japan. In the economic support index, Italy ranks third. According to Italy's high ranking in response to COVID-19, apparently the high number of deaths caused by COVID-19 in this country is due to the weakness of the country's economic and healthcare systems at the start of the epidemic.

Japan

Japan, with a population of 125,584,838, has 200,111 cases of COVID-19 per one million people, and 400 per one million people in this country have died due to COVID-19. The number of recovered patients is 20,741,641 people (Worldometers, 2022). During the first wave of the pandemic, the Japanese government enacted a number of institutional and policy initiatives, including the Infectious Diseases Management Act, established a response center, and initiated a series of expert meetings to develop policy advice. Also, the Japanese government declared a state of emergency and approved additional budgets to deal with this epidemic. In general, the response of the Japanese government to the coronavirus epidemic has not been bad, but it has faced problems such as hesitation in decision-making, coordination problems, and communication problems (Pascha *et al.*, 2021).

Japan ranks last among other countries in the overall index of government responsiveness. Nevertheless, Japan has had the lowest number of deaths from COVID-19 among the countries studied. It seems that when faced with a crisis, prior preparation of economic systems and dealing with the crisis, as well as choosing appropriate strategies, will lead to better results, and a strong reaction does not necessarily provide better results. In the stringency index, Japan ranks last. But in containment and health index, and economic support index, Japan ranks first among the surveyed countries.

United States

The United States, with a population of 334,805,269, has 301,034 cases of COVID-19 per one million people, and 3,305 per one million people in this country have died due to COVID-19. The number of recovered patients is 98,236,954 people (Worldometers, 2022). The highly problematic US response to the pandemic demonstrates a lack of resilience in several ways. First, high levels of social inequality and a deeply flawed safety net have created excessive health and economic insecurity for large segments of the population, including and especially for minorities such as blacks and Hispanics. Defects in existing family and child care policies also created major challenges for women during the crisis. Second, on the institutional and political dimensions, strong partisan divisions undermined policy coordination within the framework of US federalism. Third, and similarly, although states and the federal government provided essential data and information about COVID-19 to citizens during the crisis, unscientific claims about the nature of the virus and the threat it poses to public health were made by Trump. Fourth, the country's limited investment in environmental sustainability and its failure to make the "green economy" part of federal recovery packages represent a missed opportunity to leverage pressure from the crisis to create meaningful and lasting economic change (Beland *et al.*, 2021).

In the general index of the government's reaction, the United States ranks sixth. Therefore, it has not acted strongly, and the high number of deaths caused by COVID-19 in this country also proves this claim. In the stringency index, USA ranks sixth. In the containment and health index, and the economic support index, USA has the last rank among the examined countries. Therefore, it is not strange that the number of deaths from COVID-19 in America is the first compared to other countries.

Figure 1 compares the number of deaths in the countries under review, which can depict the results of countries' performance in dealing with the COVID-19 crisis. This figure shows that Japan has the best performance and USA has the worst performance among the countries studied.

Literature review on COVID-19

Considering the novelty of the COVID-19 pandemic, the research in this field is also new. Chatterjee *et al.* (2020) have shown that COVID-19 epidemic has witnessed a change in social

norms and the creation of a new normal. The disease is also an opportunity for new, innovative technologies to break the digital divide and increase the resilience of the most vulnerable communities through democratic access to information and participatory decision-making to develop a response strategy at the local level. The research results of [Peng et al. \(2020\)](#) have shown that the most important factors in stopping the epidemic are the early recognition of infected people, carriers, and contacts and the early implementation of quarantine measures with an organized, active, and integrated strategy at the national level. In [Cheng et al. \(2020\)](#) research, the data set including more than 13,000 policy announcements where more than 195 countries have been examined. The dataset was analyzed by using a Bayesian measurement model. The authors believe that these data are useful to help policymakers and researchers assess how effective different policies are in addressing the spread and health consequences of COVID-19. The research of [Buthe et al. \(2020\)](#) has provided an overview of public and political discourse in Germany, as well as policy responses at the federal and state levels during the first months of the pandemic. This research also provides an initial and tentative assessment of commonalities, divergences, pathologies, and learning as well as broader implications for engagement and cooperation in Europe and beyond it. [Sanfelici \(2020\)](#) has conducted research on Italy's response to the COVID-19 crisis which show that physical distancing restrictions are only one of many required measures. The availability of human and material resources is the basis for avoiding decisions based on priorities determined by budget constraints. The data analysis of this research shows how Italy's response is characterized by some rapid interventions to deal with the health crisis, but few programs for prevention and a lack of community involvement.

The results of [Daumann et al. \(2021\)](#) regarding the COVID-19 pandemic in Germany show that a health policy that aims at comprehensive protection against infection should also be based on economic criteria. The results of study by [Hale et al. \(2021\)](#) show that government policies are effective in reducing deaths in all waves in all groups of countries, and that government responses do indeed have a strong and significant statistical relationship with deaths related to COVID-19. The results of the study by [Wang \(2021\)](#) show that the policies of quarantine and movement restrictions are still the most effective, but the policies of the public health system do not show much effectiveness in the regression analysis. Another important empirical finding is that economic support policies are effective in reducing the spread of COVID-19.

Research methodology

In this research, the number of people who died in each country was adopted to measure the severity of the epidemic in each country. Also, to quantitatively measure governments' response to the COVID-19 crisis, the indicators provided by the Oxford COVID-19 Government Response Tracker are used. These data are collected from publicly available sources, such as news articles and government press releases and briefings, and identified through internet searches by a team of one hundred Oxford University students and staff ([Hale et al., 2021](#)). The indicators provided by Oxford University are shown in [Table 1](#). It should be noted that these indicators are always modified and revised, and some indicators are deleted or combined.

According to the explained goal, the main hypothesis of the research is considered as follows: there is a significant difference between the performance of Iran compared to the G7 countries in the fight against COVID-19.

Considering the hypothesis of the research and to examine the performance of different countries according to the indicators and based on the death rate of COVID-19, a multivariate analysis of variance is used by SPSS software for data analysis. Multivariate analysis of variance (MANOVA) is among the methods of variance analysis and is used when the

Group of indicators	Name	ID
Closures and containment	School closing	C1
	Workplace closing	C2
	Cancel public events	C3
	Restrictions on gatherings	C4
	Close public transport	C5
	Stay at home requirements	C6
	Restrictions on internal movement	C7
	International travel controls	C8
Economic measures	Income support	E1
	Debt / contract relief for households	E2
Health measures	Public info campaigns	H1
	Testing policy	H2
	Contact tracing	H3
	Facial Coverings	H6
	Vaccination Policy	H7
	Protection of elderly people	H8

Performance of
Iran and G7
countries in
COVID-19

191

Table 1.
A set of indicators
provided by Oxford
University

Source: [Hale et al. \(2021\)](#)

researcher wants to investigate the effect of one or more independent variables (IVs) on multiple dependent variables (DVs). This method is an extension of the analysis of variance (ANOVA) model and the most common multivariate analysis in social sciences. MANOVA tests belong to a larger family of statistical techniques known as a general linear model, which includes analyzes such as ANOVA, multiple regression types, and repeated measures designs ([Allen, 2017](#)).

The output of SPSS software includes a table of multivariate tests that are used in the analysis of the results. Among these tests, when the degree of freedom is greater than one, Wilks' Lambda is often stronger than other tests ([Allen, 2017](#)). If the Wilks' Lambda test results were significant, post hoc tests should be used. One of these post hoc tests is Tukey's test. If the significance value of this test is less than 0.05, there is no significant difference between the groups ([Pituch and Stevens, 2015](#)). In this research, structural equation modeling with the partial least squares approach with the help of Smart-PLS software is used to investigate the indicators that have had an effect on the number of deaths in all the countries under review.

Research findings

To check whether there is a significant difference between Iran's performance compared to G7 countries in the fight against COVID-19, the multivariate variance (MANOVA) was used. The data related to this research is taken from the website of Oxford University ([OxCGRT, 2022](#)), and the time period of the data is 845 days from January 16, 2020, when the first case of death was reported in the studied countries, to June 6, 2022. Also, based on the suggestion of [Hale et al. \(2021\)](#), according to the time period of contracting COVID-19 until the appearance of symptoms of the disease, 28 days have been considered between the performance of countries in each index and the date related to the number of deaths.

In order to use MANOVA, the data are checked for skewness and there are no outliers in the observations. Also, the Box's M statistic (which can be calculated when performing the MANOVA test in SPSS software) shows that the observed variance-covariance matrices of the dependent variable are equal because the significance level of Sig of this test is greater than 0.05. The results of the SPSS software related to the MANOVA test are shown in [Appendix 2](#).

According to the results reported in Appendix 2, the significance value of the Wilks' lambda test for all indicators is lower than the alpha value (0.05). Therefore, there is a significant difference in the performance of the investigated countries in the indicators. Tukey's post hoc test is now used to determine which country's indicators have this performance difference. The results of Tukey's post hoc test are shown in Appendix 3.

In order to determine the indicators that have an effect on the number of deaths caused by COVID-19 in the countries under review, structural equation modeling with the partial least squares approach has been used with the help of Smart-PLS software. The results are shown in Figure 2 and Table 2.

Considering that a strong value of 0.630 was obtained for the R^2 coefficient of determination for the dependent variable, this value shows the appropriate fit of the model. Also, the t statistic and significant value (Sig.) for each of the dependent variables are shown in Table 2.

Conclusion and suggestions

According to the results of the statistical analysis (Figure 2 and Table 2), the indicators that were effective in the number of deaths from COVID-19 in the countries under review in order are: 1- Testing policy, 2- Restrictions on gatherings, 3- School closing, 4- Restrictions on internal movement, 5- Contact tracing, 6- Debt / contract relief for households, 7- International

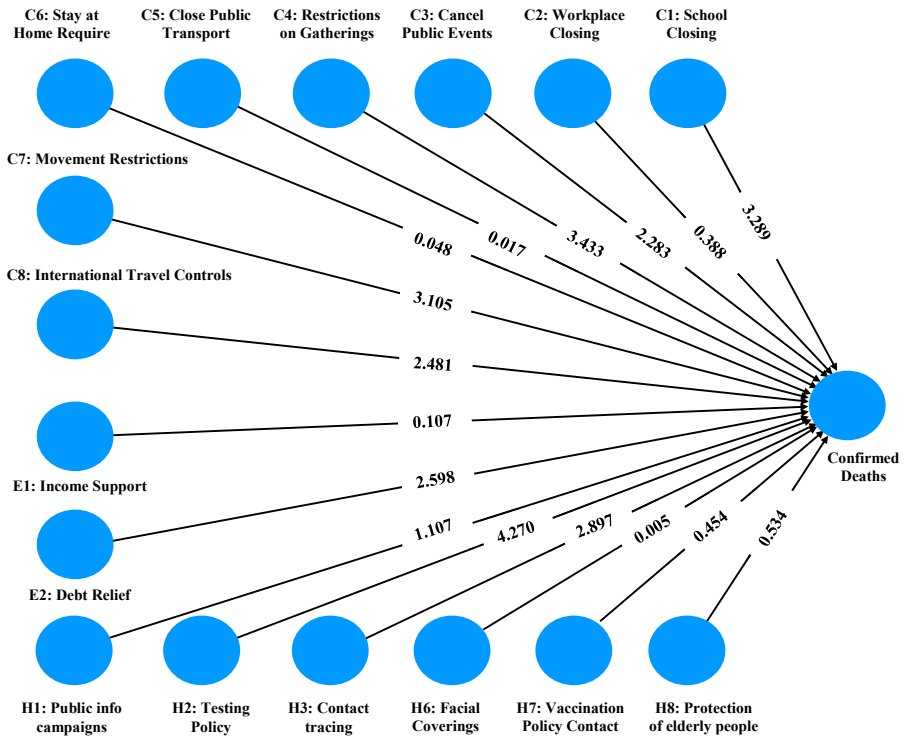


Figure 2. Smart-PLS software output in meaningful mode

Source: By author

Independent variables	ID	t statistic	Sig.	Result
School closing	C1	3.289	0.001	Confirmed
Workplace closing	C2	0.388	0.698	Rejected
Cancel public events	C3	2.283	0.023	Confirmed
Restrictions on gatherings	C4	3.433	0.001	Confirmed
Close public transport	C5	0.017	0.986	Rejected
Stay at home requirements	C6	0.048	0.961	Rejected
Restrictions on internal movement	C7	3.105	0.002	Confirmed
International travel controls	C8	2.481	0.013	Confirmed
Income support	E1	0.107	0.915	Rejected
Debt / contract relief for households	E2	2.598	0.010	Confirmed
Public info campaigns	H1	1.107	0.108	Rejected
Testing policy	H2	4.270	0.000	Confirmed
Contact tracing	H3	2.897	0.004	Confirmed
Facial Coverings	H6	0.005	0.996	Rejected
Vaccination Policy	H7	0.454	0.650	Rejected
Protection of elderly people	H8	0.534	0.594	Rejected

Source: By author

Table 2.
The results of Smart-PLS software outputs

travel controls, and 8- Cancel public events. Also, the research results (Appendix 2) showed that there is a significant difference in the performance of the investigated countries in the indicators.

Regarding the School closing index (C1), based on the significance of Tukey's post hoc test (Appendix 3), the performance of Iran and the United States are similar. According to Appendix 1, among the 6 dimensions of Hofstede's national culture, Iran and USA have the same score (low score) in the "long-term orientation" dimension. In such cultures that pay attention to the short-term time horizon, respect for tradition and the realization of social goals are emphasized, and considering the vulnerability of political and social institutions in these two countries, the similarity of performance in this index is not far from expected. From another point of view, according to GLOBE data, considering that Iran and USA are from two different cultural clusters, it seems that USA did not behave according to the cultural characteristics of its own cluster at the time of the crisis. Although USA is in the Anglo cluster, it has adopted a strong policy of containment and closure and has behaved like the South Asian cluster, seeking to avoid uncertainty.

According to the results of this research, the performance of Iran and Italy in the indicator of Cancel public events (C3) were similar (Appendix 3). Among Hofstede's cultural dimensions, Iran and Italy have a similar score in the dimensions of "uncertainty avoidance" and "indulgence" (Appendix 1). Considering the high score of both Iran and Italy in the uncertainty avoidance index, the tendency to avoid risk, the existence of standard procedures, and respect for authority are characteristics of these two countries that can be seen in the cancellation of public events. Also, the low score of these two countries in the indulgence index indicates a culture that stops satisfying needs and controls them through strict social norms. This culture has also supported the cancellation of public events to deal with the COVID-19 crisis. From the perspective of GLOBE data, Iran is in the Southern Asia cluster and Italy is in the Latin European cluster. The two clusters are similar in communication style, levels of collectivism, existence orientation, and uncertainty avoidance. As a result, the very similar performance of Iran and Italy is not out of mind. The results of this research show that Iran's performance in the restrictions on gatherings index (C4), international travel controls index (C8), and Debt/contract relief for household's index (E2) are not similar to any other country (Appendix 3).

According to the results of this research, the performance of the countries of Iran and Canada in the Restrictions on internal movement (C7) index is similar (Appendix 3). Iran and Canada have a low and similar score in the national culture dimension of “long-term orientation” (Appendix 1), which shows that these countries prefer to maintain old traditions and norms and show a desire to achieve quick results. Therefore, through these policies, they have tried to quickly control the COVID-19 crisis. Among the countries under review, Canada has applied the most restrictions in relation to this index. This result can be seen while Iran is in the Southern Asia cluster and Canada is in the Anglo cluster, and apparently it has behaved outside its cluster.

Based on the results of this research, in the Testing policy index (H2), Iran’s performance was similar to Canada’s and Britain’s. Also, the results show that in the Contact tracing index (H3), Iran’s performance is similar to France and America (Appendix 3). According to Hofstede’s dimensions of national culture, there is no indication that these countries have the same rank at the same time. From a GLOBE clustering perspective, these countries are also in different clusters.

As indicated by the results of this study, despite the existence of differences in the performance of the investigated countries in dealing with the COVID-19 crisis, the performance of these countries has been similar in some indicators. This similarity in performance is due to the specific crisis conditions facing the countries, which forced some governments to behave outside their cultural cluster during the crisis. According to the results of this research, some countries have not taken enough measures to deal with the crisis, and the measures of some other countries, although severe, have not been useful. In particular, the performance of the countries under review shows that supporting measures have been more useful than lockdown and stringency. Therefore, it is suggested that countries identify appropriate and useful measures to deal with similar crises and design policies that are appropriate to their national culture. It is suggested to future researchers identify the countries that have performed best in dealing with the COVID-19 crisis and design a suitable model of national culture to face such crises. Therefore, researchers are suggested to provide management models to deal with epidemic diseases with an emphasis on culture.

References

- Allcott, H., Boxell, L., Conway, J., Gentzkow, M., Thaler, M. and Yang, D. (2020), “Polarization and public health: Partisan differences in social distancing during the coronavirus pandemic”, *Journal of Public Economics*, Vol. 191, pp. 1-49.
- Allen, M. (2017), *Multivariate Analysis of Variance (MANOVA)*, Sage Publications, Thousand Oaks, CA.
- Anwar, S., Nasrullah, M. and Hosen, M.J. (2020), “COVID-19 and Bangladesh: challenges and how to address them”, *Frontiers in Public Health*, Vol. 8, pp. 1-8.
- Baker, A. (2008), “The Group of Seven”, *New Political Economy*, Vol. 13 No. 1, pp. 103-115.
- Beland, D., Lammert, C. and Thunert, M. (2021), “United States report: sustainable governance in the context of the COVID-19 crisis”, available at: https://www.sgi-network.org/docs/2021/country/SGI2021_USA.pdf (accessed 1 December 2022).
- Belot, M., van den Broek-Altenburg, E., Choi, S., Jamison, J.C., Papageorge, N.W. and Tripodi, E. (2020), “Six-country survey on Covid-19”, *COVID Economics*, Vol. 17, pp. 205-219.
- Bull, M. (2021), “The Italian government response to Covid-19 and the making of a prime minister”, *Contemporary Italian Politics*, Vol. 13 No. 2, pp. 149-165.
- Busch, A., Begg, L. and Bandelow, N.C. (2021), “United Kingdom report: sustainable governance in the context of the COVID-19 crisis”, available at: https://www.sgi-network.org/docs/2021/country/SGI2021_UK.pdf (accessed 1 December 2022).

- Buthe, T., Messerschmidt, L. and Cheng, C. (2020), "Policy responses to the Coronavirus in Germany", Cardini, G.L. (Ed.), *The World Before and After COVID-19: Intellectual Reflections on Politics, Diplomacy and International Relations*, European Institute of International Relations, Stockholm, pp. 97-102.
- Chatterjee, R., Bajwa, S., Dwivedi, D., Kanji, R., Ahammed, M. and Shaw, R. (2020), "COVID-19 risk assessment tool: dual application of risk communication and risk governance", *Progress in Disaster Science*, Vol. 7, pp. 1-11.
- Cheng, C., Barceló, J., Spencer Hartnett, A., Kubinec, R. and Messerschmidt, L. (2020), "COVID-19 government response event dataset (CoronaNet v.1.0)", *Nature Human Behaviour*, Vol. 4, pp. 756-768.
- Cotta, M., Maruhn, R. and Colino, C. (2021), "Italy report: sustainable governance in the context of the COVID-19 crisis", available at: https://www.sgi-network.org/docs/2021/country/SGI2021_Italy.pdf (accessed 1 December 2022).
- Cvetkovic, V., Nikolic, N., Nenadic, U.R., Ocal, A., Noji, K.E. and Zecevic, M. (2020), "Preparedness and preventive behaviors for a pandemic disaster caused by COVID-19 in Serbia", *International Journal of Environmental Research and Public Health*, Vol. 17 No. 4124, pp. 1-23.
- Daumann, F., Follert, F., Gleißner, W., Kamarás, E. and Naumann, C. (2021), "Political decision making in the COVID-19 pandemic: the case of Germany from the perspective of risk management", *International Journal of Environmental Research and Public Health*, Vol. 19 No. 397, pp. 1-23.
- GLOBE (2020), "Global Leadership & Organizational Behavior Effectiveness (GLOBE) project", Gustavson School of Business at the University of Victoria, Victoria, BC, available at: <https://globeproject.com/results/#country> (accessed 1 December 2022).
- Hale, T., Angrist, N., Hale, J.A., Kira, B., Majumdar, S., Petherick, A., Phillips, T., Sridhar, D., Thompson, N.R., Webster, S. and Zhang, Y. (2021), "Government responses and COVID-19 deaths: global evidence across multiple pandemic waves", *PLoS ONE*, Vol. 16 No. 7, pp. 529-538.
- Hofstede, G. (2011), "Dimensionalizing cultures: the Hofstede model in context", *Online Readings in Psychology and Culture*, Vol. 2 No. 1, pp. 1-26.
- Hofstede, I. (2022), "Country comparison", *Hofstede Insights*, available at: <https://www.hofstede-insights.com/country-comparison> (accessed 1 December 2022).
- Jannetta, A.B. (2014), *Epidemics and Mortality in Early Modern Japan*, Princeton Legacy Library Press, Princeton, NJ.
- Kabasakal, H., Dastmalchian, A., Karacay, G. and Bayraktar, S. (2012), "Leadership and culture in the MENA region: an analysis of the GLOBE project", *Journal of World Business*, Vol. 47 No. 4, pp. 519-529.
- Kluckhohn, C. (1962), "Universal categories of culture", Tax, S. (Ed.), *Anthropology Today: Selections*, University of Chicago Press, Chicago, IL., pp. 304-320.
- Lotfi, R., Kheiri, K., Sadeghi, A. and Babae Tirkolae, E. (2022), "An extended robust mathematical model to project the course of COVID-19 epidemic in Iran", *Annals of Operations Research*, Vol. 308 Nos 1-2, pp. 1-25.
- Meny, Y., Uterwedde, H. and Zohnhofer, R. (2021), "France report: sustainable governance in the context of the COVID-19 crisis", available at: https://www.sgi-network.org/docs/2021/country/SGI2021_France.pdf (accessed 1 December 2022).
- Middleton, J., Martin-Moreno, J.M., Barros, H., Chambaud, L. and Signorelli, C. (2020), "ASPHER statement on the novel coronavirus disease (COVID-19) outbreak emergency", *International Journal of Public Health*, Vol. 65, pp. 237-238.
- Okina, Y., Renn, O. and Lohse, A. (2020), "What can we learn from Germany's response to COVID-19?", *NIRA Opinion Paper*, Vol. 54, pp. 1-18.
- Or, Z., Gandré, C., Durand Zaleski, I. and Steffen, M. (2022), "France's response to the Covid-19 pandemic: between a rock and a hard place", *Health Economics, Policy, and Law*, Vol. 17 No. 1, pp. 14-26.

-
- OxCGRT (2022), "A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)", Oxford COVID-19 Government Response Tracker, available at: <https://covidtracker.bsg.ox.ac.uk/> (accessed 1 December 2022).
- Pascha, W., Köllner, P. and Croissant, A. (2021), "Japan report: sustainable governance in the context of the COVID-19 crisis", available at: <https://doi.org/10.11586/2021097> (accessed 1 December 2022).
- Peng, F., Tu, L., Yang, Y., Hu, P., Wang, R., Hu, Q., Cao, F., Jiang, T., Sun, J., Xu, G. and Chang, C. (2020), "Management and treatment of COVID-19: the Chinese experience", *The Canadian Journal of Cardiology*, Vol. 36 No. 6, pp. 915-930.
- Pituch, K.A. and Stevens, J.P. (2015), *Applied Multivariate Statistics for the Social Sciences: Analyses with SAS and IBM's SPSS*, Routledge, New York, NY.
- Rub, F., Heinemann, F. and Zohlhofer, R. (2021), "Germany report: sustainable governance in the context of the COVID-19 crisis", available at: https://www.sgi-network.org/docs/2021/country/SGI2021_Germany.pdf (accessed 1 December 2022).
- Sanfeli, M. (2020), "The Italian response to the COVID-19 crisis: lessons learned and future direction in social development". *The International Journal of Community and Social Development*, Vol. 2 No. 2, pp. 191-210.
- Scott, J.C. (2017), *Against the Grain: A Deep History of the Earliest States*, Yale University Press, London.
- Shah, S. (2017), *Pandemic: Tracking Contagions, from Cholera to Ebola and Beyond* (1st ed.), Picador, New York, NY.
- Urrutia, D., Manetti, E., Williamson, M. and Lequy, E. (2021), "Overview of Canada's answer to the COVID-19 pandemic's first wave (January-April 2020)", *International Journal of Environmental Research and Public Health*, Vol. 18 No. 13, pp. 1-15.
- Wang, R. (2021), "Measuring the effect of government response on COVID-19 pandemic: empirical evidence from Japan", *COVID*, Vol. 1, pp. 276-287.
- Worldometers (2022), "Announced new COVID-19 deaths by country", available at: <https://www.worldometers.info/coronavirus/#countries> (accessed 1 December 2022).
- Yan, B., Zhang, X., Wu, L., Zhu, H. and Chen, B. (2020), "Why do countries respond differently to COVID-19? A comparative study of Sweden, China, France, and Japan", *The American Review of Public Administration*, Vol. 50 No. 6-7, pp. 762-769.

Appendices

Appendix 1: The scores of the investigated countries based on Hofstede's six-dimensional model of National Culture

Country	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
Canada	39	80	52	48	36	68
Germany	35	67	66	65	83	40
France	68	71	43	86	63	48
Britain	35	89	66	35	51	69
Iran	58	41	43	59	14	40
Italy	50	76	70	75	61	30
Japan	54	46	95	92	88	42
USA	40	91	62	46	26	68

Source: Hofstede (2022)

Appendix 2: Multivariate variance summary for research indicators

Effect	Value	F	df	Sig.	Partial Eta Squared
Wilks' lambda for C1	0.433	501.149	14	0.000	0.342
Wilks' lambda for C2	0.426	513.969	14	0.000	0.348
Wilks' lambda for C3	0.451	472.011	14	0.000	0.329
Wilks' lambda for C4	0.391	578.817	14	0.000	0.375
Wilks' lambda for C5	0.437	495.058	14	0.000	0.339
Wilks' lambda for C6	0.448	475.766	14	0.000	0.330
Wilks' lambda for C7	0.431	505.091	14	0.000	0.344
Wilks' lambda for C8	0.378	604.317	14	0.000	0.385
Wilks' lambda for E1	0.443	485.228	14	0.000	0.335
Wilks' lambda for E2	0.284	0.673	14	0.000	0.467
Wilks' lambda for H1	0.478	430.767	14	0.000	0.309
Wilks' lambda for H2	0.407	546.576	14	0.000	0.362
Wilks' lambda for H3	0.300	795.563	14	0.000	0.452
Wilks' lambda for H6	0.400	560.913	14	0.000	0.368
Wilks' lambda for H7	0.539	348.907	14	0.000	0.266
Wilks' lambda for H8	0.413	536.439	14	0.000	0.357

Source: By author

Appendix 3: Tukey’s post hoc test results to determine the similarity of countries’ performance in each index

Country	C1	C3	C4	C7	C8	E2	H2	H3
Canada	None	Germany	Germany	Iran	None	None	Britain & Iran	None
Germany	Britain	Canada	Canada & USA	France	None	France	Italy	None
France	Japan	Britain	Britain & USA	Germany	Italy	Germany	None	Iran & USA
Britain	Germany	France	France	Japan	None	None	Canada & Iran	USA
Iran	USA	Italy	None	Canada	None	None	Canada & Britain	France & USA
Italy	None	Iran	None	None	France	Japan	Germany	None
Japan	France	None	None	Britain	None	Italy	None	None
USA	Iran	None	Germany	None	None	None	None	France & Iran

Source: By author

About the author

Vahid Pourshahabi is an Assistant Professor of Faculty of Humanities, Department of Management, Zahedan Branch, Islamic Azad University, Iran. His specialized field of study is public administration in comparative and development, His research interests are in the field of development management. Vahid Pourshahabi can be contacted at: pourshahabi.vahid@gmail.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com