Factors Affecting City Image During the COVID-19 Era[1]

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Abstract

This study examined the perceived contingent factors that affect South Korean citizens' image of the city they reside in. The respondents in this study perceived the image of their city through two dimensions––leading and safe––during the COVID-19 era. When respondents perceived the openness and expertise of the local government, the transformational and transactional leadership of the government leader, liberal political orientation of the leader, lower degree of law compliance of the mayor, high degree of citizenship, and high level of living infrastructure and competitiveness as attributes of the city, they were more likely to perceive the city as having a "leading" image. The perceived cultural characteristics of the local government, specifically the factor of hierarchy and regulation, the perceptions of citizenship, and all three variables regarding the perceptions related to city attributes (i.e., environmental, cultural, and living infrastructures and competitiveness) positively influenced the perception of a "safe" city image. Based on the results, various theoretical and practical implications were discussed in this study.

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Since the advent of the COVID-19 pandemic, citizens have been paying attention to the local government's quarantine policies and messages related to the infectious disease, actions of the city administration in response to COVID-19, and mayoral policy messages and communication activities. The pandemic has changed the way people perceive their cities. Before the COVID-19 crisis, citizens likely observed their city's functional features. Research on city brands (Echtner & Ritchie, 1991; Parkerson & Saunders, 2005; Prayag, 2010) emphasizes the importance of physical, functional, and tangible attributes of a city as factors that affect its image. In other words, the functional excellence of such visible infrastructure or systems as cultural heritage, urban aesthetics, and transportation systems were considered to significantly influence the image of a city. However, the COVID-19 outbreak appears to be a turning point that transformed the public's perceptions of their cities and local governments.

Considering the above, this study sought to examine the perceived factors that comprehensively affect the perceptions of the image of a city in the pandemic era. To examine the relative influence of factors, this study utilized the independent variables of the contingency theory of accommodation (CTA), which has been widely used as a public relations theory, while encompassing functional factors, such as urban infrastructure and systems, which have been emphasized by city brand studies.

Applying the CTA to the relationship between the local government and citizens of a city, this study aims to enumerate the following potentially influential factors: the social characteristics and the managerial leadership style of the mayor; citizenship; the severity of the infectious disease-related issues that the city must respond to; and the functional characteristics of the city––a new factor we incorporated into this study. People are exposed to messages about these various contingency variables through the media, and their accumulated perception of these factors would ultimately influence their image of the city.

Public relations scholars have investigated the influence of various

contingency factors in personal and organizational image. According to the results, perceived contingency factors affect the positive image of individuals, such as politicians (Hwang & Kim, 2020), CEOs (Hwang, Ham, et al., 2020), and entertainers (Hwang, 2016). Additionally, they affect the effectiveness of altruistic campaigns or policy PR that form a positive image of an organization (Hwang & Kim, 2017; Hwang & Kim, 2018). These studies inspired us to investigate the influence of perceived contingency factors in a larger scope of the image of a city as a society comprised of individuals and organizations. To consolidate its comprehensiveness, this study also incorporated "the functional characteristics of a city" from the city brand literature as an additional contingency variable. This study is important because it will enhance our understanding of the contingency factors in the little explored public opinion research domain of the image of a city during the pandemic era. The results of this study also offer useful and practical implications for practitioners who develop communication strategies to foster a positive city image.

Literature Review

City Image in the COVID-19 Pandemic

City image is considered a multi-dimensional construct. Some scholars assess city image using different dimensions of city attributes (De Noni et al., 2014; Gilboa et al., 2015; Merrilees et al., 2009; Rainisto, 2003). Others argue that while city attributes concern cognitive impressions based on knowledge and beliefs, city image is more likely to be informed by affective evaluations. Interestingly, this tendency has been primarily observed in studies in the context of Korea (Lee & Kim, 2013; Oh, 2012; Park & Park, 2018). It is further suggested that a city's cognitive attributes determine people's affective perceptions toward it. The following characteristics play a role in formulating the affective perceptions of a city: population size, employment and crime rates, historical background, socioeconomic status, media presence, cultural value, tourist attractions, entertainment options (Avraham, 2000), city competitiveness, convenience services, public services, and amenities (Lee & Kim, 2013).

As such, before the COVID-19 pandemic, city image was formulated mainly

based on a city's functional characteristics. Additionally, people did not pay much attention to how their cities of residence were perceived. However, since the COVID-19 outbreak, a city's infrastructure and responses to the pandemic have become of great interest to citizens. People observe and evaluate whether cities function properly to control infectious disease issues based on the extensive media coverage about the medical facilities and workforce that cities offer their citizens, activities of local governments, mayoral leadership, the city's quarantine communication messages, and so on. While local governments are obviously guided by a national center for disease control and prevention, varying perceptions and evaluations may emerge for different cities during the pandemic due to their disparate municipal resources and capabilities.

In this regard, we aim to predict the independently positioned specific factors that construct municipal competence. Given the importance of safety in the pandemic era, a city's functional characteristics, such as its urban infrastructure, cultural characteristics of its local government as its central institution, mayoral activities and leadership types, the infectious disease issues that it faces, and the citizenship (civic-mindedness) of its residents, can be presumed to be substantial factors that affect people's overall perception and evaluation of its image. Following research on city branding in the context of Korea, we conceptualize city image as affective perceptions of a city while simultaneously assuming that its functional characteristics––the cognitive attributes of the city––serve as antecedents of city image. To conceptually identify the factors addressed above, we attempt to apply the CTA, which has been extensively utilized in various PR contexts.

Contingency Theory of Accommodation in Public Relations

Since the CTA was proposed by Cancel et al. in 1997, it has become one of the core theories for elucidating the public relations phenomenon. Cancel et al. (1997) proposed 86 conditions that leverage organizational positions between accommodating public positions and advocating their own positions. Some of the variables are internal or predisposing conditions, such as the organizational culture, the PR department's power within the organizational decision-making hierarchy, the CEO's support and understanding of PR values, and internal threats, such as a corrupt reputation, which

limits the organizational positions that PR practitioners can take initially. Other variables are external or situational conditions, such as litigations, industrial dynamics, social support, and the size and credibility of external publics, which can alter an organization's position with time (Cancel et al., 1999).

Today, contingency theorists have expanded the research by adopting various dependent variables beyond the spectrum of organizational positions, ranging from accommodation to advocacy. CTA researchers have particularly examined the explanatory power of contingent factors in image PR. Several studies have shown that the perceived contingent factors are statistically significant in perceiving the image of various celebrities (Hwang, 2016; Hwang, Ham, et al., 2020; Hwang & Kim, 2020), organizations' CSR, and policy campaigns (Hwang, Kang, et al., 2020; Hwang & Kim, 2017; Hwang & Kim, 2018). That is, the CTA has been verified as a robust theoretical framework explaining the image-building process. The results of these studies commonly point out the importance of the characteristics of organizations, leaders, internal threats, external threats, the issue under question, and the opposing public.

Applicability of Contingent Factors in the Image of a City

In this study, we attempt to explain the image change of a city during this pandemic era using the CTA. The COVID-19 pandemic is an emergent global crisis that has threatened almost every country and city in the world, especially the city image related to the integrity of the public health system. People watch the news daily to learn more about the number of people diagnosed with COVID-19 and the cities that have been most gravely impacted by it. Thus, local governments attempt to defend the image of the city they represent by claiming that everything is under control and in good shape. The results of the studies mentioned above have shown that individuals or organizations cannot exist in a vacuum and inevitably interact with their internal and external environments to determine their position regarding whether they advocate their own voices or accommodate public opinion when they encounter crises and conflicts. Their efforts to alter their positions in line with public opinion were to maintain a good image and build a positive reputation. Thus, in this study, we examine how the perception of contingent factors affects a city's image during the pandemic.

Based on the commonly important factors in previous image PR studies using the CTA (Hwang, 2016; Hwang, Ham et al., 2020; Hwang & Kim, 2020), this study modified those factors to reflect the research setting: organizational characteristics were changed to cultural characteristics of the local government; and characteristics of the dominant coalition were modified to the mayor's social characteristics and leadership style. Citizens are often exposed to various news stories showing the local government's features and its representative's integral activities to manage administration under the pandemic situation. Through the media, local government and its leaders' messages produce administrative and managerial leadership impressions, which could affect the image of the city they serve. Therefore, this study proposes the following hypothesis:

H1: The perceptions of such predisposing contingent factors as the cultural characteristics of the local government and the social characteristics and managerial leadership styles of mayors will affect individuals' perceived image of the city.

Next, this study modified important situational factors to reflect the research setting. The literature suggests that the external public's characteristics are a significant factor affecting public relations practices (Cancel, et al., 1999) and images (Hwang, 2016; Hwang, Ham et al., 2020; Hwang & Kim, 2020). As for the characteristics of the external public, this study first focuses on the very citizenship of local citizens. We thus expect that the characteristics of local citizens, specifically the perceived citizenship of local citizens, would affect the individuals' perceptions of a city. Whether citizens actively cooperate with the local government's quarantine policy and instructions could be important for successful public health communication. Maintaining public health in a city based on their sincere participation could produce a positive image of the city. Additionally, as for the issue under question as another situational factor (Hwang, 2016; Hwang, Ham et al., 2020; Hwang & Kim, 2020), this study focuses on the severity of the COVID-19 issue. Considering the impact of the issue worldwide, we predict that the perception of the factor could be associated with the clean and safe image of a city. We believe that the COVID-19 issue is the most outstanding negative issue that local governments commonly face, and it could

overwhelm other negative threats surrounding the local government in media coverage. Consequently, this study did not select internal and external threats as likely important factors. Based on this rationale, this study posits the following hypothesis:

H2: The perceptions of such situational contingent factors as citizenship and the severity of the COVID-19 issue will affect individuals' perceived image of the city.

Furthermore, this study embraced a city's functional characteristics as likely to be important factors affecting the image of a city. The literature of city brands consistently pointed to the importance of functional features before the pandemic era. Empirical research on the relationship between cities' functional characteristics and affective perceptions is still lacking; however, some empirical studies have demonstrated positive relationships between the functional characteristics and perceived image of cities. For instance, cultural resources of cities affect the image of a city as leading, sophisticated, and active (Kim & Kim, 2010); the characteristics of cultural heritage, facilities, living infrastructure, and environments enhance the image of a city as active and stable (Yoo et al., 2008); a city's esthetic elements, including environments and cultural heritage, contribute to its image as active and pleasant (Kim et al., 2011); and a city's functional characteristics, such as its infrastructure, facilities, and environments, affect the image of the city as active, pleasant, or sophisticated (Chung & Kim, 2009). That is, according to reviewed literature, a city's functional characteristics, such as its infrastructure, systems, services, facilities, environments, and cultural heritage, can be considered significant components or antecedents of individuals' perceptions toward it.

We predict that the advanced and solid infrastructures of a city will be helpful for the local government to effectively perform administrative actions, thereby producing a positive image of the city (see hypothesis 3).

H3: The perceptions of a city's functional characteristics will positively affect individuals' perceived image of the city.

Figure 1

Conceptual Framework
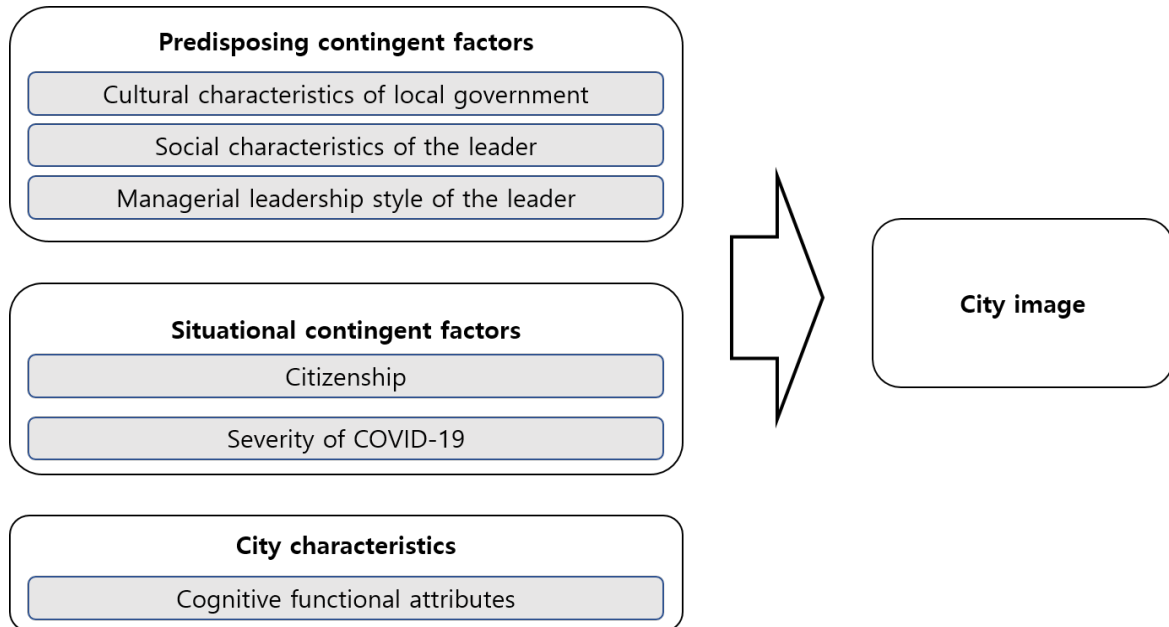
Method

Data

To systematically identify the factors that influence the city image from a citizen's perspective, this study focused on countries and cities that responded satisfactorily to the pandemic and remained actively engaged in economic and social activities during the crisis. Acknowledging the possibility of little variance of variables, as people in a challenging pandemic situation may be biased toward forming a negative image, this study performed a national online survey targeting Korean citizens from October 23 to October 27, 2020. This study enlisted the help of an online survey company, which used a nonprobability quota sampling method to ensure regional, age, and sex balance. The online panel used in the current study is the biggest in South Korea, with around 1.3 million panelists as of 2020. E-mail solicitations were sent to about 4,000 panelists, and a total of 948 respondents participated in the survey. The respondents were aged 20–64 years (*M* = 43.20 years, *SD* = 12.19), and men comprised 47.7% of the respondents. The sample was representative of the

Korean population in terms of region of residence (the capital Seoul = 19.3%, Gyeonggi/Kangwon province = 33.5%, Gyeongsang province = 26.6%, Chungcheong/Jeolla province = 20.5%). In terms of educational attainment, 19.2% of the respondents had graduated high school or had obtained less education, 70.3% had some college experience or were college graduates, and 10.5% had a graduate degree or higher[3]. Respondents spent an average of 10–15 minutes completing the survey.

Measures

To develop a survey questionnaire, we conducted a comprehensive review of previous studies on the CTA (e.g., Cancel et al., 1997; Hwang & Cameron 2008a) and city images (e.g., Gilboa et al., 2015; Kim & Kim, 2011; Lee & Kim, 2013; Oh, 2012). To confirm the validity of the questionnaire items, a pilot test was conducted with 15 undergraduate and graduate students. The initial items were revised based on the pilot study's results, especially regarding its wording and language. All items were measured on five-point Likert scales. The final questionnaire included four major sections, which are described below.

Perceptions of Predisposing Contingent Factors

The perceived cultural characteristics of the local government were measured through 15 items adopted from the list of contingent variables (Cancel et al., 1997). An exploratory factor analysis was performed to examine the underlying factors using the principal-axis factoring extraction and varimax rotation methods, revealing that respondents perceived the characteristics of their local governments based on two primary factors: openness and expertise ($M = 3.23$, $SD = .65$, $\alpha = .91$), and hierarchy and regulation ($M = 3.21$, $SD = .56$, $\alpha = .75$). The perceived social characteristics of the local government leader (i.e., a city mayor) were measured through 16 items adopted from Cancel et al. (1997). The results of an exploratory factor analysis showed that the respondents perceived the social characteristics of their city mayors based on two primary factors: communication/social responsibility activities and law compliance (see Table 1).

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[3] According to Statistics Korea, 51% of the Korean population aged 25-64 have college degrees as of 2021. Noteworthily, the current sample slightly over-represents those with higher educational levels, probably due to the online survey method.

Table 1

Internal Consistency and Descriptive Statistics for Subscales

Subscale	No. items	Cronbach's α	M	SD	Skewness	Kurtosis
Predisposing contingent factors						
Perceived cultural characteristics of the local government						
Openness and expertise	7	.91	3.23	.65	-.10	-.12
Hierarchy and regulation	3	.75	3.21	.56	.24	.68
Perceived social characteristics of the local government leader						
Communication and social responsibility activities	5	.91	3.07	.81	.07	-.06
Law compliance	2	.79	3.09	.92	-.20	-.30
Political orientation	1	-	3.32	1.06	-.46	-.35
Perceived managerial leadership style of the local government leader						
Transformational leadership	4	.94	2.95	.86	-.05	-.13
Transactional leadership	3	.81	2.89	.66	-.05	1.04
Situational contingent factors						
Perceived citizenship	5	.87	3.26	.63	-.04	.58
Perceived severity of the COVID-19 issues	3	.87	4.16	.74	-.84	.68
Perceptions of functional characteristics of a city						
Perceived city characteristics						
Ecological infrastructure	4	.70	2.98	.67	-.04	.14
Cultural infrastructure	3	.84	3.31	.78	-.16	-.05
Living infrastructure and city competitiveness	8	.92	3.31	.79	.00	-.15
City image						
City image						
Leading	9	.95	3.18	.79	-.03	-.05
Safe	3	.87	3.31	.73	-.06	.25

In addition to these two factors, the perceived political orientation of their city mayors was also measured on a 5-point scale from 1 = *Conservative* to 5 = *Liberal* (*M*

= 3.32, *SD* = 1.06). The perceived leadership style of the leader was measured based on the prior leadership studies (Bass, 1990; Hwang & Cameron, 2008a, 2008b; Yukl, 2002). The transformational leadership of city mayors was measured using four items: suggesting a clear vision, explaining how to achieve their vision, demonstrating positive behavior and expressions, and encouraging employees to achieve their goals (*M* = 2.95, *SD* = .86, α = .94). Transactional leadership was measured using the following three items: clearly setting expectations and rewarding employees for meeting them, monitoring employees' errors to prevent mishaps, and performing corrective actions for unsatisfactory outcomes (*M* = 2.89, *SD* = .66, α = .81).

Perceptions of Situational Contingent Factors

The perceived citizenship was measured using 12 items adopted from Cancel et al. (1997) and Lee and Kim (2013). The exploratory factor analysis provided a single factor consisting of five items: trustworthy, reasonable, hardworking, civic, and friendly (*M* = 3.26, *SD* = .63, α = .87). The perceived severity of the COVID-19 issue that the local government is responding to was measured using three items adopted from Cancel et al. (1997) and Lee and Kim (2013): the degree of social impact, changing rapidly, and being complicated to solve (*M* = 4.16, *SD* = .74, α = .87).

Perceptions of the Functional Characteristics of a City

The perceived functional characteristics of a city were measured using 15 items developed based on previous literature (Gilboa et al., 2015; Kim & Kim, 2011) and the results of interviews with experts. The exploratory factor analysis revealed three relevant factors: ecological infrastructure, which consisted of four items (e.g., having a clean urban environment; *M* = 2.98, *SD* = .67, α = .70), cultural infrastructure, which consisted of three items (e.g., having historic artifacts; *M* = 3.31, *SD* = .78, α = .84); and living infrastructure and city competitiveness, which consisted of eight items (e.g., having high level of education, transportation, and economy; *M* = 3.31, *SD* = .79, α =.92).

City Image

This study utilized 22 measurement items adopted from previous studies (Chung & Kim, 2009; Merrilees et al., 2013; Oh, 2012) to comprehensively investigate the concept of city image. Oh (2012) classified city images as leading, traditional,

sophisticated, and active. In addition, this study included three measurement items related to safe image (Chung & Kim, 2009; Merriless et al., 2013) by considering the importance of safety during the pandemic era. The exploratory factor analysis revealed that the respondents' city images consisted of two primary dimensions: leading, which had nine items (e.g., future-oriented, leading, dynamic, cutting-edge, and active; *M* = 3.18, *SD* = .79*, α* = .95), and safe, which had three items (e.g., safe, clean, and pleasant; *M* = 3.31, *SD* = .73, *α* = .87). That is, the leading image of a city partially reflected an existent sophisticated and active image. A safe image emerged as an independent dimension, while a traditional image of a city was not observed. Thus, this study performed a series of analyses based on the two image dimensions.

Table 2

Measurement Items

Predisposing contingent factors	*α*
Perceived cultural characteristics of the local government	
Openness and expertise	.91
The local government has an open organizational culture.	
The local government has a public relations department that communicates with citizens.	
The local government makes trustworthy policy decisions.	
The local government provides satisfactory services for its citizens.	
The local government possesses a high level of technology for its administrative duties.	
The local government has a high speed of growth in the knowledge level it uses.	
The local government is economically stable.	
Hierarchy and regulation	.75
The local government has many rules or codes that define and limit the job descriptions of its employees.	
The local government has a clear hierarchy in its structure.	
The legal department has a substantial influence on the local government.	
Perceived social characteristics of the local government leader	
Communication and social responsibility activities	.91
The city mayor is active in communicating with citizens.	
The city mayor uses various channels of communication.	
The city mayor's work activities are often covered by the news media.	
The mayor has been carrying out diverse social responsibility activities.	
The mayor actively participates in various social activities.	

Table 2

Measurement Items (Contd.)

Predisposing contingent factors	α
Law compliance	.79
The city mayor abides by the law.	
The city mayor is not plagued by any scandals.	
Political orientation	-
The city mayor's political orientation is … (1 = Conservative to 5 = Liberal).	
Perceived managerial leadership style of the local government leader	
Transformational leadership	.94
The city mayor has a clear vision.	
The city mayor explains how the city's vision can be achieved.	
The city mayor demonstrates positive behavior and expressions.	
The city mayor encourages public officers to achieve their goals.	
Transactional leadership	.81
The city mayor clearly sets expectations and rewards public officers for meeting them.	
The city mayor monitors public officers' errors to prevent mishaps.	
The city mayor performs corrective actions for unsatisfactory outcomes.	
Situational contingent factors	α
Perceived citizenship	.87
People living in the city are trustworthy.	
People living in the city are reasonable.	
People living in the city have a high sense of citizenship.	
People living in the city are hardworking.	
People living in the city are friendly.	
Perceived severity of the COVID-19 issue	.87
The COVID-19 issue has a huge social impact.	
The COVID-19 issue changes every moment.	
The COVID-19 issue is complex to solve.	
Perceptions of functional characteristics of a city and city image	α
Ecological infrastructure	.70
The city has abundant green space.	
The city is clean wherever you go.	
The city is highly polluted. *	
The city is noisy. *	

Table 2

Measurement Items (Contd.)

Perceptions of functional characteristics of a city and city image	α
Cultural infrastructure	.84
Many symbols represent the city.	
There are many historical relics in the city.	
Various local festivals are held in the city.	
Living infrastructure and city competitiveness	.92
The city has a convenient public transportation system.	
The city is equipped with various educational facilities.	
The city is equipped with various shopping facilities.	
In the city, the level of education is high.	
In the city, the level of economy is high.	
The city provides a good business environment.	
In the city, the level of internationalization is high.	
In the city, the level of technical research is high.	
City image	
Leading	.95
Future-oriented	
Cutting-edge	
Active	
Leading	
Dynamic	
Luxurious	
Sophisticated	
Economic	
Advanced	
Safe	.87
Safe	
Clean	
Pleasant	

*The item is reverse-coded

Results

This study proposed that the perceptions of predisposing (H1), situational contingent factors (H2), and a city's functional characteristics (H3) affected individuals' perceived image of their city of residence. Preliminary factor analysis found that the respondents' city image consists of two dimensions (i.e., "leading" and "safe"); thus, two multiple regression analyses were conducted to test the hypotheses for each dimension, respectively.

Before conducting a multiple regression analysis for the respondents' perception of a city as a "leading" city, we checked the assumptions for multiple regression analysis. The histogram of standardized residuals and the normal P-P plot indicated that the data met the assumptions of homoscedasticity and linearity. The data also met the assumption of independent errors (*Durbin-Watson value* = 2.11); the values of variance inflation factor (VIF), which were less than 10, indicated that multicollinearity was not a concern (see Table 3 for VIF values). The results of a multiple regression analysis indicated that the input variables in the regression model accounted for 76.1% of the total variance of the respondents' perception of a "leading" city image (F[15, 932] = 201.76, $p < .001$, adjusted $R^2 = .76$) (see Table 3 for the regression coefficients and statistics). Among the predisposing contingent variables proposed by H1, perceived cultural characteristics of the local government, specifically the factor of openness and expertise, positively influenced its perception as a "leading" city ($\beta = .09$, $p < .001$). The perceptions of the local government leader also significantly influenced the city's image. Respondents' perception that their city mayor possessed a higher level of transformational ($\beta = .13$, $p < .001$) and transactional leadership ($\beta = .06$, $p < .01$) positively influenced the perception that their city possessed a "leading" image. A lower degree of law compliance and a liberal political orientation of the city mayor was also positively associated with its perception as a "leading" city ($\beta = -.09$, $p < .001$). The mayor's political orientation was also significantly associated with the "leading" city image ($\beta = .06$, $p < .01$). However, the perception of the local government's hierarchy and regulation ($\beta = -.04$, $p > .05$) and of the leader's communication and social responsibility activities ($\beta = -.02$, $p > .05$) were not significantly associated with the "leading" city image.

Among the situational contingent variables proposed by H2, the greater the level of citizenship the respondents perceive from the city residents, the greater the level of its image as a "leading" city (β = .07, p < .01). The perception of the COVID-19 issue was not significantly associated with the "leading" city image (β = .01, p > .05). Finally, as for the city's functional characteristics proposed by H3, only the perception of a city's living infrastructure and competitiveness positively influenced the image as a "leading" city (β = .70, p < .001). The perceptions of environmental (β = -.02, p > .05) and cultural (β = .03, p > .05) infrastructure were not significantly associated with the "leading" city image. Thus, for the "leading" city image as a dependent variable, H1, H2, and H3 were all partially supported, with a part of proposed predicting variables found to significantly affect the dependent variable.

Table 3

Multiple Regression for the Perception of City Image: Leading

	Variables	Beta	t	Tolerance	VIF
Control variables	Age	.06**	3.52	.89	1.13
	Education	-.04*	-2.56	.96	1.04
	Period of residence	-.05**	-2.99	.87	1.15
	[Local gov.] Openness and expertise	.09**	3.46	.36	2.78
	[Local gov.] Hierarchy and regulation	-.04	-1.71	.59	1.69
Contingent factors	[Leader] Communication and social responsibility activities	-.02	.60	.24	4.14
	[Leader] Law compliance	-.09***	-3.82	.44	2.25
	[Leader] Political orientation	.06**	3.45	.86	1.16
	[Leader] Transformational leadership	.13***	3.61	.20	5.13
	[Leader]Transactional leadership	.06**	2.65	.47	2.13
	[Situational] Perceived citizenship	.07**	3.30	.57	1.75
	[Situational] Perceived severity of the COVID-19 issue	-.01	-.28	.89	1.16
Functional characteristics of a city	Environmental infrastructure	-.02	-.87	.74	1.36
	Cultural infrastructure	.03	1.36	.63	1.60
	Living infrastructure and city competitiveness	.68***	30.13	.50	2 .01

Note. * p < .05, ** p < .01, *** p < .001

Next, regarding the "safe" city image, the assumptions check for multiple regression analysis was first conducted using the histogram of standardized residuals and the normal P-P plot and showed similar results. The data met the assumptions of homoscedasticity, linearity, and independent errors (*Durbin-Watson value* = 2.11). The variance inflation factor (VIF) values, which were less than 10, indicated that the data also met the assumption regarding multicollinearity (see Table 4 for VIF values). The results of a multiple regression analysis indicated that the input variables in the model accounted for 56.7% of the total variance of the respondents' perception of the city as "safe" (F[15, 932] = 83.72, $p < .001$, adjusted $R^2 = .57$) (see Table 4 for the regression coefficients and statistics). As for the predisposing contingent variables (H1), the perceived cultural characteristics of the local government, specifically its hierarchy and regulation, positively influenced the perception of a "safe" city image ($\beta = .07$, $p < .01$). The perception of openness and expertise was not significantly associated with the "safe" city image ($\beta = .05$, $p > .05$), neither were the perceived social characteristics of the local government leader: communication and social responsibility ($\beta = .05$, $p > .05$), law compliance ($\beta = -.01$, $p > .05$), political orientation ($\beta = -.01$, $p > .05$), transformational leadership ($\beta = .01$, $p > .05$), and transactional leadership ($\beta = .01$, $p > .05$). Among the situational contingent variables proposed by H2, the perceptions of citizenship positively influenced the perception of a "safe" city image, as did the perception of COVID-19 issue ($\beta = .05$, $p < .05$). All three variables regarding the perception of city attributes were observed to positively influence the perception of the city as "safe:" environmental ($\beta = .34$, $p < .001$), cultural ($\beta = .06$, $p < .05$), and living infrastructure and competitiveness ($\beta = .30$, $p < .001$). Thus, for the "safe" city image as a dependent variable, H1 was partially supported, and H2 and H3 were fully supported.

Table 4

Multiple Regression for the Perception of City Image: Safe

	Variables	Beta	*t*	Tolerance	VIF
Control variables	Age	.00	-.02	.89	1.13
	Education	-.03	-1.27	.96	1.04
	Period of residence	.01	.37	.87	1.15
Contingent factors	[Local gov.] Openness and expertise	.05	1.39	.36	2.78
	[Local gov.] Hierarchy and regulation	.07**	2.62	.59	1.69
	[Leader] Communication and social responsibility activities	.05	1.18	.24	4.14
	[Leader] Law compliance	-.01	-.36	.44	2.25
	[Leader] Political orientation	-.01	-.32	.86	1.16
	[Leader] Transformational leadership	.01	.12	.20	5.13
	[Leader]Transactional leadership	.01	.23	.47	2.13
	[Situational] Perceived citizenship	.24***	8.61	.57	1.75
	[Situational] Perceived severity of the COVID-19 issue	.05*	2.03	.89	1.13
	Environmental infrastructure	.34***	13.72	.74	1.36
Functional characteristics of a city	Cultural infrastructure	.06*	2.20	.63	1.59
	Living infrastructure and city competitiveness	.30***	9.80	.50	2.01

*Note. * p < .05, ** p < .01, *** p < .001*

Discussion

Based on the commonly important cognitive factors in previous city brand research (Chung & Kim, 2009; Kim & Kim, 2010; Yoo et al., 2008) and image PR studies using the CTA (Hwang, 2016, 2017; Hwang & Kim, 2018, 2020; Hwang, Ham, et al., 2020; Hwang, Kang, et al., 2020), this study proposed a research model testing a series of hypotheses predicting the influence of perceived predisposing, situational, and urban functional factors on the image of a city during the COVID-19 pandemic. According to the results, all hypotheses were partially supported with significant factors in each cluster.

Regarding the leading image of a city, this study found the following significant factors: openness and expertise of the local government, the transformational and

transactional leadership of the mayor, legal compliance of the mayor, and political orientation of the mayor (predisposing factors); citizenship (situational factors); and the living infrastructure and city competitiveness (functional attribute of the city). First, the local government's cultural characteristics (openness and expertise) had an impact on the leading city image, suggesting that the local government's information transparency, active response to civil complaints, active dissemination of information, and active communication activities positively influenced the perception of the city as leading. A clear perception of the leader's transformational leadership produced the surprising impression that the city is forward-looking and leading. This naturally emphasizes the importance of administrative activities in which the mayor presents their future vision for the city and encourages citizens' participation in its realization. The perception of transactional leadership, which is contradictory to transformational leadership, also had a significant positive effect. Transactional leadership, often emphasizing punishment and regulation, may be quite burdensome for public officials; however, ordinary citizens seemed to evaluate such leadership positively and effectively. The same can be understood as translating to the image of the city. Similarly, the political orientation of the mayor is also a contributing factor. When respondents perceived the mayor of a specific city to be politically progressive with a reformatory attitude, they tended to regard the city as a dynamic and leading one.

Interestingly, the evaluation of the morality and law compliance of the mayor negatively affected the perception of the city as leading and dynamic. The more moral and law-abiding the mayor was, the less the city was perceived as leading and dynamic. Whereas this is not readily understood at first glance, it may be comprehended to some extent considering the unique situation prevailing in the Republic of Korea. The mayoral positions in Seoul and Busan––the second-most populous city––were vacant during the survey period due to a sex scandal. Although there were no scandals involving the leaders of relatively smaller cities, they remained underdeveloped. Although the leadership position were unoccupied in the two big cities, the cities themselves retained the leading and dynamic aspects of global cities. However, it is highly likely that this situation is unique to Korea and may not apply to other countries. A high level of citizenship was also an important factor. In other words, the respondents displayed a tendency to believe that rational, hardworking, and kind

citizens were responsible for the city's future. The most important factor that facilitated the perception of a city as future-oriented was its competitiveness and practical capabilities based on its excellent living infrastructure. This implies that this perception can be produced only when the city really has enough practical capabilities.

Next, the safe image of a city was significantly influenced by the following factors: hierarchy and regulation of the local government (predisposing factor); citizenship and the severity of COVID-19 issue (situational factors); and environmental, cultural, and living infrastructures and city competitiveness (urban functional factors). First, the rules and hierarchies within city hall influenced the city's image as safe and clean. If the respondents perceived that the regulations within the city hall were strict and hierarchical, they tended to expect the city's disease management and safety control to be performed smoothly. Next, high citizenship was pointed out as a significant factor, suggesting that a citizen's consciousness to observe regulations, such as wearing a mask and practicing social distancing, can eventually create a safe and clean city that manages to contain the outbreak. When the respondents strongly perceived the pandemic issue's severity, they were likely to perceive their city of residence as safe. Although it is difficult to deal with the disease, a relatively successful quarantine system in South Korea led Korean citizens to believe that they are safer than other regions or countries in the world. Additionally, the city's physical characteristics, such as its natural and ecological environment, cultural infrastructure, such as city symbols and festivals, and urban competitiveness based on living infrastructure, positively influenced its image as a clean and safe city. Respondents appeared to believe that having a clean natural environment, refined cultural assets, and sufficient facilities for education, transportation, and shopping are the basic conditions for maintaining a city's cleanliness and safety.

Scholarly Implications

Most importantly, this study found a distinctive and differential influence of contingent factors in the two observed images of a city. Perceptions of such internal organizational factors as openness and expertise of the local government; of managerial, political, and legal characteristics of mayors; and of living infrastructure were strongly influential in producing a city's leading and dynamic image. By contrast,

perceptions of external situational factors such as citizenship, the COVID-19 issue, and all three city attributes of environmental, cultural, and living infrastructure were highly influential in perceiving a city's safe and clean image. Although the perception of citizenship was significant (β = .07) in the leading urban image, it was more powerful (β = .24) in the safe urban image. Whereas the perception of hierarchy and regulation of the local government (β = .07) was significant in the safe image of a city, the only significant predisposing factor took a small portion out of explanatory factors, compared with the other external situational and functional factors. Overall, these results indicate the possibility of theoretical bundling between internal organizational factors and producing a leading and dynamic urban image and between external situational factors and perceiving a safe and clean city image.

Next, we took note of insignificant factors. An image of a leading city is essentially associated with its functional attributes or behaviors. Hierarchy and regulation in the local government remind us of becoming static. Administrative leaders' communication and altruistic offline actions have shrunk during the pandemic to avoid infections. Because of the strong perception of the severity of the pandemic, people stayed in a limited sphere, which is not conducive to producing an active and dynamic image of a city. Environmental and cultural infrastructures are mostly immovable and, thus, do not seem to be associated with a dynamic urban image. Experiencing a more static life to prevent infections applies to citizens and officials in the local government and its leaders. People believe that administrative regulation, citizenship, and refined urban infrastructures are influential in the safety of a city. By contrast, they might also believe there is little room for administrative staff to directly affect urban safety, because their life patterns have also accordingly shrunk, which implies they cannot actively perform administrative duties. Comprehensively, a changed static lifestyle to avoid infections during the pandemic could be a fundamental actor accounting for insignificant factors.

Practical Implications

The results of this study indicate that the relative influences of the factors differ in cultivating the two-dimensional city image. Thus, practitioners should consider two-track strategies to produce two different urban images during the pandemic. To

produce leading and dynamic images of a city, practitioners should check whether the city really has an advanced living infrastructure and city competitiveness. Then, publicizing the excellence of the related infrastructure would be a shortcut to cultivating a leading urban image. Furthermore, through diverse media outlets, practitioners should broadcast important internal organizational factors, such as open organizational culture, the expertise of the local government, the progressive political orientation of the mayor, and the mayor's transformational and transactional leadership activities. Since the mayor's image greatly influences the city image, the importance of PR practices that communicate a leader's identity should never be overlooked when attempting to construct a leading and dynamic city image.

Moreover, practitioners should keep the powerful influence of situational and functional urban factors in mind to build a safe and clean image of a city. An effective communication strategy would be to disseminate and emphasize the message that there are advanced cultural, environmental, and living infrastructures in the city because citizens would think they are safe due to well-managed, clean infrastructure. Additionally, practitioners should adequately inform citizens about the severity of the pandemic based on scientific evidence. Accurate news on public health crises results in people being cautious about the possibility of infection, which helps them feel safe with preventive efforts. A series of news items dealing with the cooperativeness of citizens regarding quarantine and vaccination policies would produce a perception that citizens are reasonable and have a high sense of citizenship; this too is strongly associated with the safe and clean image of the city.

In addition to these situational and functional attributes, practitioners must remind citizens that the local government has a clear hierarchical structure. Consequently, people would believe that it is possible for the local government to implement necessary policies for citizens effectively and in a timely manner. Such a perception would help present the image of safety. Also, it would be necessary to conduct intensive promotion activities taking cognizance of the factors above to impress on citizens the different dimensions of the city image. Thus, it is suggested that planning be selectively changed based on the target image.

Limitations of the Study and Suggestions for Future Research

Despite its various meaningful implications, this study has some limitations. First, it used a nonprobability sampling method. Sampling from an online survey panel may limit the generalizability of the results to the entire Korean population. Furthermore, the sample of this study is limited to Koreans. It is highly likely that the results of one country's sample will appear substantially similar to the perspective of citizens of other nations in terms of multivariate relations. However, whether this is certainly the case requires confirmation through further research. Next, although this study systematically examined the relationship between the perceptions of contingency factors and the two-dimensional city image, it did not specify which visible PR activities influence the city image and the degree of their influence. We also did not investigate the various behavioral effects produced by the two image dimensions. Scholars will be able to answer such research questions through subsequent studies. Fourth, the mayors of Seoul and Busan, the two major cities in South Korea, were absent during the survey period. Although the respondents mostly answered questions about mayoral activities and leadership styles by thinking of the most recent mayors, it would be possible for them to answer these questions without clear impressions of a particular leader. Therefore, we need to be cautious in asserting that mayoral leadership is without a doubt significant in the image of a city. Further research involving incumbent mayors will clarify the relationships among the variables above.

In summary, this study confirmed that citizens largely perceived two unprecedented dimensions of city image in this pandemic landscape. In addition, this study comprehensively investigated the relationship between contingency factors and the two dimensions of city image, confirming that the CTA can be applied to the broader context of image PR as a useful theoretical framework. We hope the findings of this study can enable practitioners to systematically plan and execute city image PR in the future.

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