# "DO YOU DARE TO TRAVEL?" RISK AND DESTINATION PERCEPTIONS ON WUHAN SINCE THE COVID-19 PANDEMIC

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## INTRODUCTION

The outbreak of the novel coronavirus COVID-19 has caused a standstill to the global economy and changed the way of life (Gössling et al., 2020; Sigala, 2020). With international borders closed, limitations to non-essential travel, and city lockdowns to curb the spread of the novel coronavirus, the tourism industry has received a devastating hit, with over 70% decline in international tourist number and about USD730 billion loss in tourism exports (UNWTO, 2020). Started in Wuhan, Hubei Province, China, the novel coronavirus was previously known and publicized in various media channels as the Wuhan Coronavirus before its official naming on 11 February 2020. In the context of an ongoing pandemic, media takes the role of a double-edged sword during a public health crisis. Both mass media and social media have been significant in providing timely updates of the pandemic, heightening public awareness, and informing the public with evaluations on risk without causing public panic and anxiety (Chemli et al., 2020). Yet media could also play a role in inducing panic, heightening risk perceptions, and influence potential tourists' evaluation of destination related to public health crises (Fennell, 2017; McKercher, 2003; Novelli et al., 2018; Yu et al., 2020). At the start of the pandemic, various media outlets had branded the coronavirus based on the epicenter of Wuhan, or even regarded it as a disease that only affects the Asian race (Wen et al., 2020). The media spotlight of a place as the origin of a global pandemic would bring about negative effects to place imagery and destination image management (Novelli et al.,

2018; Schroeder & Pennington-Gray, 2014). Additionally, it would also cause spillover effects, not only to the place itself but to a regional level (Novelli et al., 2018).

Research since the start of the COVID-19 pandemic has focused on several areas: the impact of COVID-19 on destinations (Gössling et al., 2020; Sigala, 2020), possible recovery strategies for the tourism and hospitality industry, and the influence of media on perceptions of COVID-19, risk and travel (Chemli et al., 2020; Wen et al., 2020; Yang et al., 2021; Yu et al., 2020).

Current works that investigated the impacts of media on destinations related to public health crises have suggested that misleading media coverage on COVID-19 could negatively affect one's destination image and travel intention to China (Yang et al., 2021) or enhance risk perceptions (Chemli et al., 2020). However, there is still a research gap on how such media portrayals influence the perceptions of public health risks, such as COVID-19, travel risk, destination image, and travel intention. To bridge the aforementioned research gap, this study would like to focus on Wuhan in the first three months of the pandemic, with the following research objectives:

- 1. To explore how travelers within and outside China, perceive the coronavirus and travel risks during a pandemic.
- 2. To examine the influence of perceptions of COVID-19 and travel risk, on the travelers' destination image of Wuhan.

An integrated framework will be proposed and tested. This study contributes by making a

comparison between travelers in Singapore and China (based in Beijing and Shanghai), providing consumer insights in times of crisis on their perception of destination and how it affects their travel consumption behaviors. This study investigates the relationships between perceptions of COVID-19, travel risk, destination image, and travel intention to a highly associated destination during the first three months of the global pandemic.

## LITERATURE REVIEW

Destination image and risk perceptions have been noted to be influential to decision-making, yet these two concepts have been studied under two different streams of research in tourism (Becken et al., 2017; Chew & Jahari, 2014). Recently, there has been a rise in studies that integrated risk literature with destination image (Becken et al., 2017; Chew & Jahari, 2014; Li et al., 2018; Perpiña et al., 2020; Qi et al., 2009; Rittichainuwat & Chakraborty, 2009). Building upon the aforementioned theoretical background, the current study posits on the first three months of the COVID-19 pandemic centered in Wuhan, China. This study proposes an integrated framework to examine how perceptions of COVID-19 affect one's perception of travel risk, its influences on destination image that is highly associated with the pandemic, and one's travel intention to the said destination.

## Perceptions of COVID-19.

Perceptions are defined as "an individual's knowledge, information, and experience which are responsive to their cognition of objects, behaviors, and events" (Anderson, 2004 in Lee et al., 2012, p.92). As such, mass media and social media, which are responsible for providing real-time (mis)information of COVID-19, can influence people's perceptions of the COVID-19. Extant literature has illustrated that risk perceptions of an epidemic disease, such as SARS and COVID-19, can be affected by the media, causing fear and panic, and consequently heightening one's perceived risk of the disease and destination(s) related to the epidemic (Law, 2006; McKercher, 2003; Novelli et al., 2018; Rittichainuwat & Chakraborty, 2009). With COVID-19 constantly being on the headlines of every media platform, and media coverage shining spotlight on certain places related to the coronavirus (Wen et al., 2020; Yu et al., 2020), negative perceptions of COVID-19, like any other existing pandemic diseases, heighten the perceived risk of those places, affecting tourists' image of the places and travel intention, whether or not it is an "infected" destination (Novelli et al., 2018; Rittichainuwat & Chakraborty, 2009).

Moreover, previous studies have proven that perceptions of the disease are influential in perceived risks and travel decision making (Brug et al., 2004; Lee et al., 2012; Reisinger & Mavondo, 2008; Sonmez & Graefe, 1998). As perceptions can shape attitudes, opinions, and behaviors, a traveler's perception of the coronavirus would heighten tourists' perception of risk, and traveling in an outbreak would raise issues on personal health and safety, impacting one's destination image and subsequent travel behavior (Kozak et al., 2007; Law, McKercher, 2003; Rittichainuwat 2006: Chakraborty, 2009). Hence, we would like to propose:

- **H1**: Perceptions of COVID-19 heightens travel risk.
- **H2**: Perceptions of COVID-19 negatively affects (a) affective and (b) cognitive destination image of Wuhan.
- **H3**: Perceptions of COVID-19 negatively affects travel intention to Wuhan.

## Risk Perceptions.

Defined here as the way a consumer perceives an action that may expose them to danger, risk perceptions can influence one's travel decisions if the perceived danger is deemed to be beyond an acceptable level, which by its turn can impact one's travel decision-making to a destination choice (Becken et al., 2017; Perpiña et al., 2020; Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998). Prior research has examined that negative attributes of a destination, such as urban air pollution in China (Becken et al., 2017) and effects of an earthquake and nuclear disaster in Japan (Chew & Jahari, 2014), have affected the destination image of potential tourists. These negative attributes of destination are valid concerns for tourists as going to such destination raises issues of lacking personal health and safety (Reisinger & Mavondo, 2005), and possibly influence tourists to evaluate perceptions

of destination more undesirably. This is especially so since measurements of destination image, explore how the destination offers personal safety (cognitive destination image) and induce relaxing/distressing emotions (affective destination image) toward the destination (Baloglu & McCleary, 1999; Beerli & Martin, 2004). These attributes, which are affected by the tourists' perception of how the place could expose them to danger, are likely to influence negative evaluations of the destination. Thus, it can be understood that the perceived risks can influence destination image. With the above theoretical background, we propose:

• H4: Risk perceptions negatively affects (a) affective and (b) cognitive destination image of Wuhan.

Based on the Theory of Planned Behavior (TPB) by Azjen (1991), intentions indicate how one is likely to engage in certain behavior. Intentions are likely to be affected by an individual's subjective knowledge, previous travel experiences (Lam & Hsu, 2006). In the context of a pandemic that has led to strict lockdowns and stay-home notices, the lack of travel experiences has led individuals to look to their perceptions of risk and safety when making travel decisions (Li & Ito, 2021; Sönmez & Graefe, 1998). Previous studies on SARS, Ebola, and COVID-19 have identified that the media is influential in inducing fear or exaggerating risk perceptions of traveling to the related destination (Chemli et al., 2020; Mansfeld, 2006; Novelli et al., 2018; Rittichainuwat & Chakraborty, 2009). Under the context in the first three months of the pandemic, where various media platforms have placed the spotlight on Wuhan as the ground-zero of COVID-19, the media have likely to enhance risk perceptions of travel, allowing us to hypothesize that:

• **H5**: Risk perceptions negatively affects travel intention to Wuhan

## Destination Image.

Defined by Crompton (1979) as "the sum of beliefs, ideas, and impressions that a person has of a destination" (p.18), destination image consists of three aspects: cognitive, affective, and conative (Becken et al., 2017; Chew & Jahari, 2014; Echtner & Ritchie, 1993; Gartner, 1994; Pike & Ryan, 2004). The cognitive dimensions of destination

image comprise a set of knowledge or understanding consumers have about the destination, evaluated based on a set of attributes that correspond to tourism products the destination provides (Beerli & Martin, 2004). The affective dimension of destination image refers to one's personal feelings or emotions toward the destination (Baloglu & McCleary, 1999; Beerli & Martin, 2004; Russell et al., 1981). Conation refers to the interactions of cognitive and affective aspects which are then later translated into behavior (Becken et al., 2017). In the extant researches on destination image, Baloglu and McCleary's (1999) model, which focuses on the understanding of destination image through cognitive and affective evaluations, has been widely used and extended on various research to uncover antecedents and effects of destination images on travel behavior. Antecedents such as age, previous travel experiences, and information sources have been proven to influence both cognitive and affective destination images (Baloglu, 2000; Baloglu & McCleary, 1999; Beerli & Martin, 2004). Along with how perceptions of risks are influential to both cognitive and affective destination image, this study would like to focus on the two facets of destination image for investigation.

Current research has shared how tourists form their destination image, starting from shaping an initial organic image of the place, to refining it into an induced image based on the processing of related information (Becken et al., 2017). Chen, Lai, Petrick, and Lin (2016) illuminated the importance of word-of-mouth and the use of social media as influential in forming organic images and reinforcing stereotypes of destination images. Since mass media and social media portrayed Wuhan to be strongly associated with COVID-19, such media portrayal is likely to bring about negative stimulations that play with the emotions of potential tourists, affecting their destination evaluations toward Wuhan (Chemli et al., 2020; Yu et al., 2020).

Prior works have highlighted both the interrelationship between cognitive and affective destination images, emphasizing the importance of affective destination image (Gartner, 1994; Perpiña et al., 2020). According to these works' premises, the ongoing COVID-19 pandemic would have caused potential tourists to be in a continual state of worry and panic, especially when media outlets,

focused on constant coverage of pandemic reports which heightened risk perceptions (Ren et al., 2020; Wen et al., 2020; Yu et al., 2020). These negative valence of media reporting on Wuhan as ground-zero of COVID-19 may have affective dimensions playing a more dominating effect on travel intention than cognitive dimensions (Becken et al., 2017; Li et al., 2018; Perpiña et al., 2020). Thus, we hypothesize:

• **H6**: Affective destination image of Wuhan has a direct impact and positive influence on the corresponding cognitive destination image of Wuhan.

## Destination Image and Travel Intention.

There have been many studies documenting destination image as a strong predictor of travel intention (Baloglu, 2000: Qu et al., 2011). Previous studies have noted that destination image has a direct and positive effect on travel intention (Perpiña et al., 2020; Qu et al., 2011). On the other hand,

Becken et al. (2017) have highlighted in their study that perceived negative stimulations via media portrayal play with the emotions of potential tourists affected their affective destination image, which is influential in deterring them visit China. Similarly, Novelli et al. (2018) have presented their findings on the significance of media portrayals of Ebola affecting the destination image of the Gambia that impacted the overall tourism industry despite having no confirmed cases of Ebola. Hence, it can be assumed that

• H7: (a) Affective destination image and (b) cognitive destination image of Wuhan directly influences travel intention to the destination.

With the above theoretical background, this study would like to propose an integrated framework (Figure 1) to examine how perceptions of COVID-19 affect one's perception of travel risk, their influences on the destination image of Wuhan, and travel intention to the said destination.

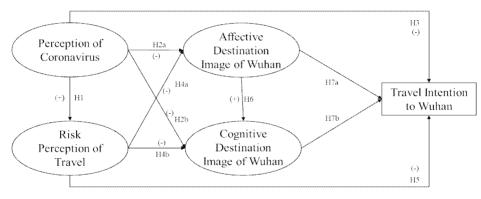


Figure 1: Hypothesized Model

## **METHOD**

## Data Collection.

A web-based questionnaire was distributed among consumers from Singapore and China (outside of Hubei Province) via random sampling through local market research firms in March 2020. Since COVID-19 is a public health issue that does not discriminate age, the sample retrieved from each country consists of at least 300 respondents per country and is stratified equally according to age and gender quotas to achieve representativeness of the population of China and Singapore. Singapore was chosen to compare with China as it was the other country outside of China with the highest number of COVID-19 cases as of February 2019. In terms of human mobility between the two

countries, Singapore is also one of the main outbound countries for Chinese Nationals due to the high number of expatriates and foreign labor in the country (Lee, 2020). Additionally, Chinese inbound tourists contributed S\$900 million tourism receipts in Q4 2019, making China one of the most important inbound tourism markets for Singapore's tourism (Singapore Tourism Board, 2020). On the other hand, unlike South Korea, Japan, and the US, Singapore is only the ninth most important inbound market source for China's inbound tourism in 2018 (Ma, 2020). Yet, Singapore inbound tourists to China constitute the second greatest market share in Southeast Asia, after Malaysia, with a great proportion of travels accounting for business travels and familial visits to ancestral homes (Chiang, 2015). Since the outbreak of COVID-19, Singapore has

dealt well with swift responses to contain the spread of the coronavirus, as compared to Japan, Korea, and the US, which has a lag in the spread and response of the coronavirus. Hence, Singapore would be a sound choice of comparison with China in the study.

### Instruments.

The questionnaire consists of items on consumers' perception of the coronavirus COVID-19, risk perception of traveling, destination image of Wuhan, and behavioral intentions. Instruments are developed from measurement items of existing literature. Perception of coronavirus is measured by items adapted from Lee, Song, Bendle, Kim, and Han (2012). Risk perception of travel is derived from works by Brug, Aro, Oenema, de Zwart, Richardus, and Bishop (2004), and Leung, Lam, Ho, Chan, Wong, and Hedley (2003). Destination image of Wuhan will be measured based on affective destination image and cognitive destination image items established by Baloglu and McCleary (1999), Beerli and Martín (2004), and Russell, Ward, and Pratt (1981). Travel intentions are measured based on items from Law (2006) and Lee et al. (2012). Respondents were asked to value all measurement items based on 7-point semantic differential scales ranging from not at all (1) to very much (7). The last segment of the survey focused on the demographic profile of the respondents, and questions on their preferred media of information related to the COVID-19 disease outbreak.

## **FINDINGS**

## Descriptive Statistics.

A total of 688 complete responses were collected (Table 1). Out of which, 332 (48.3%) responses were from Singapore, and 356 (51.7%) responses were made up of respondents from Beijing and Shanghai, China. There are a few reasons why Beijing and Shanghai were selected. Firstly, Beijing and Shanghai have comparable GDP to Singapore. Furthermore, based on a report on China's top search engine Baidu, Beijing has been crowned the number one city of outbound domestic tourism searches, with Shanghai, placed third (Techweb, 2020). The two cities from China were also the top two cities in their domestic outbound travel index (hb.ifeng.com, 2019). Based the above. relatively demographically representative samples collected from Singapore, Beijing, and Shanghai, with equal numbers of male and female respondents. Both groups of respondents are highly educated, with 48.9% and 74.8% of the respondents graduated with a Bachelor's degree or higher in Singapore and China, respectively. Additionally, about 42.7% of the Chinese respondents have traveled to Wuhan, as compared to 13.2% in the Singapore sample.

Table 1. Demographic profile of respondents (N=688)

Singapore (N=332)	Frequency	%	China (N=356)	Frequency	%
Gender			Gender		
Male	167	50.3	Male	172	48.3
Female	165	49.7	Female	184	51.7
Traveled to Wuhan			Traveled to Wuhan		
No	288	86.7	No	204	57.3
Yes, Once	36	10.8	Yes, Once	109	30.6
Yes, twice or more	8	2.4	Yes, twice or more	43	12.1
Age			Age		
18-29	67	20.2	18-29	99	27.8
30-39	66	19.9	30-39	103	28.9
40-49	66	19.9	40-49	96	27.0
50-59	67	20.2	50-59	58	16.3
60-69	66	19.9	60-69	0	0
Education			Education		
Secondary school and below	49	14.8	Secondary school and below	6	1.7
Junior College/Polytechnic	89	26.8	Junior College/Polytechnic	19	5.3
Vocational/technical school	32	9.6	Vocational/technical school	65	18.2
Bachelor's degree	135	40.7	Bachelor's degree	232	65.2
Master's degree/MBA/PhD	27	8.1	Master's degree/MBA/PhD	34	9.6

Exploratory factor analysis was executed using SPSS 24.0. Under principal component factor analysis, the results of both samples have confirmed that all variables were related and suitable for structure detection (p < .001). The requirement of the Kaiser-Meyer-Olkin Measure (KMO) was met with .875 (Singapore) and .820 (China), indicating that both samples were sufficient for further analysis (Yong & Pearce, 2013). Following a varimax rotation, one item from travel risk (TR 4) and one item from the perception of COVID-19 (COVID 4) were eliminated due to low factor loadings. Cronbach's alpha coefficients were calculated to ensure internal consistencies. All values were above 0.7 except for perceptions of COVID-19 and travel risk for the China sample, suggesting high reliability for the Singapore sample, and acceptable reliability (Table 2).

## Measurement Model.

This study undertook Anderson and Gerbing's

(1988) two-step approach of confirmatory factor analysis (CFA) and structural equation modeling (SEM) to test the relationships between the perception of COVID-19, travel risk, destination image, and travel intention. IBM AMOS 24.0 was utilized to analyze the data. The model fit indices indicated an acceptable fit of the combined model of both samples ( $\chi^2$  (48) = 163.233,  $\chi^2/df = 3.401$ , p < .01, NNFI = .955, CFI = .967, RMSEA = .057). The reliability and validity of both measurement models were achieved, with values of CR being greater than 0.7, and values for AVE greater than 0.5, indicating sound construct reliability and convergent validity (Bagozzi & Yi, 1988). Each AVE values greater than the corresponding squared inter-construct correlation estimates, meeting the thresholds for discriminant validity. Based on the above statistics, the results suggested that a theoretically meaningful and statistically acceptable model was achieved.

Table 2. Descriptive statistics and Factor Loadings (N=688)

Constructs/Items	Mean	SD	FL	Mean	SD	FL
	SG (N= 332)			CN (N=356)		
Affective Destination Image of Wuhan	(Cronbach's $a=.907$ )			(Cronbach's $a=.873$ )		
AD_W1 Pleasant/Unpleasant	2.89	1.58	.852	3.18	1.74	.841
AD_W2 Arousing/Sleepy	3.14	1.60	.708	2.70	1.54	.829
AD_W3 Relaxing/Distressing**	2.64	1.48	.852	3.71	1.90	.861
AD_W4 Favourable/Unfavourable	2.79	1.55	.883	2.18	1.37	.740
Cognitive Destination Image of Wuhan	(Cronbach's $a=.866$ )		(Cronbach's $a=.799$ )			
CD_W1 High standards of hygiene and cleanliness	2.99	1.58	.856	4.79	1.21	.693
CD_W2 High quality of infrastructure	3.67	1.61	.574	5.58	1.06	.813
CD_W3 High levels of personal safety	3.23	1.56	.834	5.17	1.40	.640
CD_W4 A lot of interesting cultural and historical attractions**	3.91	1.62	.863	6.20	0.96	.757
CD_W5 A lot of food choices**	4.04	1.60	.876	6.12	0.99	.715
Travel Risk	(Cronbach's $a=.769$ )		(Cronbach's $a=.679$ )			
TR_1 It is dangerous to travel with the current coronavirus situation. **	5.90	1.38	.771	6.37	0.86	.761
TR_2 People around me refrained from travelling during the current coronavirus situation.	5.80	1.25	.835	6.36	0.84	.713
TR_3 There is a risk of my family/friends disapprove of my choice to travel during the current coronavirus situation.	5.85	1.21	.774	6.30	0.80	.711
TR_4 There is a risk that I may contract the coronavirus if I travel.*	5.97	1.12	-	5.66	1.06	-
Perception of COVID-19	(Cronb	oach's a	(=.769)	(Cronb	ach's	a=.594)
COVID 1 The coronavirus is a frightening disease. **	5.60	1.31	.79 <b>á</b>	6.25	0.92	.632
COVID 2 I am afraid of contracting the coronavirus.	5.54	1.31	.693	6.07	1.03	.593
COVID_3 Compared to SARS and Avian Influenza, the coronavirus is more dangerous.	5.06	1.49	.851	5.90	1.25	.847
COVID_4 I have confidence to survive the coronavirus if I get infected.*	4.91	1.28	-	5.30	1.28	-
Travel Intention						
Intention to visit Wuhan in the following 12 months after the end of the Coronavirus outbreak	2.07	1.52	-	3.78	1.65	-

<sup>\*</sup>Items removed in EFA, \*\*Items removed in CFA.

## Hypotheses Testing.

Model fit of the structural model was evaluated based on the comparative fit index (CFI), non-normed fit index (NNFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA). The recommended threshold of acceptability for NNFI and CFI is 0.95, while SRMR of less than .08 and RMSEA close to .06 indicates well-fitting models (Hooper et al., 2008; Hu & Bentler, 1999). The hypothesized model was tested separately with the same items after CFA to examine if there are any national differences.

## Singapore Sample.

The goodness-to-fit model indices of the Singapore sample, as shown in Figure 2, reported  $a^2$  (55) = 91.836,  $^2$ /df = 1.670, p < .01, CFI = .984, NNFI = .977, SRMR = .0355, RMSEA = .045. Based on the findings of the tested hypotheses, perception of COVID-19 has a significant positive effect on risk perception of travel, supporting H1. While H2a received statistical support with

perceptions of COVID-19 negatively affecting affective destination image of Wuhan amongst the Singaporean respondents, it does not have any statistically significant effect on the cognitive destination image of Wuhan, refuting H2b. Furthermore, it has also been tested that Singaporeans' perceptions of COVID-19 do not have any direct significant effect on travel intention to Wuhan, rejecting H3. Risk perception of travel has a statistically significant effect on affective destination image of Wuhan, supporting H4a, but does not have any significant negative effect on the cognitive counterpart (H4b). Interestingly, travel risk perception did not produce a statistically significant effect on Singaporeans' travel intention to Wuhan, rejected H5. Hypothesis 6 is supported, showing a strong effect of affective destination image of Wuhan on the cognitive destination image of Wuhan. Lastly, only H7a is accepted showing that affective destination image of Wuhan has a strongly significant effect on travel intention to Wuhan.

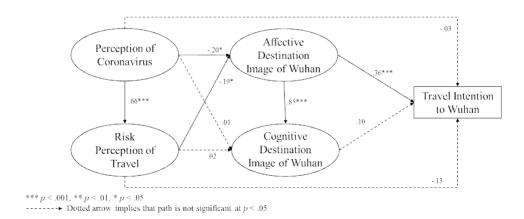


Figure 2. Structural model with estimated path coefficients (Singapore).

## China Sample.

The goodness-to-fit model indices of the China sample, as shown in Figure 3, reported  $a^2$  (34) = 63.450,  $^2$ /df = 1.866, p < .01, CFI = .954, NNFI = .935, SRMR = .0327, RMSEA = .056. Based on the findings of the tested hypotheses, perceptions of COVID-19 has a significant positive effect on risk perception of travel, supporting H1. Different from the Singapore sample, perception of COVID-19 does not have any effect on both affective and cognitive destination image of Wuhan,

refuting H2a and H2b. Similarly, it has also been tested that perception of COVID-19 does not have any direct significant effect on travel intention to Wuhan, rejecting H3. Risk perception of travel has a statistically significant effect on affective destination image of Wuhan, supporting H4a, but does not have any significant negative effect on the cognitive counterpart (H4b). However, travel risk perception does have a statistically significant negative effect on the travel intention to Wuhan, accepting H5. Hypothesis 6 is supported, showing

a significant effect of affective destination image of Wuhan on the cognitive destination image of Wuhan. In contrast to the Singapore sample, both H7a and H7b are accepted showing that affective destination image of Wuhan has a significant

negative effect on travel intention to Wuhan, while cognitive destination image of Wuhan has a statistically positive effect on travel intention to Wuhan.

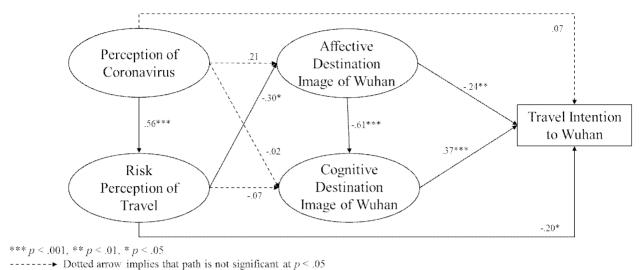


Figure 3. Structural model with estimated path coefficients (China).

## **DISCUSSION**

Linking concepts of risk perception and destination image, this study aims at providing consumer insights in times of crisis on their perception of destination and how it affects their travel consumption behaviors. This study investigated the relationships between perceptions of COVID-19, travel risk, destination image, and travel intention to a highly associated destination, during the first three months of the global pandemic, centered in Asia.

## Effects of COVID-19 Perception.

Despite the negative perception of COVID-19 illustrated in the descriptive statistics from both samples (Table 2), noteworthy findings have been highlighted in the hypotheses testing. Firstly, perception of COVID-19 does heighten risk perception of travel in both Singapore and China samples. However, it does not have any direct effect on the travel intention to Wuhan. This finding corroborated with the study on 2009 H1N1, where the perception of health-related crises is not a significant predictor of behavioral intention (Lee et al., 2012). Instead, supported by previous research, perception of COVID-19 influences attitudes and other perceptions (Reisinger & Mavondo, 2005).

In this case of this study, perception of COVID-19 strongly affects perception of travel risk for both Singapore and China samples, and negatively affects the affective destination image of Wuhan for the Singapore sample. Interestingly, a mediating effect is observed, where the perception of travel risk mediates ( $\beta = -.06$ , ps <.05) the effect of perception of COVID-19 on affective destination image of Wuhan for the China sample. Similar to prior works, the negative perceptions of COVID-19 heightens the risk perceptions of travel, which results in evaluating the destination as less favorable (Chew & Jahari, 2014; Law, 2006; Rittichainuwat & Chakraborty, 2009). This is especially so during the first three months of the pandemic where the coronavirus is still an unknown entity, the world faced an unprecedented spread of a virus and lockdowns of cities, which inevitably results in heightened perceptions of travel risk from Singapore and China. The role of media facilitates how people outside of China see Wuhan. Wuhan, unlike Beijing and Shanghai, or other more touristy destinations like Hangzhou, is not known to Singaporeans as compared to Chinese locals. With only 13.2% of the Singapore sample been to Wuhan, the media coverage on Wuhan as the epicenter of COVID-19 would result in the Singapore sample associating the city's image as that of being portrayed in the

media they interact with (Becken et al., 2017). Moreover, Singapore's affective destination image of Wuhan is the only image construct that is negatively affected by the perception of COVID-19. This result is supported by previous studies as affective dimensions have been proven to be more influential as worry and panic accumulate, which has been proven to influence destination image through risk in the context of a prolonged crisis (Becken et al., 2017; Chen et al., 2016; Li et al., 2018; Perpiña et al., 2020). Hence, media coverage and association of the pandemic with a place is likely to skew a negative light on the destination, resulting in a more strongly negative affective evaluation to Wuhan (Wen et al., 2020; Yu et al., 2020).

## Affective Destination Image – Mediating between Risk Perceptions and Travel Intention.

A noteworthy finding from both samples is the mediating role played by the respective affective destination image of Wuhan. Results obtained by using SPSS PROCESS macro (model 4) (Hayes, 2013) indicated that the affective destination image of Wuhan of the Singapore sample acts as a mediator, mediating effects of perceptions of COVID-19 ( $\beta$  = -.12, ps <.05) and travel risk ( $\beta$ = -.14, ps <.05) to travel intention to Wuhan. This is similar in the China sample, where affective destination image mediates between risk perception of travel and travel intention ( $\beta = .12$ , ps < .05), as well as the relationship between risk perception of travel and cognitive destination image of Wuhan  $(\beta = .09, ps < .05)$ . The key role of destination image as a mediator between the perception of travel risk and travel intention is supported by Chew and Jahari (2014), which proved that perceptions of travel risk leads to negative (re)evaluations of destination images, and decreases the likelihood of repeat visits. However, findings from the current study differ from that of the previous study, where cognitive destination image does not have a mediating effect between risk perceptions and travel intention. This could be due to the dominating effect of affective evaluations being more influential individual's perception of an image, as worry and panic accumulate in the state of a prolonged crisis (Becken et al., 2017; Chen et al., 2016; Li et al., 2018; Perpiña et al., 2020).

## Differing Routes to Travel Intention.

While affective destination image of Wuhan is the only construct that affects travel intention to Wuhan for the Singapore sample, three constructs directly affects travel intention to Wuhan for the China sample. Firstly, risk perception of travel negatively affect the travel intention to Wuhan. Also, both affective and cognitive destination images of Wuhan directly influence travel intention to Wuhan. The China sample differs from the Singapore sample as respondents of the China sample may have a better understanding of Wuhan as compared to the Singapore sample due to prior travel experience to Wuhan. As explained by previous studies, an individual's prior travel experience of a destination could be influenced by media imagery (Baloglu, 2000; Beerli & Martin, 2004; Kozak et al., 2007), which would have an impact on the travel intention to the destination being portrayed. With about 42.7% of the China sample having prior travel experience to Wuhan, along with the swift response of the lockdown to contain the coronavirus in Wuhan, these contexts would result in a more positive cognitive destination image that leads to a positive effect on travel intention in the future to Wuhan. Different from the Singapore sample, the China sample's affective destination image of Wuhan has a negative influence on that of the cognitive destination image of Wuhan. This could be due to the differing images from respondents of the China sample, as shown from the average means of the destination image items, where respondents in China have a positive cognitive destination image of Wuhan ( $\tilde{x}$ = 5.72 on a 7-point scale), but a negative affective destination image of Wuhan ( $\tilde{x}$ = 2.94 on a 7-point scale) (illustrated in Table 2). This differing image could be caused by how media portrayals of Wuhan in the first three months of the pandemic focusing on Wuhan as the epicenter of the coronavirus, which amplifies the negative emotions of the audience (Wen et al., 2020). Results illustrated for the China sample are substantiated by Perpiña et al. (2020), where a more positive cognitive destination image would result in a higher likelihood of visiting the destination. Yet, the dominating effect of affective destination image due to negative media portrayals would also lead to negative effects on cognitive image perception of Wuhan and travel intention to

the said destination.

## CONCLUSION

## Theoretical Implications.

Linking concepts of risk perception and destination image, this study aims to provide a comparative study between consumers in China (outside of Wuhan, Hubei Province) and Singapore on their risk perceptions and destination image in times of crisis and effects on their travel behaviors. This study is an initial investigation on risk relationships between perceptions of COVID-19, perceived travel risk during the outbreak, destination image of the affected city, and its consequent behavioral intentions based on the first three months of the global pandemic centered in Asia. This study extended current literature on risk perceptions and destination image beyond SARS, H1N1, and Ebola, highlighting the possible impacts of incessant media coverage on risk perceptions, destination image, and travel intention (Law, 2006; Leppin & Aro, 2009; McKercher, 2003; Novelli et al., 2018; Rittichainuwat & Chakraborty, 2009). Comparing Singapore and China in the first three months of the pandemic, the study contributes by illuminating the importance of affective destination evaluation as a key mediator for risk perceptions and travel intention. This is supported by previous researches, on recognizing the importance of affective destination evaluations (Perpiña et al., 2020), typically its dominating effect in times of an ongoing pandemic for the Singapore sample who relies on media coverage to evaluate Wuhan as a destination (Becken et al., 2017; Chen et al., 2016). In addition, this study contributes to current literature, highlighting the mediating effect of destination image between perceptions of risk and travel intention (Chew & Jahari, 2014). More importantly, evidence from the study illustrates that in times of an ongoing pandemic, perceptions of the virus and risk perceptions of travel would result in a negative affective evaluation of the destination, which reduces the intention of traveling to the destination.

## Practical Implications.

The studies have illuminated the importance of affective destination evaluation, especially for

destinations that are less known but affected due to being ground-zero of an infectious disease or a natural disaster (Chew & Jahari, 2014; Novelli et al., 2018). Practitioners could take a more affective stance in future marketing strategies, leveraging influencers to reimagine destinations through engaging and emotive advertising content. The use of virtual tours through social media influencers, or even user-generated content through the local perspective, can provide a different perspective to how previously media has portrayed the destination and (re)imagine the affected destination (WSJ, 2020). This would be helpful for destinations previously affected not only by a pandemic but also less-known destinations to enhance travel intentions for post-COVID-19 tourism recovery.

## Limitations and Future Studies.

One limitation to be taken note of was that the research was based on the first three months of the pandemic, which centered in Asia. Then, it was unexpected that COVID-19 would have swept through the globe, intrinsically changing lifestyles and impacting the tourism industry drastically. While it is not part of the questionnaire in this study, influences of media (mis)portrayal or media coverage on COVID-19 on risk perceptions, destination image, and travel intention could have been explored. Further research should uncover possible relationships on the types of information source on perceptions of COVID-19, destination image, and travel intention (Baloglu, 2000; Baloglu & McCleary, 1999). Other possible projects could look at comparing how other countries in Asia, typically South Korea and Japan, which are the top inbound tourist market sources for China. Additionally, destination managers could benefit from the research comparing destination images during various stages of the ongoing pandemic, focusing on risk perception and destination image recovery through emotional or viral campaigns.

## REFERENCES

Anderson, J. R. (2004). Cognitive psychology and its implications. Macmillan.

Anderson, J. C. and Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological bulletin, 103(3), 411-423.

- Ajzen, I. (1991). The theory of planned behavior. Organizational behavior and human decision processes, 50(2), 179-211.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Baloglu, S. (2000). A path analytic model of visitation intention involving information sources, socio-psychological motivations, and destination image. *Journal of Travel & Tourism Marketing*, 8(3), 81-90.
- Baloglu, S., & McCleary, K. W. (1999). A model of destination image formation. *Annals of Tourism Research*, 26(4), 868-897.
- Becken, S., Jin, X., Zhang, C., & Gao, J. (2017). Urban air pollution in China: Destination image and risk perceptions. *Journal of Sustainable Tourism*, 25(1), 130-147.
- Beerli, A., & Martin, J. D. (2004). Factors influencing destination image. *Annals of Tourism Research*, 31(3), 657-681.
- Brug, J., Aro, A. R., Oenema, A., De Zwart, O., Richardus, J. H., & Bishop, G. D. (2004). SARS risk perception, knowledge, precautions, and information sources, the Netherlands. *Emerging Infectious Diseases*, 10(8), 1486-1489.
- Chemli, S., Toanoglou, M., Valeri, M. (2020). The impact of Covid-19 media coverage on tourist's awareness for future travelling. *Current Issues in Tourism*, 1-8.
- Chen, C. C., Lai, Y. H. R., Petrick, J. F., & Lin, Y. H. (2016). Tourism between divided nations: An examination of stereotyping on destination image. *Tourism Management*, 55, 25-36.
- Chew, E. Y. T., & Jahari, S. A. (2014). Destination image as a mediator between perceived risks and revisit intention: A case of post-disaster Japan. *Tourism Management*, 40, 382-393.
- Chiang, M. H. (2016). Tourism Exchange between Singapore and China: Smooth Expansion and Bright Prospects. In Y. Zheng & F. L. Liang (Eds.), Singapore-China Relations 50 Years, (pp. 75-104). World Scientific.
- Crompton, J. L. (1979). An assessment of the image of Mexico as a vacation destination and the influence of geographical location upon that image. *Journal of Travel Research*, 17(4), 18-23.
- Echtner, C. M., & Ritchie, J. B. (1993). The measurement of destination image: An empirical assessment. *Journal of Travel Research*, 31(4), 3-13.

- Fennell, D. A. (2017). Towards a model of travel fear. Annals of Tourism Research, 66, 140-150.
- Gartner, W. C. (1994). Image formation process. *Journal* of Travel & Tourism Marketing, 2(2-3), 191-216.
- Gössling, S., Scott, D., Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 1-20.
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Press.
- Hb.ifeng.com 鳳凰網湖北. (2009, January 30).

  Zhongguo lvyou xiaofei dashuju baogao 2018
  chulu: Wuhan ren lvyou xiaofei pai disi [China's tourism expense big data report 2018 is out:
  Wuhan residents rank number four]. Retrieved from
  - http://hb.ifeng.com/a/20190130/7196769\_0.shtml
- Hooper, D., Coughlan, J., Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53-60.
- Hu, L. T. and Bentler, P. M. (1999). Cut-off Criteria for Fit Indices in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. Structural Equation Modeling, 6 (1), 1-55.
- Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research*, 9(4), 233-242.
- Lam, T., & Hsu, C. H. (2006). Predicting behavioral intention of choosing a travel destination. *Tourism management*, 27(4), 589-599.
- Law, R. (2006). The perceived impact of risks on travel decisions. International Journal of Tourism Research, 8(4), 289-300.
- Lee, C. K., Song, H. J., Bendle, L. J., Kim, M. J., & Han, H. (2012). The impact of non-pharmaceutical interventions for 2009 H1N1 influenza on travel intentions: A model of goal-directed behavior. *Tourism Management*, 33(1), 89-99.
- Lee, H. Y. (2020, February 18). Singapore and Coronavirus: Small State, Global Crisis. The Diplomat. Retrieved from https://thediplomat.com/2020/02/singapore-and-coronavirus-small-state-global-crisis/.
- Leppin, A., & Aro, A. R. (2009). Risk perceptions related to SARS and avian influenza: theoretical foundations of current empirical research. *International Journal of Behavioral Medicine*, 16(1), 7-29.

- Leung, G. M., Lam, T. H., Ho, L. M., Ho, S. Y., Chan, B. H. Y., Wong, I. O. L., & Hedley, A. J. (2003) The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. *Journal of Epidemiology & Community Health*, *57*(11), 857-863.
- Li, F., Wen, J., & Ying, T. (2018). The influence of crisis on tourists' perceived destination image and revisit intention: An exploratory study of Chinese tourists to North Korea. *Journal of Destination Marketing & Management*, 9, 104-111.
- Li, S. R., & Ito, N. (2021). "Nothing Can Stop Me!" Perceived Risk and Travel Intention Amid the COVID-19 Pandemic: A Comparative Study of Wuhan and Sapporo. In W. Wörndl et al. (Eds.), Information and Communication Technologies in Tourism 2021 (pp. 490-503). Springer.
- Ma, Y. (2020, November 17). *Tourism industry in China statistics & facts*. Statista. Retrieved from https://www.statista.com/topics/1210/tourism-ind ustry-in-china/#dossierSummary
- Mansfeld, Y. (2006). The role of security information in tourism crisis management: The missing link. In Y. Mansfeld, & A. Pizam (Eds.), *Tourism, security & safety: From theory to practice*, (pp. 271-290). Elsevier.
- McKercher, B. (2003). SIP (Sars induced Panic) a greater threat to Tourism than Sars (Severe acute respiratory Syndrome. *E-Review of Tourism Research (ERTR)*, 1(1), 17-18.
- Novelli, M., Burgess, L. G., Jones, A., Ritchie, B. W. (2018). 'No Ebola··· still doomed'-The Ebola-induced tourism crisis. *Annals of Tourism Research*, 70, 76-87.
- Perpiña, L., Prats, L., & Camprubí, R. (2020). Image and risk perceptions: an integrated approach. *Current Issues in Tourism*, 1-18.
- Pike, S., Ryan, C. (2004). Destination positioning analysis through a comparison of cognitive, affective, and conative perceptions. *Journal of Travel Research*, 42(4), 333-342.
- Qi, C. X., Gibson, H. J., & Zhang, J. J. (2009). Perceptions of risk and travel intentions: The case of China and the Beijing Olympic Games. *Journal* of Sport & Tourism, 14(1), 43-67.
- Qu, H., Kim, L. H., & Im, H. H. (2011). A model of destination branding: Integrating the concepts of the branding and destination image. *Tourism management*, 32(3), 465-476.
- Reisinger, Y., & Mavondo, F. (2005). Travel anxiety and

- intentions to travel internationally: Implications of travel risk perception. *Journal of Travel Research*, 43(3), 212-225.
- Ren, S. Y., Gao, R. D., & Chen, Y. L. (2020). Fear can be more harmful than the severe acute respiratory syndrome coronavirus 2 in controlling the corona virus disease 2019 epidemic. *World Journal of Clinical Cases*, 8(4), 652.
- Rittichainuwat, B. N. and Chakraborty, G. (2009). Perceived travel risks regarding terrorism and disease: The case of Thailand. *Tourism Management*, 30(3), 410-418.
- Roehl, W. S., & Fesenmaier, D. R. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel Research*, 30(4), 17-26.
- Russell, J. A., Ward, L. M., & Pratt, G. (1981). Affective quality attributed to environments: A factor analytic study. *Environment and Behavior*, 13(3), 259-288.
- Schroeder, A., & Pennington-Gray, L. (2014). Perceptions of crime at the Olympic Games: What role does media, travel advisories, and social media play?. *Journal of Vacation Marketing*, 20(3), 225-237.
- Sigala, M. (2020). Tourism and COVID-19: impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312-321.
- Singapore Tourism Board. (2020). *Tourism Sector Performance Q4 2019 Report*. Retrieved from https://www.stb.gov.sg/content/dam/stb/document s/statistics-marketing-insights/Quarterly-Tourism-Performance-Report/STB%20Q4%202019%20F A%20v7.pdf
- Sönmez, S. F., & Graefe, A. R. (1998). Determining future travel behavior from past travel experience and perceptions of risk and safety. *Journal of Travel Research*, 37(2), 171-177.
- TechWeb (2020, October 19). Baidu guoqing sousuo dashuju: Guoneiyou xiangguan sousuo tongbi shangzhang 4149% [Baidu national da online search big data: Domestic tourism related searches increased 4149%]. Retrieved from http://www.techweb.com.cn/news/2020-10-09/28 06418.shtml
- UNWTO. (2020). Impact Assessment of the COVID-19
  Outbreak on International Tourism. Retrieved
  from
  - https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism.

- Wen, J., Aston, J., Liu, X., Ying, T. (2020). Effects of misleading media coverage on public health crisis: a case of the 2019 novel coronavirus outbreak in China. *Anatolia*, 1-6.
- WSJ. (2020, October 17). Wuhan, Former Pandemic Center, Emerges as Tourist Hot Spot [Video]. Retrieved from https://www.wsj.com/video/wuhan-former-pande mic-center-emerges-as-tourist-hot-spot/4111219F-BE6A-42B7-A7F7-E47977969A8B.html
- Yang, S., Isa, S. M., Ramayah, T. (2021). How Are

- Destination Image and Travel Intention Influenced by Misleading Media Coverage? Consequences of COVID-19 Outbreak in China. *Vision*, 1-10.
- Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in quantitative methods for psychology*, 9(2), 79-94.
- Yu, M., Li, Z., Yu, Z., He, J., Zhou, J. (2020) Communication related health crisis on social media: a case of COVID-19 outbreak. *Current Issues in Tourism*, 1-7.

## MORTALITY SALIENCE AND PREFERENCE FOR HUMANOID SERVICE ROBOT

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## INTRODUCTION

Service robots are defined as "system-based autonomous and adaptable interfaces that interact, communicate. and deliver service organization's customers" (Wirtz, Patterson, Kunz, Gruber, Lu, Paluch, & Martins, 2018, p. 909). Service robots have been regarded as important elements to facilitate the frontline service process (Ivanov, Webster, & Garenko, 2018). The current worldwide pandemic also encourages the adoption of service robots in the tourism and hospitality industry to reduce interpersonal interactions and lower the risk of virus transmission (Wan, Chan, & Luo, 2020). Undoubtedly, the implementation of service robots serves as an effective strategy to help the industry to get through difficult times.

In fact, many hospitality and tourism industries adopt humanoid service robots (HSR) to serve their customers. Some researchers have demonstrated that to facilitate the interaction between humans and robots, the anthropomorphic features of the service robot, either in form or behavior, are necessary (Duffy, 2003). In part, this is because that consumers generally perceived humanoid (vs. non-humanoid) service robots to have more warmth attributes (Kim, Schmitt, & Thalmann, 2019; Tussyadiah & Park, 2018), and warmth perception of service providers will positively affect service satisfaction (Smith, Martinez, & Sabat, 2016).

However, we argue that consumers/tourists may react negatively to humanoid service robots during a pandemic. Humanoid robots may elicit uncomfortable feelings and threaten human identity (Mende, Scott, van Doorn, Grewal, & Shanks, 2019). Therefore, we propose that when tourists/consumers experience mortality salience (e.g., the surge of death cases of Covid-19), they

would be more reluctant to adopt the services provided by humanoid service robots. However, when the mortality experience is less salient, tourists/consumers would react more positively to humanoid (vs. non-humanoid) robots.

According to Terror Management Theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991), mortality threat will motivate people to protect and defend themselves from outside insecurity. Note that humanoid service robots would generate insecurity feelings to tourists/consumers because of their human-like appearance. The appearance of humanoid service robots would challenge the uniqueness of humans and then produce existential anxiety. Hence, tourists/consumers would react negatively towards humanoid service robots and less likely to choose the services provided by these robots.

## **METHOD**

In an experimental study, a total of 308 participants (53.2% Male,  $M_{age}$ =39.65 years) were recruited from MTurk and randomly assigned into a 2 (mortality salience: low vs. high) x 2 (service robot: humanoid non-humanoid) VS. between-subjects experiment design. Firstly, participants were told that they would finish two unrelated studies. In the first one, participants were randomly assigned to write about two distinctive life experiences: mortality salience or a typical day (control). Then, they answered the manipulation check questions (3 items; a 10-point scale), adapted from the literature (Rindfleisch, Burroughs, & Wong, 2009;  $\alpha$ =.93). In the second study, participants were indicated to imagine that they will travel to Japan and they are now booking a robot-staffed restaurant, in which the robot is used

on providing food ordering and delivery service. Then they were shown a picture with one of the two service robots (humanoid vs. non-humanoid). After reading the scenario, participants are directed to answer questions (5 items; a 10-point scale) measuring their preference for the restaurant (e.g., You would choose the restaurant in the future; 1=totally disagree, 10=totally agree; α=.97), adapted from the literature (Lee, Shrum, & Yi, 2017). Next, they rate the human-likeness of the robot by a 6 item on a 10-point scale (e.g., The appearance of this service robot looks like a human; Mende, et. 2019:  $\alpha = .93$ ). Finally, they finished demographic questions and were dismissed.

## **FINDINGS**

## Manipulation checks.

The manipulation of mortality salience was successful. Participants in mortality salience conditions indicated a higher perception of mortality

threat (M=5.98) than those in the control condition (M=5.28; F(1,304)=4.26, p<.05). The manipulation of robot appearance was also successful. Participants rated the humanoid robot (M=7.27) higher in human-likeness than its counterpart (M=3.29; F(1,304)=364.83, p<.00).

Preference. A 2 (mortality salience: low vs. high) X 2(service robot: humanoid VS non-humanoid) **ANOVA** indicated only significant interaction effect (F(1,304)=11.95,p < .01). Specifically, participants in low mortality salience condition were more likely to choose the restaurant with a humanoid robot (M=6.60,SD=2.29) than the restaurant with a non-humanoid robot(M=5.56, SD=2.61; F(1,304)=7.40, p<.01); On the contrary, participants in high mortality salience condition preferred the restaurant with non-humanoid robot (M=6.55, SD=2.11) than that with a humanoid robot (M=5.72, SD=2.51; F(1,304)=4.70, p<.05) (see Figure 1).

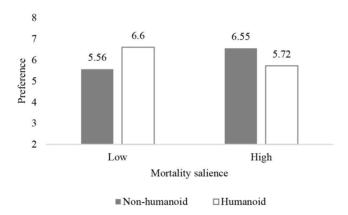


Figure 1. The Influence of Mortality Salience on Preference for HSR

## CONCLUSION

Previous literature emphasizes that humanoid robots will induce warmth perception (Kim, et. al, 2019), and then facilitate positive marketing outcomes. However, we suggest that tourists/consumers experiencing mortality salience will prefer to interact with non-humanoid robots than humanoid robots. More experiments and field studies will be conducted to reveal the underlying mechanisms and boundary conditions in the future.

Our results provided practical implications in

terms of humanoid robots' adoption under special situations (e.g., epidemic outbreak). Marketers should aware that when people experience mortality salience or capture morality cues, adopting a humanoid robot to substitute human service providers won't be a good choice. Instead, they should adopt a service robot with a less human-like appearance to avoid negative responses.

## REFERENCES

Bonsu, S. K., & Belk, R. W. (2003). Do not go cheaply

into that good night: Death-ritual consumption in Asante, Ghana. *Journal of Consumer Research*, 30(1), 41-55.

- Duffy, B. R. (2003). Anthropomorphism and the social robot. *Robotics and autonomous systems*, 42(3-4), 177-190.
- Ivanov, S., Webster, C., & Garenko, A. (2018). Young Russian adults' attitudes towards the potential use of robots in hotels. *Technology in Society*, 55, 24-32.
- Kim, S. Y., Schmitt, B. H., & Thalmann, N. M. (2019). Eliza in the uncanny valley: Anthropomorphizing consumer robots increases their perceived warmth but decreases liking. *Marketing letters*, 30(1), 1-12.
- Lee, J., Shrum, L. J., & Yi, Y. (2017). The role of cultural communication norms in social exclusion effects. *Journal of Consumer Psychology*, 27(1), 108-116.
- Mende, M., Scott, M. L., van Doorn, J., Grewal, D., & Shanks, I. (2019). Service robots rising: How humanoid robots influence service experiences and elicit compensatory consumer responses. *Journal* of Marketing Research, 56(4), 535-556.
- Riley Jr, J. W. (1983). Dying and the meanings of death: Sociological inquiries. *Annual Review of Sociology*, *9*(1), 191-216.

- Rindfleisch, A., Burroughs, J. E., & Wong, N. (2009). The safety of objects: Materialism, existential insecurity, and brand connection. *Journal of Consumer Research*, 36(1), 1-16.
- Smith, N. A., Martinez, L. R., & Sabat, I. E. (2016). Weight and gender in service jobs: The importance of warmth in predicting customer satisfaction. *Cornell Hospitality Quarterly*, *57*(3), 314-328.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. *Advances in experimental social psychology*, 24, 93-159.
- Tussyadiah, I. P., & Park, S. (2018). Consumer evaluation of hotel service robots. In *Information and communication technologies in tourism 2018* (pp. 308-320). Springer, Cham.
- Wan, L. C., Chan, E. K., & Luo, X. (2020). ROBOTS COME to RESCUE: How to reduce perceived risk of infectious disease in Covid19-stricken consumers?. Annals of Tourism Research.
- Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave new world: service robots in the frontline. *Journal of Service Management*.

## CAN GRATITUDE CHANGE RESIDENTS' ATTITUDES TOWARDS TOURISM? A CASE STUDY OF WUHAN, CHINA

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## INTRODUCTION

Residents' attitude towards tourism has been one of the most concerning topics among tourism academia (McGehee & Andereck, 2004). Residents of tourist destinations play different roles in tourism settings. They are both the recipients and the participants of tourism services, and are also important tourism stakeholders. Residents' support is, therefore, considered one of the most critical determinants of successful sustainable tourism development (Sharma, Dyer, Carter, & Gursoy, 2008; Nunkoo, Smith, & Ramikissoon, 2013). A significant number of studies (Ap. 1992; Andereck & Vogt, 2000) have been devoted to explain how residents are evolved and reflected in prospective or developed tourism destinations. Yet, despite the study of attitude (Doxey, 1975; Bulter, 1980) towards tourism development was starting early, little research has been concerned with its changes over time.

Another neglected area is the research of emotion on residents' attitude toward tourism. The prevalent literature explains residents' attitude by social exchange theory. Residents, as rational decision-makers, evaluate tourism development based on the costs and benefits (Gursoy, Jurowski, & Uysal, 2002; Andereck, Valentine, Knopf, & Vogt, 2005). In fact, the role of emotions is ubiquitous during the exchange process (Lawler & Thye, 1999) and can influence residents' attitudes and behavior toward tourism. However, the research of emotion on residents' attitude is limited to a few emotions, including stress (Jordan, Spence, & Prayag, 2019), social emotion (Zheng, Liang, & Ritchie, 2020), and yet to be further explored.

Considering the research gap, the aim of this research is to examine the role of gratitude in the residents' attitude change towards development. Gratitude, among other emotions, is considered as the emotional core of reciprocity (Emmons & Mccullough, 2004) and is resulted from an involuntary emotional response when uncommon disasters hit a region and residents received help and support from others. Gratitude is regarded as a direct reciprocation of kindness in psychology literature, and it has been proven that it results in altruistic behavior towards others (McCullough, Kimeldorf, & Cohen, 2008). It is thus anticipated that gratitude will play an important role in attitude formation of residents who have experienced unexpected challenging situations such as the COVID-19 pandemic. In fact, gratitude is one of the most frequent emotions in psychological reactions to COVID-19 (Lwin, Lu, Sheldenkar, Schulz, Shin, Gupta, & Yang, 2020; El-Awaisi, O'Carroll, Koraysh, & Huber, 2020). It might be more important than ever to investigate the role of gratitude in studying residents' attitudes, especially for those in COVID-ravaged cities.

The pandemic is considered as the moment of reconsidering tourism development (Gössling, Scott, & Hall, 2020). While the pandemic has renewed research interests of effects of crises on tourism, academia has tended to research from demand and business supply perspectives (Sigala, 2020; Fotiadis, Polyzos, & Huan, 2021; Kock, Nørfelt, Josiassen, Assaf, & Tsionas, 2020). However, research on residents' attitude change after the pandemic outbreak is important and much-needed for maintaining and revitalizing tourism (Kamata, 2021; Joo, Xu, Lee, Lee, &

Woosnam,2021). Destination Management Organizations (DMO) need to understand how resident's attitude change towards tourism in order to formulate strategies of recovery during and after the pandemic (Qiu, Park, Li, & Song, 2020; Kamata, 2021).

Accordingly, the purpose of the study is to examine 1) how residents' attitude changed between before and after the pandemic outbreak; and 2) the role of gratitude in supporting tourism since the pandemic. For the empirical study, a survey of residents of Wuhan, China, which is one of the most influenced cities by the pandemic was conducted. The findings will contribute to the increasing research on the impacts of positive emotion on residents' attitude and crisis management. In practically, the results would provide enhanced understandings of residents' attitude change to help DMO develop recovery strategy and promote sustainable tourism.

## **METHOD**

The city of Wuhan, China, the first city suffered from the pandemic, was chosen as a case study city, and a survey method was applied for the study. Since cross-provincial mobility restriction eased by Chinese government, Wuhan tourism authority has started a gratitude-themed tourism promotion campaign. Travel agencies in Hubei province have received 15.3 million group tourists as of December 13, 2020 (Hubei Daily, 2020). Given this situation, Wuhan would be the best setting to test how gratitude changed the residents' attitudes towards tourism. Data collection was done during February and March 2021. The target population was current residents of Wuhan City who have lived there for over one year. A quota sampling by gender and age group was applied to the selection of sample to represent the citizen of Wuhan better. As a result of an on-line survey, a total number of 270 responses was obtained.

This research adopted the concept of gratitude, perceived damage and support, and attitude toward tourism in order to explore the relationship between gratitude and residents' attitude. Gratitude was measured by using

McCullough's (2002) 6-item scale of Gratitude. Perceived damage was measured by items for self-perceived damage, if life was threatened, financial loss, and risk of exposure (Miao, Zeng, & Shi, 2021). Perceived support was measured by items to ask self-perceived support, quantity, and sources of support, including tangibles support, information support, and emotional support (Dakof &Taylor, 1990). The six items with higher factor loading from Tourism Impact Attitude Scale (Wang & Pfister, 2008) was used to measure respondents' attitude toward tourism's contribution to city and support for tourism development. Residents' attitude towards tourism development before and after the pandemic outbreak was measured respectively by retrospective pretest-posttest (RPP) method. The RPP method is used to collect retrospective pretest and current data as posttest at one time. The RPP method encouraged greater usage than the traditional pretest-posttest design because it reduced bias and its sensitivity to true change effects (Little, Chang, Gorrall, Waggenspack, Fukuda, Allen, & Noam, 2020).

Data analysis began with the descriptive analysis and paired sample t-test to identify the attitude change before and after the pandemic outbreak. Structural equation modelling (SEM) then used to analyze attitude change affected by the gratitude.

## **FINDINGS**

Attitude change before and after COVID-19. In this study, residents' attitudes to the tourism development have been measured both before the pandemic and after the pandemic. A paired samples t-test demonstrated that respondents significantly changed their attitude after COVID-19 outbreak. More specifically, both the mean scores of contribution to city (M=6.02) and support for tourism development (M=6.18) after the COVID-19 outbreak is significantly higher than the scores (5.62 and 5.71, respectively) before the COVID-19 outbreak. The result (see Table 1) indicates that residents hold a more positive attitude towards tourism after the COVID-19 outbreak.

	Mean		4	G:_
	Before	After	_ ι	Sig.
Contribution to City	5.62	6.02	7.642	.000
Support for Tourism Development	5.71	6.18	8.149	.000

Table 1. Attitude towards tourism before and after COVID-19 outbreak

## Structural model of gratitude and tourism attitude.

A change score analysis was conducted, with attitude change (i.e., attitude toward tourism after COVID-19 outbreak minus attitude before the outbreak) as the outcome variable and attitude before COVID-19 outbreak as baseline measurement. The model took covariation between the latent baseline and change variables. The values of model fit indices  $\chi^2/df$ , CFI, AGFI, and RMSEA are 1.804, .953, .860, and .055, respectively. Even though the value of AGFI does not exceed 0.9, it still meets the requirement suggested by MacCallum & Hong (1997). The results (see Figure 1) indicates that perceived support is directly related to gratitude. The more support perceived is associated with higher levels of gratitude ( $\beta$ =.23; p=.002), and it was related to the level of perceived damage. The direct effect ( $\beta$ =.18; 95% CI=-.018, .382) and indirect effect ( $\beta$ =.06; 95% CI=.021, .142) of perceived damage on gratitude indicate that perceived damage impacts gratitude through perceived support, but the damage is not directly influencing the level of gratitude. In other words, the results suggest that perceived support fully mediates between perceived damage and the feeling of gratitude.

The effects from attitude before the COVID-19 outbreak to the attitude change in both contribution to city and support for tourism development were significant negative ( $\beta$ =-.62, -.66, p <.0001). The results indicate that when residents' attitudes before the COVID-19 are high, their attitude changes toward tourism are not likely. The level of gratitude significantly ( $\beta$ =.30, .38, p <.0001) influences the attitude change level of contribution to the city and support for tourism development.

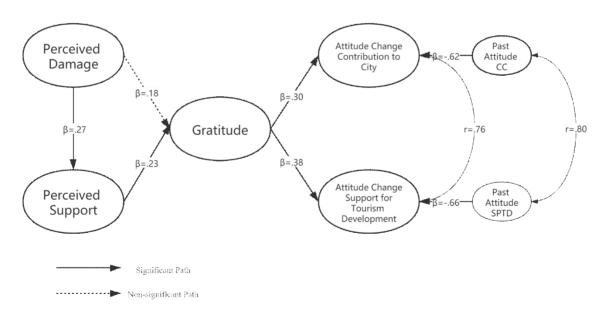


Figure 1. Results of structural model of gratitude and attitude change

## **CONCLUSION**

This study was conducted to introduce

gratitude when evaluating residents' attitudes change towards tourism development. It might be more important than ever to do this research because

all people are going through unusually challenging times. The findings of this study support the change in tourism attitude before and after the pandemic outbreak was significant, indicating a more positive attitude. Gratitude positively influences the changes of attitude toward tourism since the pandemic, in words. gratitude increased residents' perception towards tourism development. Furthermore, past attitudes influenced attitude change negatively. This result is in line with Prislin (1996) and Xu et al. (2020) provide further support that high strength attitude has the feature of stability.

With the COVID-19 vaccine widely used, reviving tourism is now within reach. It might be the best time to starting research on tourism development after the COVID-19. However, the perceived risk of infection may result in residents reject tourism. The negative attitude of residents derives from their negative assessment of the benefits and costs of tourism from social exchange theory (Joo et al., 2021). Residents' concerns about potential risks are understandable but may not be conducive to the destination development and host-guest relationship. Therefore, this research provides a silver lining perspective to improve the favorable residents' attitude, especially in the COVID-ravaged destination.

Since gratitude has a positive relationship with tourism attitude, it is important to raise residents' gratitude. This study indicated that the feeling of gratitude is not directly affected by the perceived damage, but directly influenced by the perceived support. Thus, the key to eliciting residents' gratitude is possible to remind and perceive the support they have or are receiving. Gratitude theme campaign is the most common tourism promotion in disaster-affected areas. Past research (Raggio & Folse, 2009) has proven that it can help to improve tourists' attitude towards destination and thus willing to pay more for its tourism products. The potential benefits from the thank-you-campaigns may further arouse local residents' gratitude, thereby improving their attitude towards tourism and motivating more pro-tourism behaviors.

## REFERENCES

Andereck, K. L., & Vogt, C. A. (2000). The relationship between residents' attitudes toward tourism and

- tourism development options. Journal of Travel research, 39(1), 27-36.
- Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A. (2005). Residents' perceptions of community tourism impacts. Annals of tourism research, 32(4), 1056-1076.
- Ap, J. (1992). Residents' perceptions on tourism impacts. Annals of tourism Research, 19(4), 665-690.
- Bulter, R.W. (1980). The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources. Canadian Geographer, 24 (1),5-12
- Dakof, G. A., & Taylor, S. E. (1990). Victims' perceptions of social support: What is helpful from whom?. Journal of personality and social psychology, 58(1), 80-89.
- Doxey, G. V. (1975). A causation theory visitor-resident irritants: Methodology research inferences. In Travel and tourism research associations sixth annual conference proceedings (pp. 195-198). London, LON: The Association.
- El-Awaisi, A., O'Carroll, V., Koraysh, S., Koummich, S., & Huber, M. (2020). Perceptions of who is in the healthcare team? A content analysis of social media posts during COVID-19 pandemic. Journal of Interprofessional Care, 34(5), 622-632.
- Emmons, R. A., & McCullough, M. E. (2004). The psychology of gratitude. New York, NY: Oxford University Press.
- Fotiadis, A., Polyzos, S., & Huan, T. C. T. (2021). The good, the bad and the ugly on COVID-19 tourism recovery. Annals of Tourism Research, 87, 103117.
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. Journal of Sustainable Tourism, 29(1), 1-20.
- Gursoy, D., Jurowski, C., & Uysal, M. (2002). Resident attitudes: A structural modeling approach. Annals of tourism research, 29(1), 79-105.
- Hubei Daily (2020. Dec 16). 2020 China Tourism Development Report Released in Wuhan China. Hubei Daily. https://wlt.hubei.gov.cn/bmdt/xydt/202012/t20201
- 216 3087060.shtml Joo, D., Xu, W., Lee, J., Lee, C. K., & Woosnam, K. M. (2021). Residents' perceived risk, emotional solidarity, and support for tourism amidst the

COVID-19 pandemic. Journal of Destination Marketing & Management, 19, 100553.

- Jordan, E. J., Spencer, D. M., & Prayag, G. (2019). Tourism impacts, emotions and stress. *Annals of Tourism Research*, 75, 213-226.
- Kamata, H. (2021). Tourist destination residents' attitudes towards tourism during and after the COVID-19 pandemic. *Current Issues in Tourism*, 1-16.
- Kock, F., Nørfelt, A., Josiassen, A., Assaf, A. G., & Tsionas, M. G. (2020). Understanding the COVID-19 tourist psyche: The evolutionary tourism paradigm. *Annals of tourism research*, 85, 103053.
- Lawler, E. J., & Thye, S. R. (1999). Bringing emotions into social exchange theory. *Annual review of sociology*, 25(1), 217-244.
- Little, T. D., Chang, R., Gorrall, B. K., Waggenspack, L., Fukuda, E., Allen, P. J., & Noam, G. G. (2020). The retrospective pretest–posttest design redux: On its validity as an alternative to traditional pretest–posttest measurement. *International Journal of Behavioral Development*, 44(2), 175-183.
- Lwin, M. O., Lu, J., Sheldenkar, A., Schulz, P. J., Shin, W., Gupta, R., & Yang, Y. (2020). Global sentiments surrounding the COVID-19 pandemic on Twitter: analysis of Twitter trends. *JMIR public health and surveillance*, 6(2), e19447.
- MacCallum, R. C., & Hong, S. (1997). Power analysis in covariance structure modeling using GFI and AGFI. *Multivariate Behavioral Research*, *32*(2), 193-210.
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: a conceptual and empirical topography. *Journal of personality and social psychology*, 82(1), 112-127.
- McCullough, M. E., Kimeldorf, M. B., & Cohen, A. D. (2008). An adaptation for altruism: The social causes, social effects, and social evolution of gratitude. *Current directions in psychological science*, 17(4), 281-285.
- McGehee, N. G., & Andereck, K. L. (2004). Factors predicting rural residents' support of tourism. Journal of travel research, 43(2), 131-140.

- Miao, J., Zeng, D., & Shi, Z. (2021). Can neighborhoods protect residents from mental distress during the COVID-19 pandemic? Evidence from Wuhan. *Chinese Sociological Review*, 53(1), 1-26.
- Nunkoo, R., Smith, S. L., & Ramkissoon, H. (2013). Residents' attitudes to tourism: A longitudinal study of 140 articles from 1984 to 2010. *Journal of Sustainable Tourism*, 21(1), 5-25.
- Prislin, R. (1996). Attitude stability and attitude strength: One is enough to make it stable. European Journal of Social Psychology, 26(3), 447-477.
- Qiu, R. T., Park, J., Li, S., & Song, H. (2020). Social costs of tourism during the COVID-19 pandemic. Annals of Tourism Research, 84, 102994.
- Raggio, R. D., & Folse, J. A. G. (2009). Gratitude works: its impact and the mediating role of affective commitment in driving positive outcomes. *Journal of the Academy of Marketing Science*, 37(4), 455-469.
- Sharma, B., Dyer, P., Carter, J., & Gursoy, D. (2008).
  Exploring residents' perceptions of the social impacts of tourism on the Sunshine Coast, Australia. *International journal of hospitality & tourism administration*, 9(3), 288-311.
- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of business research*, 117, 312-321.
- Wang, Y., & Pfister, R. E. (2008). Residents' attitudes toward tourism and perceived personal benefits in a rural community. *Journal of Travel Research*, 47(1), 84-93.
- Xu, M., Briñol, P., Gretton, J. D., Tormala, Z. L., Rucker, D. D., & Petty, R. E. (2020). Individual differences in attitude consistency over time: *The personal attitude stability scale*. *Personality and Social Psychology Bulletin*, 46(10), 1507-1519.
- Zheng, D., Liang, Z., & Ritchie, B. W. (2020). Residents' social dilemma in sustainable heritage tourism: the role of social emotion, efficacy beliefs and temporal concerns. *Journal of Sustainable Tourism*, 28(11), 1782-1804.

## THE FILIPINO MSMEs IN TIMES OF PANDEMIC: EXPERIENCES OF SMALL FAMILY OWNED AND OPERATED TRAVEL AND TOUR AGENCIES

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## INTRODUCTION

The announcement of the World Health Organization declaring the current condition that surrounds the CoViD 19 to be a pandemic called unprecedented measures from governments on travel and tourism. In the Philippines, an Enhanced Community Quarantine (ECQ) was implemented starting March 17, 2020 that halted the operations of most businesses in whole island of Luzon. While the tourism industry had been severely plagued by, and is continuously being threatened by calamities and disasters, the nature of these occurrences have been focused on specific areas, making other tourism destinations still operational. The CoViD 19 crisis on the other hand had both the local and international tourism destinations on a standstill. Travel restrictions and travel bans had been placed on most countries that are currently fighting to stop its spread.

The travel trade industry is composed of both travel agencies and tour operations in the Philippines and is mostly made up of family-owned and operated micro and small- sized businesses. With limited finances and network of support programs otherwise available for big businesses, it is one of the most vulnerable groups in the tourism sector.

This exploratory study aims to provide baseline material from the experiences of families owning and operating micro and small travel and tour agencies regarding how they cope with the ongoing crisis situation. It hopes to explore the immediate concerns of the business owners, and what strategies have they implemented that covers both business and family relationships.

## **METHOD**

Drawing on studies on crises management and

on familial culture and family entrepreneurships, this study was conducted as a case study, and adopted a qualitative approach in its data gathering and analysis.

From the survey conducted by the University of the Philippines Asian Institute of Tourism (UP-AIT) on fifty-nine travel and tour agencies affected by the pandemic, ten (10)micro-small-medium family owned and operated travel and tour agencies owners and/or managers key selected as informants for semi-structured interview that was conducted through a remote set-up.

## **FINDINGS**

Initial findings of this study altered the prototypical family business crisis-response model and revealed an integrated version of how familial dynamics was carried over the more formal and structured business axis. Correspondingly, the CoViD-19 pandemic situation presented a more challenging business ordeal for micro-small family owned and operated travel and tour agencies compared to previous calamity related problems that usually affects the travel trade businesses.

Three (3) themes have emerged as a coping mechanism ranging from trying to keep the business going despite the losses, to redirecting the tour and travel agency resources to other businesses, and lastly, to the permanent closure of the business and letting go of their employees. The Filipino culture of "kapwa", "hiya", and "awa" was an overarching condition that led to any of the three business coping strategies.

## **IMPLICATIONS**

Many of the literature on crisis adaptation and

management for travel and tour organizations have focused on managing the situation post-calamity. This study aims to present a holistic picture of the socio-economic impact on one of the most vulnerable sub-sectors in the travel and tourism industry because of its limited resources because of a pandemic with global effect. Based on the initial results, this study hopes to breach the gap in understanding how micro-small family owned travel and tour agencies approach a crisis that is not only national, but regional and global in scope and breadth. It gives a glimpse how the Filipino familial culture (pakikipag-kapwa) transcends the usual strategic business saving measures.

This study is perhaps the first of its kind in examining how family firms manage crisis of this magnitude. It still left much to be desired but it hopes to contribute to the materials documenting the experiences of Filipino families owning micro-small businesses in this time of crisis, in aid of crafting policies and programs that could better address their needs and concerns.

## REFERENCES

- Arrondo-Garcia, R., Fernandez-Mendez, C. and Menendez-Requejo, S. (206), "The growth and performance of family businesses during the global financial crisis: the role of the generation in control", *Journal of Family Business Strategy*, Vol. 7 No. 4, pp. 227-237.
- Barton, L. 1994. Crisis management: Preparing for and managing disasters. Cornell Hotel and Restaurant Administration Quarterly 35 (2): 59-65.
- Bauweraerts, J. (2013), "How do private family firms face the crisis? Empirical evidence from Belgium", *International Business Research*, Vol. 6 No. 8, p. 91.
- Berrone, P., Cruz, C. and Gomez-Mejia, L.R. (2012), "Socioemotional wealth in family firms: theoretical dimensions, assessment approaches, and agenda for future research", *Family Business Review*, Vol. 25 No. 3, pp. 258-279.
- Bundy, J., Pfarrer, M.D., Short, C.E. and Coombs, W.T. (2017), "Crises and crisis management: integration, interpretation, and research development", *Journal of Management*, Vol. 43 No. 6, pp. 1661-1692.
- Carney, M. (2005), "Corporate governance and competitive advantage in family-controlled firms",

- *Entrepreneurship: Theory and Practice*, Vol. 29 No. 3, pp. 249-265.
- Cater, J. and Schwab, A. (2008), "Turnaround strategies in established small family firms", *Family Business Review*, Vol. 21 No. 1, pp. 31-50.
- Eisenhardt, K.M. (1989), "Building theories from case study research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532-550.
- Eisenhardt, K.M. and Graebner, M.E. (2007), "Theory building from cases: opportunities and challenges", *Academy of Management Journal*, Vol. 50 No. 1, pp. 25-32.
- Faulkner, B. (2001), "Towards a framework for tourism disaster management", *Tourism Management*, Vol. 22 No. 2, pp. 135-147.
- Ghaderi, Z., Som, A.P.M., Wang, J. (2014), "Organizational learning in tourism crisis management: experience from Malaysia", *Journal of Travel & Tourism Marketing*, Vol 31 No 5, pp. 627-648.
- Gurtner, Y. "Returning to paradise: Investigating issues of tourism crisis and disaster recovery on the island of Bali", *Journal of Hospitality and Tourism Management*, Vol 28, pp. 11-19.
- Herbane, B. (2013), "Exploring crisis management in UK small-and medium-sized enterprises", *Journal of Contingencies and Crisis Management*, Vol. 21 No. 2, pp. 82-95.
- Hu, C. and Racherla, P. (2009), "A framework for knowledge-based crisis management in the tourism and hospitality industry", Cornell Hospitality Quarterly, doi:10.1177/1938965509341633
- Jiang, Y., & Ritchie, B. W. (2017). Disaster collaboration in tourism: Motives, impediments and success factors. *Journal of Hospitality and Tourism Management*, Vol 31, pp. 70–82.
- Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *International Journal of Tourism Research*, Vol 21, No 6, pp. 882–900.
- Khazai, B., Mahdavian, F. and Platt, S. (2018), "Tourism Recovery Scorecar (TOURS) benchmarking and monitoring progress on disaster recovery in tourism destinations", *International Journal of Disaster Risk Reduction*, Vol 27, pp. 75-84.
- Mair, J., Ritchie, B.W. and Walters, G. (2014), "Towards a research agenda for post-disaster and post-crisis recovery strategies for tourism destinations: a narrative review", *Current Issues in Tourism*, Vol

- 19, No 1, pp. 1-26.
- McKercher, B., & Chon, K. (2004). The over-reaction to SARS and the collapse of Asian tourism. *Annals of Tourism Research*, Vol 31, No 3, pp. 716–719.
- McKibbin, W.J. and Fernando, R. (2020), *The Global Macroeconomic Impacts of COVID-19: Seven Scenarios*, Brookings Institution, Washington, DC.
- Minichilli, A., Brogi, M. and Calabr o, A. (2016), "Weathering the storm: family ownership, governance, and performance through the financial and economic crisis", *Corporate Governance: An International Review*, Vol. 24 No. 6, pp. 552-568.
- Pforr, C. and Hosie, P. (2008), "Crisis management in tourism", Journal of Travel & Tourism Marketing, Vol 23, pp. 249-264.
- Ritchie, B.W. (2004), "Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry", *Tourism Management*, Vol. 25

- No. 6, pp. 669-683.
- Santana, G. (2008), "Crisis Management and Tourism", *Journal of Travel & Tourism Marketing*, doi: 10.1300/J073v15n04-05
- Sausmarez, N. (2007), "Crisis Management for the tourism sector: Preliminary considerations in policy development". Tourism Hospitality Planning & Development,
  - doi: 10.1080/1479053042000251070
- Wenzel, M., Stanske, S. and Lieberman, M.B. (2020), "Strategic responses to crisis", *Strategic Management Journal*, doi: 10.1002/smj.3161.
- Yeh, S. (2020), "Tourism recovery strategy againsts COVID-19 pandemic", *Tourism Recreational Research*, doi:10.1080/02508281.2020.18055933
- Yin, R.K. (2017), Case Study Research and Applications: Design and Methods, Sage Publications, Thousand Oaks, CA.