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The role of local governments in South Korea's COVID-19 response

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Abstract

Research on COVID-19 responses has largely focused on national governments. Meanwhile, the crisis management literature has noted that such "transboundary crises" require collaborative responses. What role can local governments play? How do citizen perceptions matter? We look for answers in South Korea that has been considered a model case for managing COVID-19. We use data from policy briefs, news reports, and local government websites to show that local governments successfully implemented national initiatives while modifying them to fit local needs and also actively planned and executed local initiatives to address needs that the central government did not address. Based on 2020 national survey data ($N = 16,258$), we find that COVID-19 cases and deaths are linked to citizen perceptions of vulnerability to COVID-19 and its effect on wellbeing, but not to evaluations of other residents' responses (e.g. following mask mandates, social distancing) or local government responses.

KEYWORDS
citizen perceptions, COVID-19, crisis management, disaster management, local government

1 | INTRODUCTION

The 2007–2009 Global Financial Crisis generated strong anti-government sentiments in some places leading to calls for smaller government (Castells et al., 2014; Peck et al., 2012). However, the latest COVID-19 (hereafter, referred to as COVID) crisis seems to ask for a greater role of governments – to the point of raising concerns about excessive government power (Thomson & Ip, 2020). The role of public administration and public managers has been explored in previous crises, such as the 9/11 terrorist attacks (e.g. Cohen et al., 2002; Rosenthal, 2003), Hurricane Katrina (e.g. Stivers, 2007), and the Boston Marathon bombing (e.g. Hu et al., 2014). However, the current COVID crisis is a particularly wicked problem that spans a long timeframe – the World Health Organization (WHO) declared COVID a pandemic on March 11, 2020 – and geographic boundaries. Indeed, the current crisis has characteristics of a "transboundary crisis" (Ansell et al., 2010; Boin, 2019) that require new solutions.

In an effort to contribute to this search for new solutions, this paper focuses on the case of South Korea (hereafter referred to as Korea) and its response to COVID. Medical experts and the wider policy community around the world have deemed Korea a model case in the fight against COVID (Fisher & Choe, 2020), leading to popular use of the term "K-quarantine." This term was coined in 2020 and refers to the strategy the Korean government used to respond to COVID, dubbed the 3T system of testing, tracing, and treatment. Recent research has pointed out that the success of "K-quarantine" rested on the collaborations among the central government, local governments, the private medical and biotechnology sector, and citizens. The importance of local knowledge and rapid on-the-ground response has been emphasized in previous crisis and disaster management research (e.g. Baker & Refsgaard, 2007; Yilmaz & Boex, 2021). Yet, the research on COVID responses has still largely focused on national/central governments. This paper will examine the role of local governments in COVID responses in Korea and how

citizen evaluations of these responses are related to COVID deaths and cases.

Scholarly interest in crisis management has been growing rapidly, but the scope of research remains limited in terms of methods (mostly interview/observation) and research design (mostly single-case, exploratory research; Wolbers et al., 2021). In fact, Boin and Lodge (2016) bemoaned the lack of attention to crisis and disaster management in public administration, but the recent COVID pandemic may be encouraging more attention to crisis and disaster management in the field (see, for example, *Public Administration and Development*'s special issue on "Local Governments in Pandemic Response"). Nevertheless, most research on COVID responses has focused on the role of national governments (e.g. Abdullah & Kim, 2020; Kim et al., 2020) and a few articles have explored the role of nonprofit organizations (e.g. Li et al., 2020; Wang & Cheng, 2021). There has been less attention paid to the role of local governments. Some exceptions[1] are Huynh et al. (2020) that found local government capacity and COVID cases have a strong negative correlation in Vietnam and Dzigbede et al. (2020) that found smaller local governments with less resources in the US are not equipped to respond to crises and this will further exacerbate inequality between places.

2 | COVID-19 AND EMERGENCY RESPONSE IN KOREA

Despite some criticisms about the Korean government's decision to not ban travelers from China earlier, Korea was able to quickly manage the spread of COVID (Fisher & Choe, 2020) by "flattening the curve" of daily case rates with its testing, tracing, and treatment strategy. As of March 13, 2020, Korea had performed over 248 thousand tests (ranking it second after China) which translates to approximately 4831 tests per million people (ranking it in second place, ahead of China at 2508 and after Bahrain at 6164; all data from Our World in Data[2]). These early responses translated to lower death rates at the end of the year. As of December 31, 2020, the number of confirmed deaths due to COVID per million people was 17.89 in Korea (for comparison these figures were 1087.31 in Spain, 1084.49 in the UK, 1063.93 in the US, 3.22 in China, 4.96 in Singapore, and 5.18 in New Zealand). Politically, Korea is a unitary country and has a short history of decentralization – 2021 marks the 30th anniversary since the first local elections in 1991. Its level of fiscal decentralization is similar to the Organisation for Economic Co-operation and Development (OECD) average; 2019 local taxes are 4.73% of Gross Domestic Product; OECD average is 3.98%) and local taxes are 17.26% of total taxes (OECD average is 11.26%) (OECD Revenue Statistics, 2020). Skidmore and Toya (2013) found higher levels of fiscal decentralization linked to fewer disaster-induced fatalities in natural disasters, but the case of Korea and COVID may

lead to new insights as this country with low to average levels of decentralization has tackled COVID quite successfully.

The first official report of COVID-19 was from Wuhan, China on December 31, 2019. On January 7, 2020 Chinese authorities identified a novel coronavirus. Korea declared a blue (level 1) national alert on January 8, 2020 because of a suspected case (which was later confirmed to be false). The virus quickly spread across international borders with the first case outside of China confirmed in Thailand (January 13), Japan (January 15), and Korea (January 20). On January 23, the Chinese Government placed Wuhan and its surrounding cities on lockdown. On January 26, the Korean Medical Association urged the government to restrict all travel from Wuhan, China. The government chose to ignore this recommendation. On January 30, the WHO declared a global health emergency.

While the Korean government did not ban travel from Wuhan, China, it did increase quarantine and screening measures for travelers from Wuhan on January 3. On January 20, Korea increased its national alert level from blue (level 1) to yellow (level 2) (in order of increasing level; blue, yellow, orange, red) national crisis management system. On January 27, the government elevated the danger level to orange (level 3). In less than a month (February 23), the government elevated the danger level to the highest level (red; level 4).

Korea banned entry to travelers who had been to Hubei Province, China within the last 14 days on February 4, but public and medical professionals pointed out that the ban came too late. While the travel ban may have come late Korea's response to COVID was relatively successful at "flattening the curve," leading to the coining of the term "K-quarantine." On March 13, 2020, just 2 days after the WHO declared COVID-19 a pandemic, the number of patients discharged (510) outnumbered the number of newly confirmed cases (110) in Korea. Korea was able to keep its number of daily new confirmed cases relatively low (see Figure 1). There was a spike in case numbers in late February due to a cluster from religious services in Daegu Metropolitan City. However, after March 13, the number of new confirmed cases dropped rapidly to fewer than 10 cases in May and then increasing slightly to approximately 50 cases in June and July.

There are many laws related to crisis and emergency management in Korea (approximately 1000 according to a 2018 report from Korea Legislation Research Institute; there are laws that govern specific emergency types and also local governments have their own local legislation on crisis and emergency management), of which the Framework Act on the Management of Disasters and Safety is the most important. This law spells out the responsible actors and their relationships when responding to a crisis or emergency. The current emergency system in Korea was revised several times due to large-scale disaster in recent years. Some examples are the Sewol Ferry Accident (2014) and MERS (Middle East Respiratory Syndrome; 2015). The MERS experience led to significant changes in the national emergency response system that clarified responsibilities and collaborative relations among actors (Kim et al., 2020). A clear system of intergovernmental coordination is critical for successful responses against pandemics (Yilmaz & Boex, 2021).

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[1]For a more detailed literature review on the role of local governments in responding to pandemics, see Yilmaz and Boex (2021).

[2]https://ourworldindata.org/coronavirus.
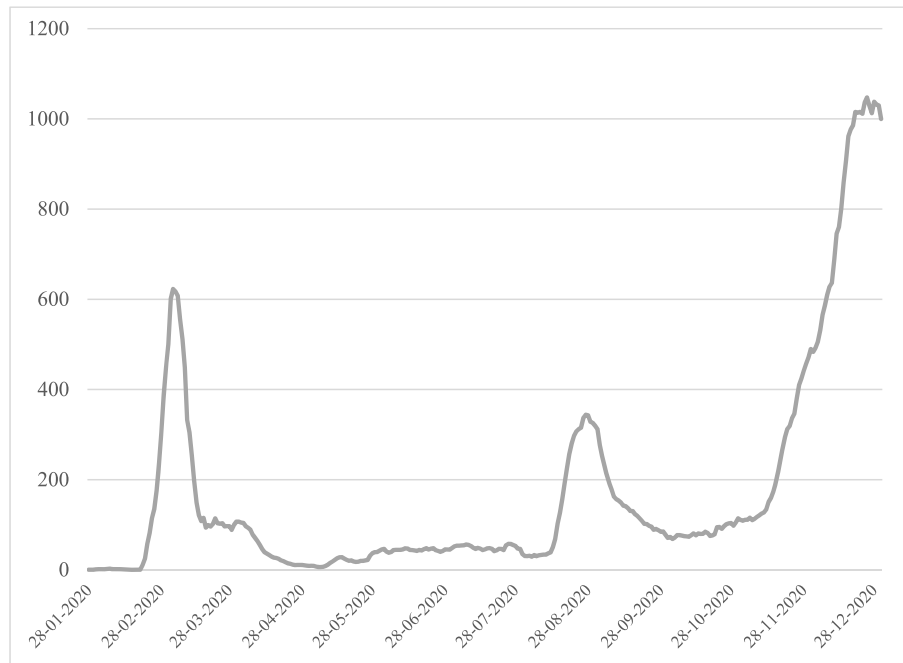
FIGURE 1 Trend of daily COVID-19 cases in Korea, 2020. Numbers are rolling 7-day averages of daily new confirmed cases. *Source:* Authors' production based on Johns Hopkins University CSSE COVID-19 Data from Our World In Data

The national level actors include the Office of the President, Office of the Prime Minister, the National Fire Agency, the Korea Coast Guard, and a Central Disaster Management Headquarters; and local level actors include local disaster and safety measure head-quarters (led by local government leaders). The director of the Central Disaster Management Headquarters depends on the type of emergency. Figure 2 shows the governance structure of infectious disease emergencies with the Ministry of Health and Welfare directing the Central Disaster Management Headquarters.

The chain of command follows the solid lines in Figure 2 with the Office of the President at the top, followed by the Central Disaster and Safety Countermeasure Headquarters, the Central Disaster Management Headquarters, and the Central Disease Control Head-quarters. The Central Disaster and Safety Countermeasure Head-quarters oversees and coordinates matters related to the prevention, readiness, response, and recovery of large-scale disasters that require a pan-government integrated response. Upon requests from appropriate departments, this headquarter can dispatch resources from the Central Disaster Management Headquarters. The Central Disaster Management Headquarters, directed by the Minister of Health and Welfare, oversees the entire infectious disease crisis, is-sues alerts, and reports on an overview of the emergency response and repair situation. The Central Epidemic Control Headquarters, directed by the Korea Centers for Disease Control and Prevention, is in charge of all quarantine and disinfection measures, develops response manuals, responsible for immediate responses to infectious diseases, conducts contact tracing, and monitors the spread of in-fectious diseases. The Local Disaster and Safety Countermeasure Headquarters, led by the Chief Elected Officers/mayors of local

governments, oversees the local response system and establishes various policies related to emergency repairs, maintaining law and order, medical and transportation issues, and public media responses.

This study has two parts. Part one presents the role of Korean local governments in responding to COVID based on information collected from each local government's website, policy briefings, Social Networking Service (SNS) posts, and news reports. Part two examines the relationship between local government responses and citizen perceptions of these responses based on national survey data.

3 | LOCAL GOVERNMENT RESPONSES TO COVID-19 IN KOREA

Local governments were crucial actors in implementing national ini-tiatives on the ground (often adding their own tweaks and modifi-cations to these initiatives) and supplementing national efforts. Furthermore, local governments actively planned and executed local initiatives where there was a lack of national response. We introduce some specific cases in this section.

3.1 | Implementing and supplementing national initiatives

The drive-through testing center that was publicized across the globe was first implemented in the Goyang City as a solution to comply with requirements to ramp up testing when the central government elevated the danger level to red (highest level) on February 23, 2020.
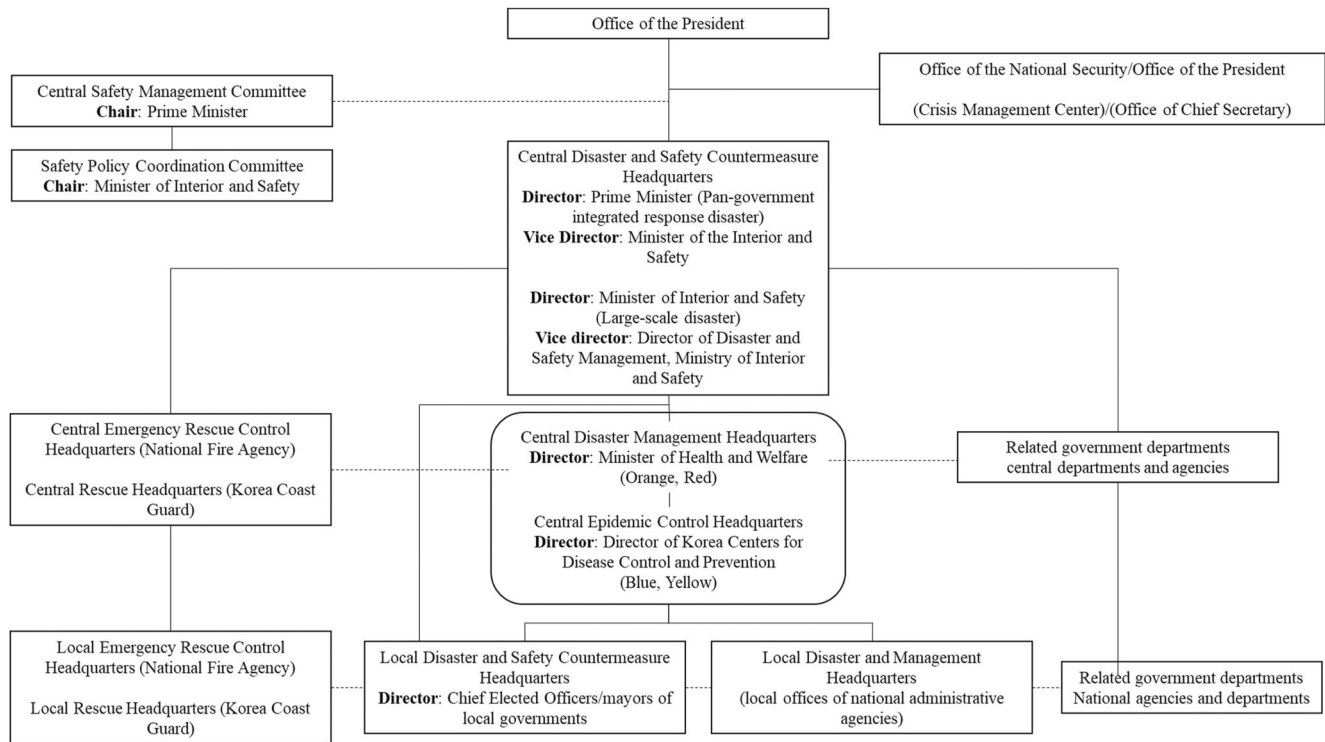
FIGURE 2 Crisis management system, South Korea. Solid lines indicate chain of command. Dotted lines indicate collaborative relations. *Source:* Authors' translation and reproduction of Ministry of Health and Welfare's Infectious Disease Crisis Management Standard Manual (2019), p. 10

With this elevation, local health centers across the country were overwhelmed with the increased demand for COVID tests. The physician who treated patient zero suggested the idea of a drive-through testing center at a conference. During a meeting at the Goyang City Local Disaster and Safety Countermeasure Headquarters, the mayor asked if the testing must be done at health centers, which are time-consuming and has the risk of infection. He then asked if the tests could be done in public parks or other open public spaces. A physician in the meeting introduced the drive-through testing idea and the first drive-through test centers were operating by 10 a.m. on February 26th. People who visit the drive-through testing center remain in their cars as a sample is taken thereby minimizing contact and potential spread of the virus. In Goyang City, the drive-through center increased test numbers by twenty-fold and cut down testing times to 10 min. Other localities adopted the model quickly (by mid-March there were 70 drive-through test centers in operation) and the Central Disaster and Safety Countermeasure Headquarters developed a standard manual as a resource for other localities.

While the quarantine and disinfection-related guidelines (e.g. mask mandates,[3] temperature checks, bans on gathering) were decided at the national level, local authorities have to make sure these are implemented. Some localities also went beyond this to makes sure there are avenues to "police" any violations of these guidelines. Changwon City[4] was the first to run a COVID Safe Report Center where citizens can report any violations of COVID guidelines anonymously. The reports are made as private posts (i.e. only the author of the post and public officials may view the post) on the COVID Safe Report Center webpage. Within 7 days, a department is assigned to investigate and respond to the report and posts a reply to the original post with information on how the report was resolved. The Report Center has been operating since December 7, 2020 and has 275 reports as of May 19, 2021. The Mayor of Changwon has noted that it is difficult to monitor all businesses with just public personnel and thus the Safe Report Center is an attempt to work with citizens to block the spread of COVID.

Per COVID guidelines, businesses must collect contact information from customers and maintain a visitors' log. In the early stages, the two options for citizens were to print their information in a paper-pen format log or use a QR code. The former option created data privacy concerns as customers have to trust that business owners will properly destroy their contact information and

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[3]Mask requirements on public transit fall under the purview of each local government via local administrative ordinance and in fact, Seoul Special City, Daegu Metropolitan City, Incheon Metropolitan City had already adopted mask requirements a few days before the central government's decree on May 25th, 2020.

[4]Local governments in Korea are organized into a two-tier system. The upper level has 1 *teukbyeol si* (special city; Seoul), 6 *gwangyeok si* (metropolitan city; Busan, Daegu, Incheon, Gwangju, Daejeon, Ulsan), 1 *teukbyeol jachi si* (special autonomous city; Sejong), 8 *do* (province; Gyeonggi, Gangwon, Chungbuk, Chungnam, Jeonbuk, Jeonnam, Gyeongbuk, Gyeongnam), and 1 *teukbyeol jachido* (autonomous province; Jeju). The lower level has 75 *si* (city), 82 *gun*, and 69 *jachi gu* (autonomous districts; often referred to as simply *gu*). In this paper, we use "local government" and "locality" to refer to units at both levels.

the latter option had accessibility challenges, especially for the elderly who may not be as comfortable using QR codes. Some localities developed a Safe Call program wherein customers can call a phone number that is unique to the business that they visit and their cell phone number and time of the call/visit is automatically logged. The Safe Call program was first developed in Goyang City and has spread to other localities. The program is especially popular with smaller businesses that may not have a tablet set up for scanning customer QR codes.

Localities have encouraged businesses to abide with quarantine and disinfection efforts through the "COVID-19 Clean Zone" programs. Gimhae City has delivered disinfecting supplies, rented disinfecting machines, and offered COVID guideline training during inspections. These "clean zone" programs are similar to "good seals" as a sort of reward for businesses that follow COVID regulations closely. Yeonsu *gu* has a Clean Zone program webpage that lists large-scale businesses (e.g. Costco, EMart) and real-time data on the most recent fumigation/disinfection date and time. The Safe Restaurant program monitors how well restaurants follow disinfection schedules, temperature checks, availability of hand sanitizers, social distancing, efforts to minimize droplet dispersions during meals, maintaining a visitor log with contact information, training staff on "distancing in everyday life" practices, and overall sanitation regulations and posts a list of selected restaurants online.

The Comprehensive Emotional Support Team is a program that is overseen by the National Center for Disaster Trauma and run in cooperation with local and regional health centers. The program is open to anyone, but is actively promoted to persons confirmed with COVID, their family members, family members who have lost a loved one to COVID, or people in self-quarantine. Local health centers send a list of these people within 73 h of their status confirmation and a text message about the program is sent. The local health center follows up with a phone call or a visit to determine further action (e.g. trauma treatment program or other counseling). Each locality can add or design special programs to match their local needs. Residents of Gyeongsang *do* can access counseling over the phone 24 h and the website has a COVID Emotional Health Quiz (a mental health and wellbeing diagnostic questionnaire) that anyone can use for self-diagnosis and follow up with treatment or therapy. Incheon Metropolitan City runs a "Therapy that Comes to You" program in which counselors visit economically disadvantaged households for counseling. Gwangju Metropolitan City initiated a "rocket diagnosis" program that allows residents to ask questions online and can receive recommendations from medical professionals within 24 h. Jeollanam *do* has developed an app for mental health that allows users to check in on their own mental health status and access information for counseling. These services are not limited to COVID patients or family and friends of COVID patients, but open to all residents. These programs have been framed as "emotional prevention" measures in parallel to "COVID-19 prevention" measures as emotional and mental health issues are still considered taboo in Korea.

3.2 | Developing local initiatives

Local governments also recognized that infections between household members, especially those returning from international trips, were driving higher case numbers and that most people did not have viable options for short-term residences. Goyang City was one of the first localities to establish a Safe Lodging program that offers a shuttle service from the airport to designated lodging facilities where people can self-quarantine for 14 days without exposing their family or roommates to potential infection. The accommodations are free to Korean nationals and a small fee is charged for foreigners. The idea has been adopted by other localities who have also signed contracts with local hotels to offer lower rates to self-quarantine guests (e.g. Gangnam *gu*, Seocho *gu*, Gwanak *gu*, Suwon City, Gwacheon City, etc.).

Local governments have also recognized that for many businesses rent is a significant cost and have started "Good Landlord" Campaigns. The first campaign started in February 2020 in Jeonju Hanok Village as local landlords came together and agreed to lower rents by 10% for their properties. Other localities have built on this example and have offered various financial and local tax incentives to landlords that reduce their rents. As of September 2020, 241 localities had offered financial support to make up for a portion of the foregone rent for the landlords and 115 local governments had offered tax incentives (Ministry of Economy and Finance 2020). Seoul Metropolitan City has offered to support various inspection and maintenance fees up to 30% of the rent reduction for landlords. In addition, Seoul Metropolitan City has awarded local currency vouchers to landlords who have signed contracts with their renters with lower rents. Jung *gu* (Seoul Metropolitan City) offers additional incentives for landlords who lower rents, such as free entrance to local museums and discounted tickets to locally produced shows. Some local governments have supported small businesses through legislation by creating "win-win cooperation" ordinances that promote long-term rental contracts and support buildings that have signed a win-win contract between the landlord and tenants with infrastructure and/or environmental improvement. As of October 2020, 52 localities had adopted such ordinances. Jeonju City expanded this campaign to residential units and signed an agreement with 33 landlords of residential buildings to lower rents in a "Good Rent Campaign."

When the COVID pandemic began people were going out less and when the central government banned customers from consuming foods in cafes and restaurants after 9 p.m. food and beverage businesses lost a significant portion of their sales. More people were having their meals or snacks delivered and many restaurants started offering delivery service by contracting with delivery companies. However, as the delivery industry is dominated by a handful of companies (e.g. Baedalui Minjok, Yogiyo, Barogo) many restaurant owners found the service fees to be too expensive. In an attempt to help local restaurants, some local governments have developed their own delivery apps. Seo *gu* (Incheon Metropolitan City) was one of the first local governments to develop its own delivery app and offered

lower rates (approximately 0%–2% of the sale, private companies charge up to 16% in fees) to businesses. Other local governments have followed by developing their own delivery apps, such as Seoul Metropolitan City's Zero Baedal Union, Gyeoonggi Province's Baedal Express. These apps are supported with local budgets, which is how they can keep the service fees so low, and also allow customers to use local currencies[5] with additional discounts (typically 10%). Gunsan City's app offers a "No 3" promise to businesses by eliminating registration fees, brokerage fees, and advertisement fees. As of May 2021, 31 local governments and 6 regional governments have a local delivery app that the locality either developed on its own or have partnered with existing apps. One of the most successful cases, Gyeonggi do has approximately 9500 business members and 190,000 users translating to 440,000 transactions and 9700 million Korean Won (KRW).

Busan City is running a Favorite Store Pre-pay Campaign that encourages customers to pre-pay for their future visit. Customers can choose to pre-pay for their future visits to businesses located in Busan City for a minimum of 50,000 KRW. Customers then post an image that promotes the campaign on their social networking service and a picture as proof of the pre-payment (e.g. gift card). Customers can upload both of these photos to the campaign website and based on a random draw, participants can win Onnuri giftcards (these giftcards were created in 2009 to revitalize businesses in traditional markets).

The central government distributed COVID emergency checks to all Koreans in May 2020 but local governments have followed up with their own emergency checks. As of July 2020, about half of localities (119 local governments of 226) had distributed local emergency checks to their residents for a total sum of 1,849,100 million KRW (Kwon, 2020). While many of these emergency checks were distributed to *all* residents in early 2020,[6] some localities have followed up with additional emergency funds for business owners. For example, Incheon City has provided 1,500,000 KRW for businesses unable to operate under COVID restrictions. Daejeon City has also provided up to 2,000,000 KRW to businesses that have not been able to operate under COVID restrictions, such as bars, karaoke rooms, etc. Jeollanam do focused on those businesses that were left out of the national funds, such as businesses in traditional markets, drivers for hire, and corporate taxi drivers.

While several localities have encouraged citizens to get tested even without any symptoms (as COVID can spread from asymptomatic carriers; e.g. Seoul Metropolitan City, Geochang gun), Pohang City took a more forceful step by mandating that at least one person per household ("1 household 1 test mandate") be tested between January 26 and February 4, 2021. This was done through an administrative mandate and led to 38 asymptomatic COVID cases being identified (out of a total 180,000 persons tested). Pohang City

has a population of approximately 503,000 and the test mandate only applied to the urban districts of about 175,000 people. The tests were provided at no cost to citizens across 26 screening centers by 117 teams of 437 health personnel.

4 | CITIZEN PERCEPTIONS OF COVID-19 RESPONSES

We conducted a national survey of adults age 19 and older using a multistage stratified sampling method. Conducted between November 16 and December 14, 2020, the survey combines an online survey with one on one in-person surveys (15,133 online respondents, 1422 in-person respondents). We analyze data of 16,258 respondents from 226 local government units (excluding Sejong special autonomous city and local units in Jeju autonomous province[7]). The survey asked residents to rate their evaluation on a 10-point Likert scale regarding the following four items about COVID: 1) sense of vulnerability to contracting the virus 2) the effect of the infectious disease on your wellbeing 3) other residents' response to the virus (e.g. social distancing, mask wearing, etc.) 4) the need for the local government to increase its response to the crisis. The mean scores for each item were as follows: 6.6 for the vulnerability to infection, 7.2 for the effect on wellbeing, 7.0 for residents' responses, and 7.5 for local government responses.

We collected COVID confirmed case counts from each local government's websites. Death counts were only posted for a few local governments. Thus, we requested this data through the Korean government open data website (open.go.kr). The numbers are aggregated figures up to December 31, 2020. The national mean scores across local government units were 245 cases and 4 deaths.

We calculated Spearman's rank correlation and conducted t-tests to see if the relationship between COVID deaths/cases and citizen perceptions were statistically significant (see Table 1). We examine the results for COVID deaths first. Deaths were positively correlated with citizens' perception of vulnerability to infection and the effect on their wellbeing. However, correlations between death and the response variables – resident responses and local government responses – were not statistically significant. The results for confirmed cases are similar to those as deaths; confirmed cases had a positive and statistically significant correlated with vulnerability to infection and effect on wellbeing. Even though the number of deaths were less publicized than the number of confirmed cases, we see that both figures are linked to feeling greater vulnerability to the virus and assessing a greater impact on one's wellbeing. Meanwhile, how well other residents responded to the virus, such as following social distancing rules and wearing masks, does not show a statistically significant relationship with confirmed cases or deaths. The need for

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[5]Many local governments in Korea have developed local currencies in an effort to promote local businesses.

[6]Crises can create political opportunities (Boin et al., 2016) and some critics argue these emergency check distributions are driven by upcoming local elections. Local special elections were held in April 2021 and regular local elections are scheduled for June 2022.

[7]Sejong special autonomous city was created in 2012 as a "mini capital" and is largely home to central government ministries. Jeju autonomous province is an island off the southern coast of Korea.

TABLE 1 Correlations of COVID-19 deaths/confirmed cases and citizen perceptions

	Total deaths	Total cases
Vulnerability to infection	0.025**	0.039***
Effect on wellbeing	0.021**	0.023**
Other residents' response	0.009	0.014
Local government's response	0.004	0.009

Note: N = 16,258. Figures in cells are Spearman's rho values. *T*-tests were conducted for statistical significance.

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Source: Authors' analysis of 2020 Korea Community Wellbeing Survey data and COVID-19 case and death data from local governments.

local governments to improve their response to the virus also has no statistically significant relationship with confirmed cases or deaths. Because these two questions require an assessment of people's actions, they seem to have a less straightforward relationship with simple case or death figures. In fact, OECD analysis of citizen trust in government and COVID deaths shows Korea has fewer deaths compared to countries with similar levels of trust in government, such as the US, France, Mexico, and Spain (OECD, 2020).

5 | DISCUSSION

We have examined the question of what role local governments play in crisis and emergency management using the case of COVID in Korea. While the overall crisis response was coordinated by the central headquarters, local governments played a crucial role in implementing COVID guidelines and also supplemented central government responses with their own initiatives. These initiatives cover a wide range of social needs from quarantine and economic/financial to mental health. Local governments assessed and responded to local needs that also encouraged the central government to adopt national policies or spread to other localities. However, there are also some limitations to local government responses.

First, the inequality among localities translated into different levels of responses – a concern found in other studies as well (e.g. Dzigbede et al., 2020). On average, localities spent 140,000 KRW per person on disaster prevention in their 2020 budget. However, the figures range from 2899 KRW per person to 1,475,527 KRW per person with a standard deviation of 226. The difference in these figures may reflect the different levels of monitoring and enforcement of COVID guidelines. The emergency checks also reflected inequality in financial resources across localities. In some localities, residents received up to 400,000 KRW (Pocheon City) while in other places residents received 50,000 KRW (Seo *gu*, Busan City). One of the most visible examples of inequality across localities was how their COVID information was presented online. For example, places like Songpa *gu* and Gimhae City have a dedicated webpage for COVID related information that includes real-time statistics (daily cases, total number of cases, total deaths, total persons in treatment, total vaccines distributed, vaccination rate, etc.), information on vaccination, how to sign up for emergency checks, and contact tracing information. Other localities (mostly *gun* units that tend to be more rural and smaller) simply posted daily statistics on number of COVID cases and those who were treated – information that is required by law.

Second, there are concerns about the impact on fiscal health. Local governments are using disaster management funds for COVID responses and experts note these funds are being rapidly depleted (Park & Maher, 2020). The cost of the 1 household 1 test mandate implemented by Pohang City is estimated at 2700 million KRW. Critics argue the cost is too expensive for identifying 38 cases while supporters say the 38 cases could have become 380 cases. Regardless, the funds to pay for this test mandate is as of yet undecided. The city had made an informal request for national funds through Gyeongsangbuk *do* that was denied. A call to the office of Pohang City confirmed that the city had received an oral response that there may be national funds to partially support the cost, but that there was no formal agreement in place as of May, 2021. The emergency checks handed out by local governments is another source of concern. Localities that have smaller budgets had decided to not distribute local emergency checks, but several places changed this decision due to resident complaints of "why don't we get anything when our neighbors in the next district do?" Guri City has a low fiscal self-reliance ratio (31%; national average is 45%) and had initially decided against writing local emergency checks, but after several resident complaints that mentioned the local elections next year ended up giving 90,000 KRW to every resident.

Lastly, there are normative concerns about whether these are appropriate roles for local governments and their sustainability. For example, the public delivery apps are able to keep their service fees low with the support of local funds, but critics point out that many customers are complaining about the usability of these apps and with a decrease in users (i.e. declining customer base) it is questionable how long the app can operate while keeping fees low for both customers and businesses. In some places these local apps have a sizable customer base, but in some places like Yeosu City there are about 60 businesses on the app and in Ulsan Metropolitan City the app only allows payment by local currency and the number of orders so far is approximately 9000 (the number of registered local currency users is 357,000). Some critics note the interference of these localities, especially those that have developed their own delivery app, in the market is inappropriate. The question of what will happen to these apps, which are currently supported by local budgets, once the pandemic ends is important.

Another example concerns democratic procedures and the power that local leaders have to by-pass these procedures in the name of emergency. Pohang City's 1 household 1 test mandate was an emergency administrative mandate from the mayor's office without any input or discussions with the Pohang City Council. Not surprisingly, the early stages of implementation had some administrative failures leading to people standing in line for two, 3 hours in the rain.

In the early stages, the City considered a fine for households that failed to follow the test mandate, but in the end decided to scrap this plan due to public pushback. Thus, while citizens would not be fined for not getting tested, they were subject to criminal punishment under Article 81 of the Act on the Prevention and Management of Infectious Diseases (enacted March 9, 2021) and may be responsible for any and all costs if one were found to be liable for the spread of infections. Citizen complaints were highly visible through SNS platforms and even led to a Blue House Presidential Petition with 15,000 signatures.

In closing, we offer some policy recommendation. First, it is clear that local governments play a crucial role in national responses to crises as any policy must be implemented "on the ground." Local governments discover the challenges and barriers to implementing national responses in local communities and can also offer ideas to overcome these challenges. Keeping the line of communication open between central and local governments to share these insights can lead to rapid policy innovation across the nation. Second, while it is important to allow local governments to experiment with different policies there should be a measure to address existing inequality across localities. Without such measures, existing inequalities may be further exacerbated during and after crises. This is especially worrisome given that there may be less resources for the public sector to address inequalities during and after times of crisis. Lastly, while the diverse local approaches in the early stages of the COVID pandemic were useful, it may be time to reflect on how much local diversity (in what policy areas) is necessary as the COVID crisis is entering its third year. Our survey results showed no relationship between citizen evaluations of local governments and COVID death and case rates. Moreover, the different social distancing rules across different jurisdictions created confusion and weak spots in the quarantine system as people searched for destinations with less stringent COVID rules during the holidays (Kim, 2021).

The COVID pandemic has disrupted daily life and has raised questions about standard operating procedures in public management. The pandemic seems to be encouraging more attention to crisis and disaster management in public administration – a welcome change given the increase in crises and disasters in recent years (Tierney, 2014). As a transboundary crisis, the solutions will require a collective effort and this article has examined the role of local governments in disaster management with the case of Korea and COVID. We found that local governments played a crucial role in implementing national directives and supplementing national efforts or developing local initiatives in response to local needs. These local efforts largely focused on economic support, quarantine measures, and mental health support. Local governments continue to play an important role in COVID responses, but some concerns are inequality among places, fiscal sustainability, normative questions regarding the role of local governments, and democratic procedures during times of crisis. More studies should explore the role of local governments as Korea is a somewhat unique case with small geography, dense population concentration in the capital region, relatively short history of decentralization, and low levels of fiscal decentralization.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

POLICY IMPACT STATEMENT

Local governments provide insights on challenges of implementing national policies and can be the source of policy innovation by suggesting local solutions. However, measures to address intra-local inequalities in capacity and clearer guidelines on which policy areas will benefit from local diversity are necessary.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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REFERENCES

Abdullah, W. J., & Kim, S. (2020). Singapore's responses to the COVID-19 outbreak: A critical assessment. *The American Review of Public Administration*, *50*(6–7), 770–776. https://doi.org/10.1177/0275074 020942454

Ansell, C., Boin, A., & Keller, A. (2010). Managing transboundary crises: Identifying the building blocks of an effective response system. *Journal of Contingencies and Crisis Management*, *18*(4), 195–207. https://doi.org/10.1111/j.1468-5973.2010.00620.x

Baker, D., & Refsgaard, K. (2007). Institutional development and scale matching in disaster response management. *Ecological Economics*, *63*(2–3), 331–343. https://doi.org/10.1016/j.ecolecon.2007.01.007

Boin, A. (2019). The transboundary crisis: Why we are unprepared and the road ahead. *Journal of Contingencies and Crisis Management*, *27*(1), 94–99. https://doi.org/10.1111/1468-5973.12241

Boin, A., Hart, P., Stern, E., & Sundelius, B. (2016). *The politics of crisis management: Public leadership under pressure*. Cambridge University Press. https://doi.org/10.1017/9781316339756

Boin, A., & Lodge, M. (2016). Designing resilient institutions for transboundary crisis management: A time for public administration. *Public Administration*, *94*(2), 289–298. https://doi.org/10.1111/padm.12264

Castells, M., Caraça, J., & Cardoso, G. (2014). *Aftermath: The cultures of the economic crisis*. OUP.

Cohen, S., Eimicke, W., & Horan, J. (2002). Catastrophe and the public service: A case study of the government response to the destruction of the world trade center. *Public Administration Review*, *62*, 24–32. https://doi.org/10.1111/1540-6210.62.s1.6. http://www.jstor.org/stable/3110167

Dzigbede, K. D., Gehl, S. B., & Willoughby, K. (2020). Disaster resiliency of US local governments: Insights to strengthen local response and recovery from the COVID-19 pandemic. *Public Administration Review*, *80*(4), 634–643. https://doi.org/10.1111/puar.13249

Fisher, M., & Choe, S. H. (2020, March 23). *How South Korea flattened the curve*. Retrieved from https://www.nytimes.com/2020/03/23/world/asia/coronavirus-south-korea-flatten-curve.html

Hu, Q., Knox, C. C., & Kapucu, N. (2014). What have we learned since september 11, 2001? A network study of the Boston marathon bombings response. *Public Administration Review*, 74(6), 698–712. https://doi.org/10.1111/puar.12284

Huynh, D., Tosun, M. S., & Yilmaz, S. (2020). All-of-government response to the COVID-19 pandemic: The case of Vietnam. *Public Administration and Development*, 40(4), 236–239. https://doi.org/10.1002/pad.1893

Kim, M. J. (2021, July 28). *Jijachaebyul georidoogi dangae deuljuknaljuk … hyooga ddeonan shimindeul honlanseuruwuh* [Patchwork of social distancing rules across localities…causing confusion among citizens on vacation]. *Chosun Ilbo*. Retrieved from https://www.chosun.com/national/welfare-medical/2021/07/28/SSED3U7XNBFTHP3FKE2M5BKSEU/

Kim, Y., Oh, S. S., & Wang, C. (2020). From uncoordinated patchworks to a coordinated system: Mers-cov to covid-19 in Korea. *The American Review of Public Administration*, 50(6–7), 736–742. https://doi.org/10.1177/0275074020942414

Kwon, S. H. (2020, October 5). *Keechojijachae julbanee jachae jaenanji-wongeum jigeup…chong 1 jo 8 cheon 500 ukwon* [Half of local governments distribute local emergency checks…total 1.85 million won]. *Yonhap News*. Retrieved from https://www.yna.co.kr/view/AKR20201005082800530

Li, Y., Chandra, Y., & Kapucu, N. (2020). Crisis coordination and the role of social media in response to COVID-19 in Wuhan, China. *The American Review of Public Administration*, 50(6–7), 698–705. https://doi.org/10.1177/0275074020942105

OECD. (2020). *The territorial impact of COVID-19: Managing the crisis across levels of government*. Retrieved from https://www.oecd.org/coronavirus/policy-responses/the-territorial-impact-of-covid-19-managing-the-crisis-across-levels-of-government-d3e314e1/

Park, S., & Maher, C. S. (2020). Government financial management and the coronavirus pandemic: A comparative look at South Korea and the United States. *The American Review of Public Administration*, 50(6–7), 590–597. https://doi.org/10.1177/0275074020941720

Peck, J., Theodore, N., & Brenner, N. (2012). Neoliberalism resurgent? Market rule after the great recession. *South Atlantic Quarterly*, 111(2), 265–288. https://doi.org/10.1215/00382876-1548212

Rosenthal, U. (2003). September 11: Public administration and the study of crises and crisis management. *Administration & Society*, 35(2), 129–143. https://doi.org/10.1177/0095399703035002001

Skidmore, M., & Toya, H. (2013). Natural disaster impacts and fiscal decentralization. *Land Economics*, 89(1), 101–117. https://doi.org/10.3368/le.89.1.101

Stivers, C. (2007). "So poor and so black": Hurricane Katrina, public administration, and the issue of race. *Public Administration Review*, 67, 48–56. https://doi.org/10.1111/j.1540-6210.2007.00812.x

Thomson, S., & Ip, E. C. (2020). COVID-19 emergency measures and the impending authoritarian pandemic. *Journal of Law and the Biosciences*, 7(1), lsaa064. https://doi.org/10.1093/jlb/lsaa064

Tierney, K. (2014). *The social roots of risk: Producing disasters, promoting resilience*. Stanford University Press.

Wang, X., & Cheng, Y. (2021). Cross the river by feeling the stones: How did nonlocal grassroots nonprofits overcome administrative barriers to provide quick responses to COVID-19? *Public Administration and Development*, 41(2), 91–98. Online First. https://doi.org/10.1002/pad.1908

Wolbers, J., Kuipers, S., & Boin, A. (2021). A systematic review of 20 years of crisis and disaster research: Trends and progress. *Risk, Hazards & Crisis in Public Policy*, 12(4), 374–392. https://doi.org/10.1002/rhc3.12244

Yilmaz, S., & Boex, J. (2021). Unleashing the potential of local governments in pandemic response. *Development in Practice*, 31(6), 805–815. https://doi.org/10.1080/09614524.2021.1937562