Theorizing the Initial Response of Countries in Bringing COVID-19 Pandemic under Control: The Effect of Change Readiness of Countries

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ABSTRACT: Pandemic crises can bring the biggest and deepest shocks to countries around the world. In the first quarter of 2020, a global pandemic named "COVID-19" spread all over the world and not only took so many lives and created so much fear but also brought a tremendous financial pain as a result of shutting down economies to fight with this unknown contagious virus. This paper examines how countries' *change readiness* enables them to bring the spread of an international crisis under control. We propose that higher levels of *change readiness* would help countries to cope with risks and uncertainties generated by the changes and shocks in the environment. Therefore, higher levels of change readiness help them bring a crisis under control. This characteristic of a country shows its influence, especially in facing pandemics. Overall, this study improves our knowledge about mechanisms through which *change readiness* of countries might impact their capability in facing international crises. This study contributes to the literature on risk mitigation in global crises. It is one of the first to look closely at the role of countries' *change readiness* in helping them to respond to shocks generated by an international crisis.

KEYWORDS: Change readiness, Global Pandemic, Spread of COVID-19, Resiliency

1. Introduction

No community is immune to the risk of catastrophes. In today's world, societies are more than ever exposed to global disasters due to globalization, rapid urbanization, and in some cases, poor development planning. This has resulted in the creation of new risks or exacerbation of existing ones leading to additional losses and disruptions. Proactive and consistent disaster preparation and risk mitigation are required methods to build resilience, reduce the severity of impacts, and recover quicker from disaster losses (Saja et al. 2019). World Health Organization (WHO) defines a disaster as "any occurrence that causes damage, destruction, ecological disruption, loss of human life, human suffering, deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside of the affected community" (Haghani et al. 2009).

The frequency of disasters happening in recent decades illustrates the importance and role of a resilient disaster management framework. In 2018, the SwissRe Institute estimated that more than 11,000 people were victims of disaster events, and the economic losses estimated to be USD 155 billion (Bevere 2019). The impacts and severity of a disaster is different in every country. Responding to large-scale disasters are very challenging. When a nation's capability fails to face large-scale disaster, international assistance is required. (Haddow et al. 2017). As no country is immune to enormous shocks, it is expected that the extent to which a country is prepared for handling short term or long-term changes would be a critical determinant for disaster preparedness, response, and recovery plans. To minimize the risks and impact of potential disasters and to increase the safety and wellbeing of residents, communities should be more resilient to address the threats and decrease the vulnerabilities to

the risks (Jabareen 2013). Therefore, change management is one of the critical factors to minimize the impacts of a disaster on the population.

The United Nations International Strategy for Disaster Reduction (UNISDR) provides guidance for the international community's overall disaster management mission. The objective is to build disaster resilient communities by promoting awareness of the importance of disaster reduction as an integral component of sustainable development. Therefore, the threshold for determining what constitutes a disaster is dependent upon two factors. First is the availability of resources, and second is the capabilities of the community to respond (Haghani et al. 2012). The response capacity of each nation is linked to several factors, such as the propensity for disaster, local and regional economic resources, government structure, and availability of technological, academic, and human resources (Haddow et al. 2017).

We use the organizational *change readiness* literature as a springboard to propose the notion of *change readiness* at a country level. We argue that *change readiness* is a function of how prepared a country is for change, how capable they are for managing a change, and how able they are to take advantage of the opportunities provided by the change (Gharagozloo et al. 2021). These changes can be the result of shocks like economic crisis, social conflicts, or disasters.

Readiness is reflected in beliefs, attitudes, and intentions of the necessity of change and the capacity to handle the change successfully. Changes always include risks due to moving from a known state to an unknown one. Adapting Change readiness analysis helps to eliminate the risks by providing evaluations and adjustments toward the situation. The analysis must include several factors, such as the influences of internal and external conditions, details of the phenomenon that has led to change, identified risks, anticipated actions, and control measures (KPMG Report 2019).

2. Theory and Hypotheses

Past research has identified several country-level factors that would influence responding to disasters. In this paper, we add to this stream of research by arguing that change readiness can help countries provide more efficient controlling measures in response to a disaster.

2.1. Change Readiness

The management literature defines *change readiness* (at an organizational level) as a "belief that affects the tolerance to an initiated change when it's time to make a change in an organization" (Armenakis et al. 2007). Bernerth (2004) argued that change readiness functions like a facilitator that helps limit the consequences of an adverse response to a change. In management literature, change readiness has been more often considered as an organization's capability (Armenakis et al. 1993; Armenakis et al. 2007). Change readiness capability allowed organizations to reduce the threats from change (Bernerth 2004), and lead to positive attitudes towards change (Rafferty, Jimmieson and Armenakis 2013). For instance, a high level of change readiness can help motivate employees to be positive and proactive to support and implement planned change (Weiner, Amick, and Lee 2008).

For a country to be ready for changes, the ability to address both sudden-onset events and build resilience against long-term structural changes is required. This readiness would be based on collaboration and coordination among multiple actors and underscores scaling up and targeting vulnerable groups. As a country fails to recognize the impact of changes and cannot handle them properly, their citizens, their society, and their economy (Bennett et al. 2021) would experience high costs of lack of change readiness (KPMG 2019).

In this study, change readiness is viewed as a multidimensional capability at the country level. It represents and measures how ready a country is for handling threats from sudden

negative changes and shocks such as financial crisis or natural disasters while taking advantage of other forms of changes (such as technology).

2.2. Why change readiness of a country matters to disaster response

According to the report published by KPMG in 2017, when an earthquake in Haiti in 2010 led to catastrophic natural, political and economic consequences, the change readiness of countries came to the attention of scholars. Experts realized that there was no standard global indicator showing the readiness of a country to respond to sudden changes in their environment. KPMG examined this issue and came up with a comprehensive index. Such an index is valuable because changes in areas such as technology, politics, and social environments can have a substantial effect on the response capabilities for a disaster.

Disasters are sudden and overwhelming events that might take a significant amount of time for the affected area to recover (Ritchie 2008). McEntire and Myers (2004) claim that in this era, there has been a greater need to anticipate disaster and be ready to deal with the adverse consequences effectively. A post-disciplinary approach is required for disaster preparedness that reviews in detail all the steps necessary that a country should consider increasing the readiness in dealing with a disaster. The readiness factors such as leadership, stakeholder involvement, and technological innovations, along with the knowledge improvements, can reduce risks, strengthen local governing capacity, and promote adaptation and long-term monitoring systems. These factors can enhance the countries' abilities to control and manage a disaster. In case of an international disaster, countries with a more considerable change readiness levels can resist, absorb, accommodate, and recover from the effects of the hazards in a timely and efficient manner and continue to perform (Jabareen 2013).

The most typical pattern for large-scale disaster is to be universal in the first few weeks, and the event's adverse effects dissipate over time. The ideal result of a disaster is resistance, where there is no dysfunction. During such conditions, the process that can generate adapted outcomes is resilience. The greater the resilience, the quicker the return to the normal functioning would be. There is this potential for communities to function effectively and adapt successfully after a disaster by developing community resilience. A resilient system depends on each component's ability to change or adapt in response to changes that occur in other components.

Community resilience is the ability of people to predict and prepare for, reduce impacts, cope with, and recover from the effects of shocks and stresses in case of a disaster and the vulnerabilities while the long-term perspectives are not compromised (Antronico et al. 2020). The resilient community has four dimensions of economic development, social capital, information and communication, and community competence. The integration of all dimensions provides a strategy for disaster readiness. To construct resilience, communities should reduce risk and resource inequities, engage the local population in mitigation plans, create organizational linkages, boost and protect social support, and prepare a structured plan. The planning requires flexibility, decision-making skills, and reliable sources of information that can function in the case of an unknown (Norris et al. 2008). The significant influence of community resilience can be traced in proactive hazards mitigation, emergency management infrastructure, and even post-disaster psychological intervention (Norris et al. 2008).

Readiness has a significant role in developing community resilience, by changing the perspectives on risk interpretation understanding, disaster risk reduction decision-making, and action implementation to manage risk under uncertainty. Based on Paton (2015), disaster risk reduction strategies are facilitated through sustained readiness from two perspectives. First, atypical demands and challenges identification that is required to be resilient or to adapt to from the disaster impact, response, and recovery phases experiences. Second, personnel,

community, and societal factors identification requires for predicting if the community proactively develop sustained resilient and adaptive capacity. Therefore, change readiness can act as a roadmap for enhancing community resilience to disasters. The underlying capabilities of communities should be identified to help them have better preparation and recovery plan for disasters.

The main goal of disaster management is to enhance immediate response to the crisis from government agencies level to the local hospitals and improve communication management. As the countries are more advanced in change readiness, there can be a better disaster response. The early response can save more lives and provide better care to meet the affected population's immediate needs and reduce the long-term impacts of the disaster (Tzeng et al. 2016).

It is expected that the level of change readiness of a country to handle technology shocks, economic crisis, natural disasters, and social changes would work as a buffer to enhance community resilience facing a disaster. We argue that countries that are advanced in terms of their change readiness are more capable of providing control measures to respond to a disaster response would be more resilient. Thus, we except:

Proposition (P1) Countries with a higher level of change readiness are more likely to be able to bring the spread of a disaster under control.

Proposition 1a (P1a) Countries with better change readiness in regulatory and government are more likely to be able to bring the spread of a disaster under control.

Proposition 1b (P1b) Countries with better change readiness in their society and among their people are more likely to be able to bring the spread of a disaster under control.

Proposition 1c (P1c) Countries with better change readiness in their private sector and among their enterprises are more likely to be able to bring the spread of a disaster under control.

3. Case Study: COVID-19

The international crisis crosses the geographical borders and threatens multiple regions or continents; and passes functional boundaries, affecting not only the health systems but economy, and industries (Winham 2020). Based on William & Waugh (2007), the pandemic crisis is categorized as large-scale disaster. Pandemics can happen with the appearance of a new virus that the population has no immunity against. A pandemic can cause social disruption, economic loss, and increase the morbidity and mortality levels. In the previous century, pandemics caused massive deaths, social damages, and financial losses all around the globe (Li et al. 2012). The urbanization and advancements in transportation have increased the possibility of the rapid spread of any new viruses around the world. Countries with limited surveillance and patient care resources, including insufficient health system infrastructure and medical supplies, have a higher likelihood of being impacted more significantly from a pandemic.

Changes cannot be implemented easily in healthcare systems due to design requirements for the interconnection of health professionals to be re-engineered effectively and efficiently. One of the challenges during a pandemic is medical capacity. There would be a high rise in workload and demands for diagnoses and prescriptions for the community. In such cases, developing community resilience can assist the community to function effectively and adapt successfully after a pandemic crisis (Norris et al. 2008). By promoting health readiness management for disaster response, challenges with the clinical practice processes and activities can be understood, and the available resources and communication linkages of relevant organizations to support the health change system can be identified (Li et al. 2012).

Figure 1. Top 10 countries with the worst spread of COVID-19 in the first 30 days in each country
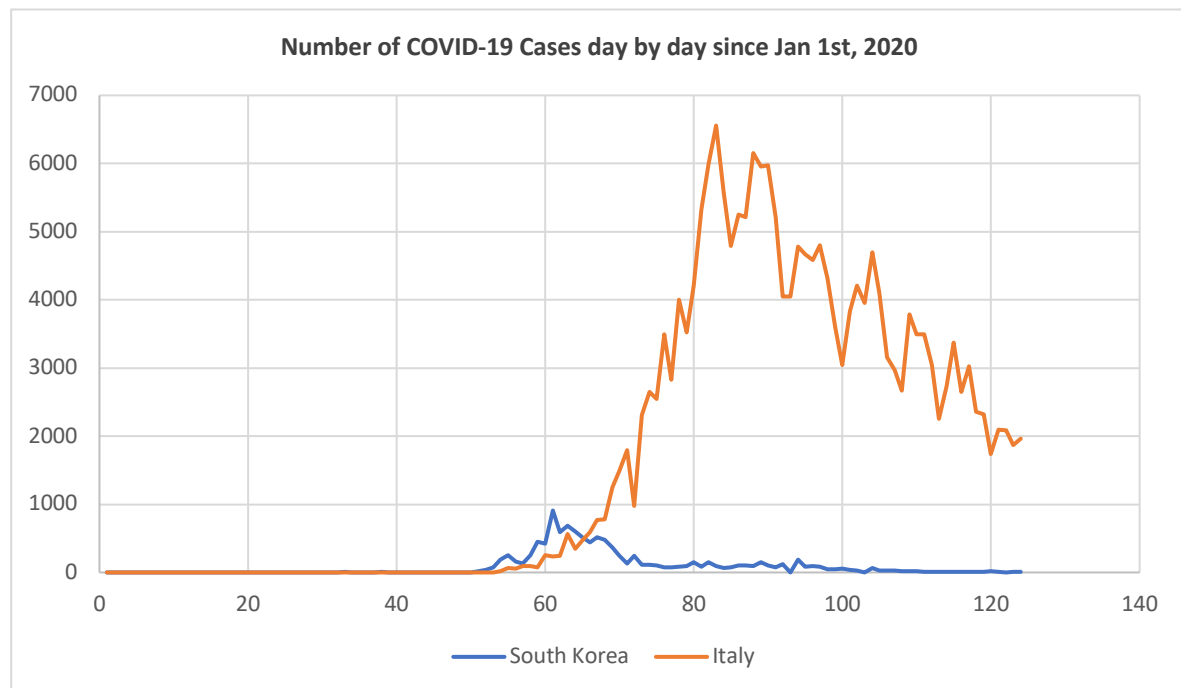
Source: European Union Open Data Port

A new pandemic had hit the globe in an unprecedented way when patients with unexplained pneumonia were found in Wuhan city in December 2019. The WHO has named the pathogen SARSCoV-2 and the caused disease is called coronavirus disease designated as COVID-19. The virus is highly infectious and pathogenic, which cause human-to-human transmission (Li et al. 2020). The catastrophe has spread rapidly, casualties continue to rise, and the impact of the crisis is spreading through all countries (Ahn et al., 2020). Fuchs (2020) argues that the coronavirus crisis is a natural disaster.

Mechanisms of the disease are primarily uncertain and have changed the worlds' view in most aspects. The critical challenge is the lack of data on the COVID-19 consequences. Crisis communication is challenging and confusing to emergency management agencies in case of high-profile contagious disease that affects human beings on a global scale, which has low probability but a high impact on human life and economies (Fuchs 2020). It has a significant effect on the population leading to heightened perceptions of risk since it spread quickly and yield to high mortality rates (Andrew et al. 2018). Responses, experiences, and the results have been different in each country and region because of different impacts and different rates of death and infection (Ahn et al. 2020).

To have an optimum response to a pandemic requires developing proper health planning and management that imply information and communication technologies for managing the risks. The pandemic surveillance and control can be enhanced by rapid case reporting, and the performance of medical practices can be improved by adequate documentation (Li et al. 2012). Therefore, health readiness management would be a critical step in change management and should be included in the disaster preparedness phase to increase the success of health management implementation. Some of the advantages of health readiness for pandemics avoid time, money, and endeavor losses, prevent delays in planning, and facilitate the process of change in the involved community from the pre-contemplation stage to preparation.

An excellent example of having such readiness can be Taiwan that has proven to be one of the most successful in the world in deploying a containment strategy in the early stage. The Taiwan centers for disease control was monitoring the news organizations, blogs, and social media in tracking an outbreak of pneumonic plague. The center claims that their success was due to treating the virus as a severe epidemic from the first day. The rapid response credited with minimizing the island of 24 million people, having 440 confirmed Covid-19 cases, with six deaths being the lowest totals in the world (Wang and Ellis 2020). The critical point is the lessons learned from the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003. It severely hit the island, and it had the third-most infections in the world. Afterward, Taiwan focused on health system readiness for the next epidemic (Wang and Ellis 2020).

4. Discussion and Conclusion

We are living in an era of significant change and, therefore, high risk and high uncertainty. The trends of substantial change around the world are observable in the economy, politics, technology, and even the natural environment of countries. These potential changes demand countries and their governments worldwide to plan ahead and bring the factor of change readiness into their risk mitigation calculations. Countries need to be resilient to tackle the risks and uncertainty. Having change management plans can identify risks, provide management plans, and reduce the potential consequences facing uncertainties. We are experiencing one of the greatest global disasters of this century, the COVID-19. Healthcare readiness as one of the change readiness factors, can assist decision-making by providing the ability to mitigate pandemic risks and facilitate the response.

Our second contribution in this study is to show the importance of the role of government and people in the magnitude of which the change readiness of a country matters. To be more specific, we brought evidence, that countries with a better level of change readiness in their government can bring the spread of a contagious virus under control in a more efficient and timely manner.

Finally, after experiencing a significant financial meltdown in almost all market around the world, understanding change readiness of countries from an economic perspective can help business communities realize where the governments are ready to collaborate (Gharagozloo et al. 2020) or to respond to an ongoing change, where the risk of lack of change readiness prevents achieving better performance and where people in a society provide a better prepared environment.

Overall, our findings contribute to the international crisis literature from the perspective of change management by looking at the level of change readiness of countries. To the best of our knowledge, this is one of the first studies to theorize the change readiness of countries influence on a disaster's severity of impact on each country and the propositions provide clear implications for government officials, local communities and how it matters for business executives and entrepreneurs (Bennett et al. 2018). Understanding the concept of change readiness on a national level can help policymakers realize the risks and provide decision plans for potential disasters. The lack of change readiness prevents achieving better performance in disaster responses and increase morality rate, economic losses, and social disruption.

There is no doubt that in order to maintain a state of readiness and create trust and cooperation between sectors constant monitoring and analysis of change readiness matters. However, this monitoring and analyzing should become a continuous process (Robert and Lajtha 2002). In fact, although finding a right line between flexibility and planning can sometimes become extremely difficult (Turner 1995) in global crises that cross the borders and involve several countries including their government, people and private sector, being flexible and planning ahead for early responses should be considered a new norm. Therefore, obtaining an understanding of change readiness is vital.

The COVID-19 crisis response calls for further research in the areas of readiness as there has been significant variation in the perceived success of bringing the virus under control in different countries. While some countries perceived success in managing the crisis has been extremely slow and undisciplined (such as Italy, Figure 1), others reported that the virus is under control in a much faster manner (such as South Korea, Figure 1). Therefore, in addition to studying the effect of change readiness that seems essential, there might be other sorts of readiness such as readiness of infrastructure or health system as well that need to be addressed in the future.

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