

COVID-19 in Singapore and New Zealand: Newspaper portrayal, crisis management[☆]

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ABSTRACT

News frames influence destination reputation. Research primarily focuses on social media impact relative to destination reputation. Newspaper reporting is a major source of information which remains a study area underexplored when assessing news media framing. This study fills the gap by analyzing how newspapers from tourist generating countries such as China, USA, and Australia portrayed reputable destinations like New Zealand's and Singapore's efforts to mitigate the COVID-19 pandemic. The ProQuest library database was used to collect 192 newspaper articles. The software Qualtrics Text iQ and Leximancer were used to track sentiments, identify themes and concepts correlating with literature on tourism crisis management. Responses to the COVID-19 pandemic yields a negatively lower sentiment value for New Zealand, than Singapore's higher sentiment value. The contribution lies in the relationship concept emphasizing shifts in destination reputation corollary to crisis management, and to account for reputation fluctuations in media framework theory.

1. Introduction

An opinion column in the *South China Morning Post* newspaper reads:

Singapore was held up as the gold standard for virus containment, but it has proved to be hollow. The pandemic has exposed the cramped and dirty dormitories provided to migrant workers in Singapore, which enabled COVID-19 to breed and spread rapidly (De Kressal, 2020).

Another opinion column in the *Time* magazine reads:

But New Zealand's rise in the rankings is so much more than good geographic fortune...the orderly way which New Zealand did so was admirable, accompanied by Facebook Live videos by the country's Prime Minister, Jacinda Adern. Now the country is COVID-19 free (Bremmer, 2020).

These types of readings reflect the sentiments expressed in the newspapers as the pandemic crisis waxed and waned after January 2020. The praise of one tourist destination and the astonishment in the other's failure to contain the COVID-19 pandemic does clearly indicate a

sentiment based on the mitigation efforts. This is even more true during a health-related crisis such as COVID-19 that exposes tourists' lives to risk and uncertainty.

To understand the relationship between media reporting of a destination's crisis management approach and the destination's reputation that such reporting creates, we selected two popular tourist destinations, New Zealand and Singapore, during the COVID-19 pandemic. New Zealand has witnessed a steady increase in tourist arrivals, with over 3.8 million in 2019 (MBIE, 2018; Stats, 2019). In fact, just before COVID-19 took a pandemic turn, New Zealand's Ministry of Business, Innovation and Employment (2018) forecasted 5.1 million visitors by 2024 representing 34.21% increase. From the beginning, the country had very few infections and seemed to be able to control the outbreak well. In fact, it was one of the first countries to respond swiftly to the crisis by controlling tourist arrivals, and by April, they were already emerging out of the crisis whereas the rest of the world, Singapore included, was still struggling to contain the virus.

Singapore, on the other hand, has enjoyed a flourishing tourism industry with its reputation as a clean and green city-state with numerous man-made attractions, low crime, and glitzy tourist landscape. Despite

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its small size and contrived tourist attractions, the island received over 19 million visitors in 2019, and an estimated 40–50 million transit travelers, earning more than US\$19 billion (Chee, Xin, & Busch, 2020; Ramachandani, 2019). Initially it seemed to be able to control the outbreak of infections, unlike other countries where the number of infections sky-rocketed within a short time. However, Singapore was very slow to respond, and even advised its citizens not to wear a face mask when the rest of the world was scrambling to manufacture and import the item due to global shortage, and as a result, the infection rate shot through the roof and no one talked about the island state bearing the “Gold Standard” after a while. As at April, it had one of the highest infection rates in Asia.

Media reporting can positively or negatively shape a tourist destination’s image (Govers, Go, & Kumar, 2016; La et al., 2020; Wang, Irwin, Cooper, & Srivastava, 2015), and this can be in an organic or an induced manner (Hanlan & Kelly, 2005; Mercille, 2005; Wang, Irwin, et al., 2015). Moreover, media reporting can also strongly influence the perception of prospective tourists (Crouch, Jackson, & Thompson, 2005; Santic, Bevanda, & Bijaksic, 2016). Recent studies have analyzed the implications of media portrayals on the destination’s image in times of sustained crisis (Glyptou, 2020; Kislali, Kavaratzis, & Saren, 2019). These studies present a long-term perspective that links the media images to prospective visitors’ travel intentions. However, what remains underexplored is how short-term fluctuations in media portrayal are correlated with the way a destination adopts mitigating measures in a period of crisis.

Studying and tracking sentiments on destinations’ crisis management approaches provide useful data for policymakers regarding the destination’s reputation and mitigation strategies. Given the influential role of the media, it is important for policymakers in destination countries to pay attention to how mass media, other than social media, particularly from such tourist-generating countries as the United States, China, and Australia, frame a specific destination’s image (Altheide, 2020; Garfin, Silver, & Holman, 2020; Loxton et al., 2020; McCauley, Minsky, & Viswanath, 2013; Smith et al., 2013). Newspapers are digitally accessible and information dissemination is instantaneous, therefore media can affect the organic image of destinations (La et al., 2020). Unlike studies that measured tourists’ perceptions of travel destinations (e.g., Glyptou, 2020; Parrey, Hakim, & Rather, 2019; Wang, Xue, Wang, & Wu, 2020; Wu & Shimizu, 2020), this study examines the portrayals of prospective tourist destinations’ crisis management approaches by newspapers from tourist-generating countries.

We examine newspapers dynamic portrayal from tourist generating countries such as Australia, China, and the USA corollary to the crisis management at prospective travel destinations, New Zealand and Singapore. There exists a gap on studies that actually review news media framing in relation to the sentiments expressed about destination countries’ crisis management strategies (Chaulagain, Wiitala, & Fu, 2019; Glyptou, 2020; Kislali et al., 2019; Liu, Li, Yen, & Sher, 2018). In another words, as a consequence of the crisis management efforts, the newspaper reports portrays the destination in either a positive or negative light.

In the survey of existing literature, the focus is on news media frames of destinations during a crisis. Tourist’s perception of destinations safety is an area much studied and most of the research are based on social media (Chaulagain et al., 2019; Govers et al., 2016; Liu et al., 2018; Mizrachi & Fuchs, 2016; Zhai, Luo, & Wang, 2020) rather than newspaper reports (e.g., Chen, Huang, & Li, 2020; Zou & Meng, 2020). Hence, the literature leads us to this research endeavor to investigate news media framing during a pandemic crisis. The methods sections explain the use of word clouds, sentiments analysis, and the purpose of tracking newspaper portrayal to COVID-19 infection rates. A conceptual framework is derived from the findings that expresses the dynamic relationship between newspapers’ sentiments portrayed in a fast-encompassing COVID-19 pandemic that threatens the viability of travel destinations and the mitigation strategies adopted by Singapore

and New Zealand.

2. Literature review

Organic, induced, and autonomous sources of information as secondary images influence the perceived destination image (Frias, Rodriguez, Castaneda, & Buhalis, 2012; Phelps, 1986). Health risks are one of the major travel risks (Jonas, Mansfeld, Paz, & Potasman, 2011) that influence the destination’s reputation. For instance, the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 created a negative destination image for Thailand, leading to a sharp decline in the number of travelers to Southeast Asian countries (Promsivapallop & Kannaovakun, 2017). The Ebola outbreak also led to less travel booking in Ebola-free destinations in West Africa (Mizrachi & Fuchs, 2016). Mizrachi and Fuchs (2016) analyzed travelers’ online discussions on TripAdvisor associated with the Ebola outbreak as well as the management strategies.

Tourist perception of destination safety is a multidimensional construct (Promsivapallop & Kannaovakun, 2017) composed of functional, financial, health, physical, political, psychological, satisfaction, social, terrorism, and time factors (Chew & Jahari, 2014; Lepp & Gibson, 2003). Travel decisions are emotional and based on needs fulfillment (Japutra & Keni, 2020; Ribeiro, Woosnam, Pinto, & Silva, 2018). People with a motivation to travel may seek information that is relevant to their travel needs from sources such as friends and relatives, travel guidebooks, television travel channels, the Internet, and print and digital newspapers (Chiang, Manthiou, Tang, Shin, & Morrison, 2014; Ho, Lin, Yuan, & Chen, 2016; Yeoman & McMahan-Beattie, 2006). Crisis management and media portrayal are two significant areas that can further our understanding of the destination’s reputation during a crisis.

2.1. Crisis management and news media

The Asia-Pacific Travel Association (PATA) defines the tourism crisis as “any natural or man-made disaster that has the potential to affect the tourism industry” (Simone, 2007). A health crisis certainly affects the flow of tourists into affected destinations (Mizrachi & Fuchs, 2016; Mohammed & Tarik, 2020). Apart from findings on the impact of a crisis on tourists (Ritchie and Jiang, 2019) behavior and destination image (Wu & Shimizu, 2020), the literature has also addressed how different strategies have been applied with preparations for post-crisis development (Clark, 2016; Varelas & Apostolopoulos, 2020; Yeh, 2020). For example, businesses in Greece’s hospitality industry introduced some mitigating measures against the impact of Covid-19. However, the research findings by Varelas and Apostolopoulos (2020) revealed that a larger number of smaller hospitality businesses were unaware or unprepared to adopt significant or effective strategies. Crisis management in tourism research has been studied in terms of post-crisis impact (Perles-Ribes, Ramón-Rodríguez, Moreno-Izquierdo, & Torregrasa Martí, 2018; Perles-Ribes, Ramón-Rodríguez, Rubia-Serrano, & Moreno-Izquierdo, 2016), policy approaches (Cakar, 2018) and preparedness (Mikulić, Sprčić, Holiček, & Prebežac, 2018).

The news media’s depiction of a crisis can also suddenly affect a destination’s pronounced image. Crisis communication and control is one of the important issues within the area of crisis management. The important role of media in disseminating information during a crisis highlights the need for a crisis communication strategy (Zhai et al., 2020). According to Avarham (2013) Middle Eastern countries used three media strategies which uses source, message, and audience to repair the negative destination images arising from the Arab Spring uprising. In a study employing different media including news reports on Sub-Saharan African countries’ response to protect the image during and post crisis, three approaches were adopted through the multistep model, namely: 1. Cooperating with the news sources or direct denial of access to media coverage. 2. Focusing on the positive aspects of the destination using celebrities and denying the existence of a crisis and 3.

Information on attractions targeting audience interest (Avraham & Ketter, 2017). Since the sudden emerging crisis and slow response appear to generate news reports that contains negative sentiments, a national approach study is needed in tourism scholarship on ways governments better manage sudden reputation fluctuations with better crisis communication (See also, Rasmussen & Merckelsen, 2014)

2.2. Destination media portrayal

Framing research refers to the “frames in communication” (Chong & Druckman, 2007, p.106). The major premise of framing theory is that an issue can be viewed from a variety of perspectives and be construed as having implications for multiple values or considerations (Chong & Druckman, 2007). Media framing theories are divided into three categories of formal, cognitive, and motivational theories (Gonzalez, Dana, Koshino, & Just, 2005). These theories are used when there are different responses to the gains (positive frames) and losses (negative frames) (Gonzalez et al., 2005). A news frame is an ‘emphasis in salience of different aspects of a topic’ (De Vreese, 2005, p. 53). Media framing theory has been adopted in tourism and hospitality studies that investigated the influence of message frames on destination attractiveness (Min, Martin, & Jung, 2013), hotel booking intentions (Sparks & Browning, 2011), and travelers’ perceived risk of a tourism destination (Kapuściński & Richards, 2016). These highlights the importance of message frames in destination management, especially during a crisis. Stepchenkova (2009) introduced the dynamic destination image index (see also Stepchenkova & Eales, 2011) to investigate the transmission of destination image. The results reveal that the image is dynamic and changes over time due to negative and positive events at the destination. Travel risk is an important factor that influences destination image and travel intention (Kozak, Crotts, & Law, 2007). In this regard, media portrayal emphasizes the way words are expressed rather than the information they provide (Ogbodo et al., 2020). The study of image maintenance or promotion during a crisis is rare (Avraham & Ketter, 2017). A recent study of global news frame coverage of the COVID-19 pandemic suggests that news reports hyped the virus, causing fear and panic (Ogbodo et al., 2020). Hence, the media framing theory allows for sentiments analysis to understand the extent that words carries meanings and readers can attribute to a specific way of thinking about the crisis (Chen et al., 2020).

The nature of crisis management, especially during an epidemic and pandemic suggests that newspapers can carry sentiments that are reflective of the success or failure of the destination’s mitigation efforts. Television news content was analyzed to understand the framing of the HINI 2009 threat to Australia (Fogarty et al., 2011). Similarly, in the United Kingdom’s newspaper reporting on the Swine Flu of 2009 (Hilton & Hunt, 2011) and the H5NI Avian Flu of 2003 (Dudo, Dahlstrom, & Brossard, 2007), studies focused primarily on the dissemination of information to in-country residents. In these three instances, the media tended to focus on the infection and death rates, advisory for public calmness, infection/mortality rates, the spread of the virus, potential risks for certain groups or individuals, and national assurances of the measures taken (Dudo et al., 2007; Fogarty et al., 2011; Hilton & Hunt, 2011). These studies were published in science and health-related journals. The theory underpinning the investigation diverges when studying news from a tourist-generating country on the crisis management of a prospective destination. News related to travel, transport, facility services, and travel safety are indeed of interest to tourists.

Two important research questions emerge from the literature survey for the purposes of this research paper:

1. How is a destination’s reputation reflected through newspapers portrayal during a pandemic crisis? In a study of the Avian influenza health crisis, results indicated that newspapers employed framing targeting government efforts, hence portraying the risks emanating from the destination’s success or failure at containing the crisis (Choi

& McKeever, 2019). Through content analysis of the newspaper articles that reported on Malaysia’s Movement Control Order (MCO), a government initiative to restrict maximum movement of people, resulted in severely portraying the country in a negative light (Razak, 2020).

2. Does there exist a relationship between crisis management and newspaper portrayal during the pandemic crisis? News media is highly impactful in the destination image formation (Jeannie Hahm & Tasci, 2019). However, in research studying the Ebola health crisis in Africa, findings suggest that newspapers tend to be less fear creating in their reporting compared to social media (Kilgo, Yoo, & Johnson, 2019).

Given that the tourism and media literature has strongly adopted social media as a method of analysis (Buhalis & Sinarta, 2019; Sigala, 2011; Zhai et al., 2020), impact studies show that the media influence tourists’ behavior and risk perceptions (Mizrachi & Fuchs, 2016; Mohammed & Tarik, 2020; Yu, Li, Yu, He, & Zhou, 2020; Zou & Meng, 2020). Little attention has been given to the relationship between newspaper portrayals of destinations and especially with the way in which the destination manages the crisis. Another new initiative underpinning this research is the use of sentiment analysis, which has not previously been applied much in tourism studies analyzing the news frame. Hence, this paper fills this gap in the literature by analyzing how the sentiments expressed in newspapers shifts a destination’s reputation depending on the success or failure of crisis management efforts.

3. Methodology

3.1. Criteria for selecting countries

New Zealand and Singapore were selected as the primary destinations in this study. The divergent responses by the two destinations allowed for a comparative study, especially as both countries are popular destinations based on their own merits and due to safety and security. New Zealand from the beginning had very few infections and seemed to be controlling the spread of COVID-19 well. From the first reported case on 28 February, the New Zealand government had depended on science and health professionals to introduce phases of controls on social interaction and inbound travel (Anglemyer, Baker, & Wilson, 2020; Wilson, 2020). Within a short period of time, after 1500 infection cases and 20 deaths, on 23 March 2020, New Zealand took an elimination strategy swiftly (Cousins, 2020; Cox, 2020). This hard strategy entailed a complete lockdown barring people from travelling in and out of the country and a continuous testing scheme to identify communities at risk such as the elderly and health care workers (Cox, 2020). Within five weeks community infection cases were completely eliminated while quarantining returning citizens from overseas to achieve zero to near zero from imported cases (Wilson, 2020). In fact, it was one of the first countries to respond swiftly to the pandemic by controlling tourist arrivals. Whereas the rest of the world, including Singapore, was still evaluating the threat, and doing contact tracing.

Singapore was selected because it was touted as the “gold standard” in the management of the pandemic when the virus first reached its shores on January 23, 2020 (Kurohi, 2020). On 5 January 2020, Singapore had started temperature screening at airports soon after reports in the media of the COVID-19 cases and by 23 January had a confirmed case from a tourist from Wuhan (Wong, Leo, & Tan, 2020). The city state had assiduously followed up with contact tracing as an initial mitigating effort and had unwisely advised to its citizens to not panic and not rush to wear mask necessarily in part due to lack of sufficient scientific knowledge in the early part of spread (Ting, 2020). As the community spread became apparent and further stricter measures needed, on 7 February 2020, the government brought the health alert level from Yellow to Orange suggesting a serious outbreak. Contact tracing and implementation of mask wearing and physical distancing as

a rule and practice was imposed in public places (Ong, 2020). As a small and open trading economy, its dependency on global business connectivity was a priority but not until much later when the many countries in the world were announcing a lockdown and repeated number of clusters were found in the community, that Singapore adopted a ‘circuit breaker’ approach on 7 April 2020. The government’s leadership though slow compared to New Zealand, was also blind-sided by the sudden and huge number of foreign labour community infections, which would take months before the numbers were levelled in October 2020 (Abdullah & Kim, 2020; Wong & Yusof, 2020).

3.2. Criteria for selecting newspapers

Two criteria were considered for choosing the source of data collection specific to the time of the pandemic crisis. First, at the time of the outbreak, infodemic was a common phenomenon (Zarocostas, 2020) especially through social media, which is avoided in this study. So, newspaper articles were selected as a source of information, since they have a uniform format, specified ownership, geographical impact, on-line accessibility, and precise dating (Stepchenkova & Eales, 2011). Second, media coverage in the times of the pandemic brings more than individual (autonomous) evaluation of the destination crisis management efforts, reflecting a national political agenda than crisis reality may suggest (Avraham, 2020). Therefore, data were collected from newspaper articles published in the top three common tourist-generating countries for New Zealand and Singapore: China, Australia, and the United States of America. Furthermore, all the available newspaper articles related to COVID-19 were considered regardless of their political orientation.

Using the ProQuest newspapers database and online sites for Chinese newspapers, we collated 192 newspaper articles originating from Australia, China, and the USA from February 12020 to April 30,2020 (Table 1). The newspaper articles were meticulously and manually filtered to identify those that mentioned New Zealand and Singapore and their respective management of COVID-19. The number of newspapers articles approximately increased in the mentioned countries followed the spread of the pandemic. This short period covers the time from the discovery of COVID-19 and announcement to the world by China and includes the early responses by both New Zealand’s and Singapore’s governments and the implementation of lock-down measures.

3.3. Method of analysis

Sentiment analysis is applied in this study to identify and categorize opinions expressed in newspapers articles, especially to determine whether the media portrayal of COVID-19, government responses and tourism-related topics is positive, negative, or neutral (Alaoui & Gahi, 2019; Tao, Zhang, Shi, & Chen, 2019). Qualtrics text iQ was used as the

analytical platform. This platform identifies the sentiment around the tagged keywords, which are imported into the system categorized by topics and parent topics. In order to determine topics as the basis for sentiment analysis, the Leximancer software was used to mine the newspaper articles for common themes and concepts. The extracted concepts were reviewed based on destination reputation and health-related crisis literature in tourism studies. Consequently, four parent topics and 12 topics were selected for sentiment analysis. Parent topics are COVID-19, government responses, risk, and tourism. COVID-19 covers all related keywords that explain the crisis. Government responses include crisis management using restrictions, control measures, financial support, and social distancing. The risk parent topic is divided into social, health, and financial risks. Finally, the tourism parent topic covers travel, transport, facility-services, and travel safety. The sentiment of topics is reported by mean frequency percentage. Thereafter, the relationship between the number of new COVID-19 cases in each country of this study and the mean sentiment portrayed by newspapers was analyzed.

4. Findings

The findings poignantly reveal that the destinations’ portrayal is dependent on the elimination or mitigation efforts and severity of the COVID-19 pandemic reported monthly by the newspapers. In this study, sentiment analysis is used to track trends over time by newspaper coverage on New Zealand and Singapore. The results are shown in the bubble widgets (Figs. 1 and 2). The size of the bubbles shows the frequency of newspaper articles tagged with the parent topic. Each bubble represents a parent topic with detailed information on the frequency of newspaper articles, mean sentiment of each parent topic, the breakdown of the sentiment for the parent topic, and the list of topics. Fig. 1 shows that all the parent topics reflected in American, Australian, and Chinese newspapers are predominantly negative, with some positive portrayals as well. The mean sentiment on Singapore for COVID-19, risk, tourism, and government is -1.2, -0.8, -0.7, and -0.6, respectively. Although the range of sentiment for newspaper articles varied from -9 to 9, the mean sentiment for Singapore was -2.88, with a standard deviation of 3.96. The overall sentiment toward Singapore shows 74% of newspaper articles reported negatively and 21% positively (Fig. 1, Table 2).

The sentiment analysis on New Zealand shows a slightly negative portrayal that is close to neutral (Fig. 2, Table 2). The mean sentiment of the parent topics of risk, COVID-19, tourism, and government, respectively, is -0.5, -0.4, -0.3, and -0.2. The government received the least negative comments. Although the range of sentiments for newspaper articles varied from -8 to 9, the mean sentiment for New Zealand was -0.51, with a standard deviation of 4.51. The overall sentiment on New Zealand shows 57% negative and 29% positive reports. Comparing the results of the two destinations, New Zealand received less negative portrayal from newspapers.

Table 1
The number of newspaper articles from the tourist-generating market.

Market origins	List of newspapers	Mentions of New Zealand			Mentions of Singapore			Total
		Feb 2020	Mar 2020	Apr 2020	Feb 2020	Mar 2020	Apr 2020	
Australia	Herald Sun, Great Lakes Advocate, Newcastle Herald, Sunday Age, Sydney Morning Herald, Magnet, Tasmanian Country, The Advisor, The Australian, The Canberra Times, The Cairns Post, The Courier, The Daily Telegraph, The Gold Coast Bulletin, The Herbert River Express, The Mercury, The Morning Bulletin, The Standard, The Weekly times, Timaru Herald, Weekend Australian	0	11	23	10	27	24	95
China	(English language newspapers) China Daily, China Briefing, South China Morning Post	4	6	5	19	13	5	52
USA	Christian Science Monitor, CNN Wire News, Concord Monitor, Florida Times Union, Honolulu Star, Los Angeles Times, Sun Journal, Targeted News Service, Telegraph-Herald, The Daily Beast, The Examiner, The New York Times, The Wall Street Journal, The Washington Post, USA Today, Wall Street Journal	0	6	21	0	3	16	46
Total		4	22	49	29	43	45	192

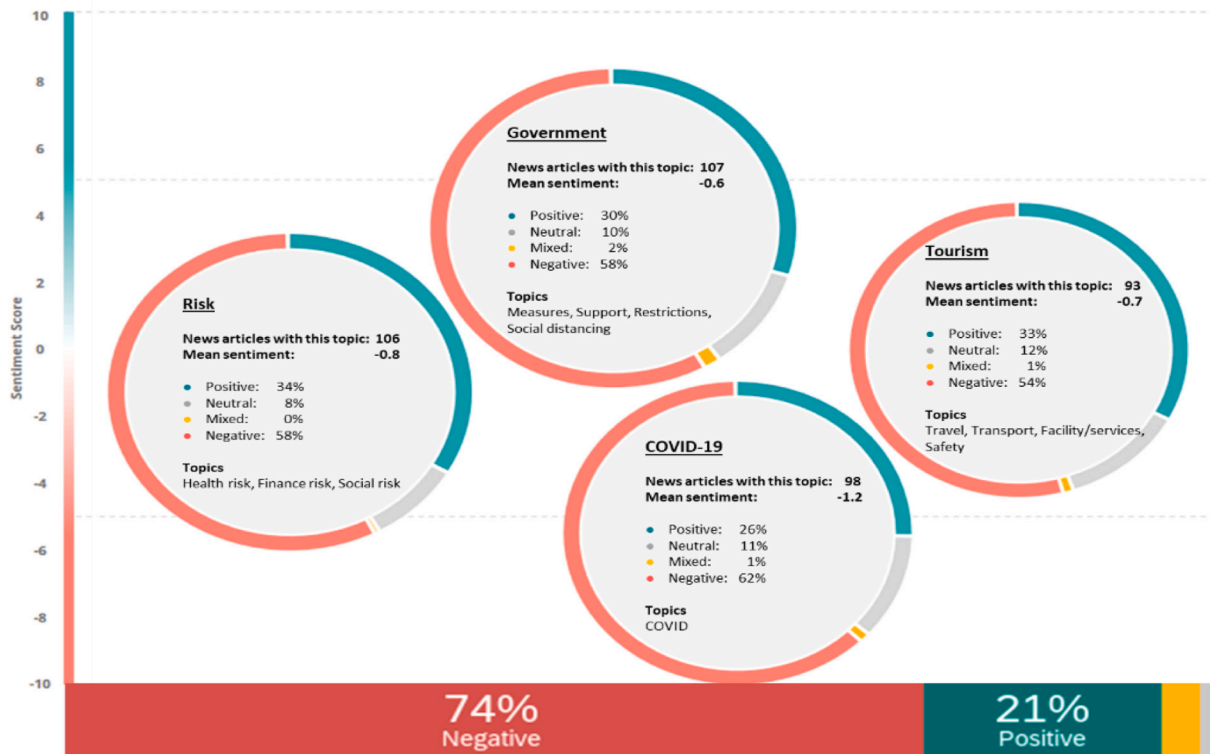


Fig. 1. Newspapers' Portrayal toward Singapore, February–April 2020.

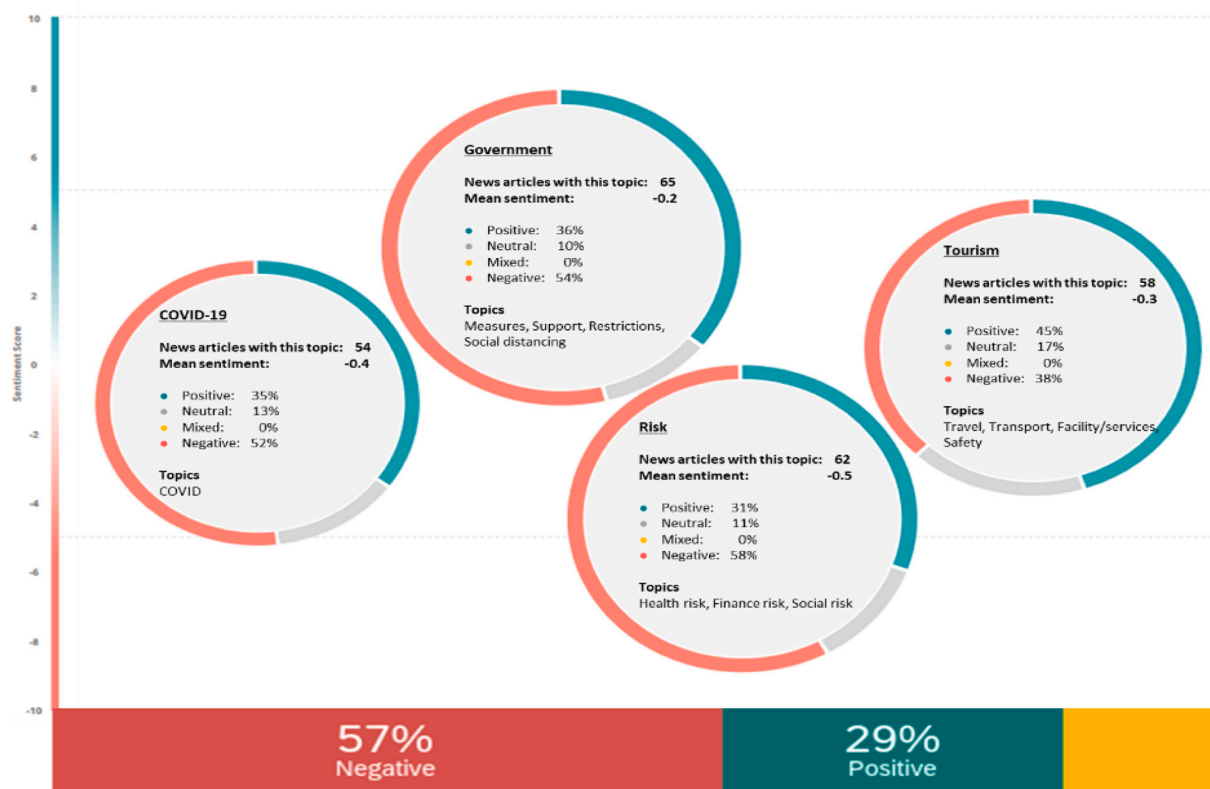


Fig. 2. Newspapers' Portrayal toward New Zealand, February – April 2020.

Media attention on both destinations was mainly on government. The responses of the destination governments to the crisis suggests the influence of the media on sentiment depiction. An analysis of sentiment

change over a three-month period was conducted to identify media portrayal of government measures at the destinations. The key sentiment changes from February 1st to April 30th about Singapore and New

Table 2
Newspapers' mean sentiment summary.

Destination	Minimum	Maximum	Mean	Std Deviation	Variance	Count
Singapore	-9.00	9.00	-2.88	3.96	15.68	117
New Zealand	-9.00	9.00	-0.51	4.51	20.33	75

Zealand are shown in Fig. 3. Singapore received a more negative sentiment from the newspapers. More positive comments were written on New Zealand's COVID-19 response, especially with the highlight on health risk. The sentiments on both destinations decreased, while New Zealand maintained a higher mean sentiment. The greatest sentiment change in newspapers on New Zealand was toward government responses, which shifted from -1.1 to +0.2. The risk factor for New Zealand as a destination and other travel focus factors received more positive sentiment in the newspapers by the end of this period. Singapore's government continued to be depicted with negative changes from March, reaching -0.9.

Furthermore, the trend of sentiment change toward Singapore and New Zealand is compared to the number of new cases (New Zealand Ministry of Health, 2020; Singapore Ministry of Health, 2020) in each country during the first quarter of 2020 (Fig. 4). Fig. 4 clearly indicates a symptomatic relationship between newspapers' portrayal of the destination's crisis management and the number of infections in both countries. Both destinations start off at about the same number of COVID-19 cases reported mostly in February 2020. By March 2020, the

sentiment portrayal of both countries in the newspapers from China, the USA, and Australia began to improve. Singapore was termed the "gold standard" bearer, only for that to change after the truth was revealed of its inability to prevent the spread of the virus among its migrant workers residing in cram quarters (Mokhtar, 2020). Mokhtar's headline on Bloomberg aptly describes the media sentiment starting to take a dive from mid-April onwards to a -3.5 mean: "How Singapore Flipped from Virus Hero to Cautionary Tale" (Table 3).

New Zealand's prompt response to ensure that no person caught the virus meant that an early lockdown of the country was portrayed as a successful endeavor. From April 2020 onwards, the number of cases in New Zealand dropped drastically, and the sentiment mean score started improving from -3.5 in March to -2.8 by the end of April 2020. This move toward a positive territory is also aptly depicted in an article in the National Geographic released on 30 April (Gulley, 2020) titled, "New Zealand has 'effectively eliminated' coronavirus. Here is what they did right."

Table 3 illustrates the positive and negative sentimental values expressed by newspapers on the respective ways Singapore and New

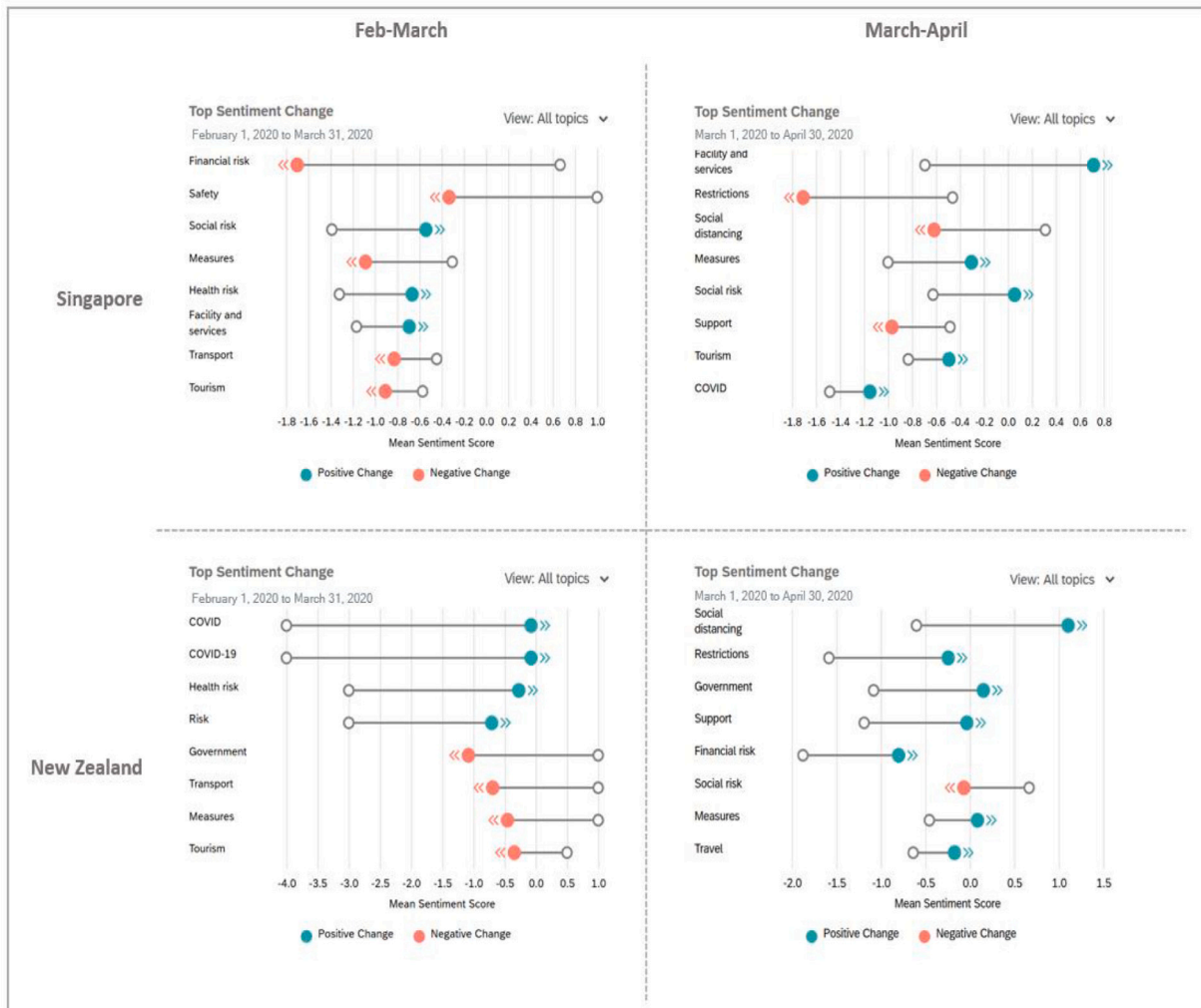


Fig. 3. Top sentiment depiction changes for Singapore and New Zealand.

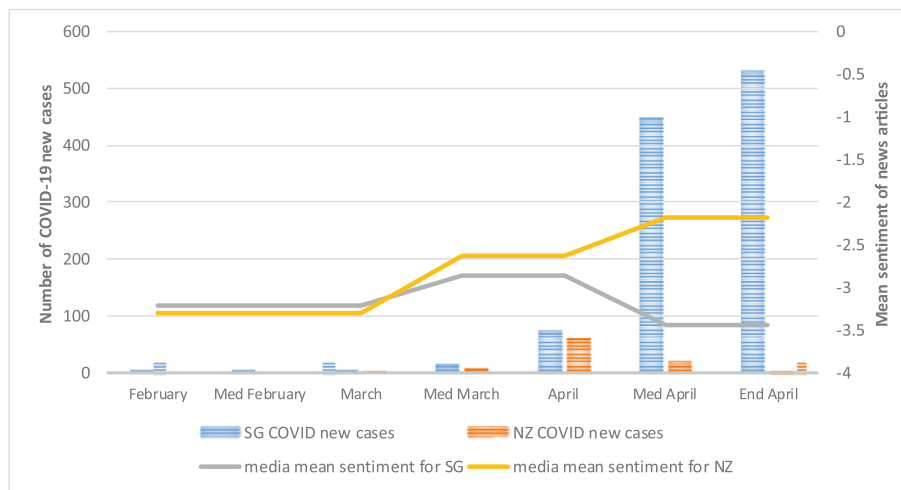


Fig. 4. Relationship between sentiment depiction and number of COVID-19 cases.

Table 3
Sample of extracted texts from newspapers

Country sentiment	Singapore	New Zealand
To positivity	<p>"...Some pointed out that Singapore was doing temperature checks daily as kids enter school. One tweet mentioned that spotless Singapore was the cleanest city in the world..." <i>(Newcastle Herald, 19 March.2020)</i></p> <p>"...At the Malaysian and Singapore airports I travelled through, temperature checks were made, and hand-sanitising stations were everywhere..." <i>(The Age, 29 Feb.2020)</i></p> <p>"...This is also what Singapore has done — they've been quite effective in managing and limiting the transmission of this virus in that country..." <i>(The Australian, 19 March.2020)</i></p>	<p>"...But the real key to New Zealand's success appears to be an approach that could be applied anywhere – moving swiftly, testing widely, and relying heavily on good science. Like many countries, New Zealand had models that showed that a potential coronavirus outbreak could be devastating if no action was taken..." <i>(CNN Wire News, 28 April.2020)</i></p> <p>"...In San Francisco, "the entire international section of the airport was empty – except for one flight to New Zealand, ..." <i>(South China Morning Post, 20 April.2020)</i></p> <p>"... New Zealand, the only developed economy in the eastern time zone of the Southern Hemisphere to suppress the virus..." <i>(The Age, 25 April.2020)</i></p>
To negativity	<p>"... In Singapore, which last year recorded its lowest growth for a decade, the government has forecast further negative fallout from the coronavirus. We certainly expect there to be an impact on our economy, business and consumer confidence this year, especially as the situation is expected to persist for some time..." <i>(South China Morning Post, 28 January.2020)</i></p> <p>"... Singapore's hotel sector is expected to take a significant hit from the Covid-19 outbreak in the short-term and recover just as quickly as after Sars in 2003... disruption from the outbreak on Singapore's hospitality industry is expected to be short-lived even though the impact might be deeper in the near term..." <i>(South China Morning Post, 19 February.2020)</i></p> <p>"... A recent spike in imported cases has threatened the success of Singapore's containment measures, while authorities have been tightening border controls so the health care system would not be too taxed..." <i>(South China Morning Post, 23 March.2020)</i></p>	<p>"... New Zealand is also temporarily banning foreign visitors..." <i>(The Wall Street Journal, 14 April.2020)</i></p> <p>Or</p> <p>"...In New Zealand, Prime Minister Jacinda Ardern shut down tourism and introduced the country's highest, level 4 lockdown measures in March during which offices, schools and non-essential services including bars, restaurants, and playgrounds were shuttered..." <i>(USA Today, 17 April.2020)</i></p> <p>"... Mr. Bolden predicted there would be a lift in domestic travel and travel to New Zealand sometime afterwards but was cautious that might not be until next year. He said he was also worried domestic travellers were more inclined to book online themselves, although he was optimistic there would be some bounce back..." <i>(The Standard, 22 April.2020)</i></p> <p>Meanwhile, thousands of tourists caught out by this week's self-isolation rules and lockdown in New Zealand also faced a challenge to adapt. Some on-tourist visas were dealing with the financial setbacks of a longer-than-scheduled travel period, while others on work-holiday visas were scrambling to find jobs and accommodation. Some travellers struggled to return home due to flight cancellations and international travel restrictions..." <i>(South China Morning Post, 26 March, 2020)</i></p>

Zealand handled COVID-19. These findings are reflected in our sentiment analysis tool in Fig. 4.

5. Discussion

The immediate and drastic measures taken by New Zealand at an early stage was favourably published in the newspapers of Australia, China and the United States of America. Clearly, this indicates a salient reading based on the actual stringent elimination efforts resulting in the successful containment of the COVID-19 virus incidences. Likewise, Singapore's initial dithering on the type of measures to adopt and a cautious wait and see approach, cost it negative sentiments expressed in

newspapers published in major mentioned markets.

A. Conceptual approach

Drawing from the research findings, Fig. 5 illustrates that the translation of (un)successful crisis management by destinations can be framed by the newspapers in the tourist-generating countries positively and negatively.

This represents three key elements: the destination's crisis management strategy outcome, the effect of news portrayal, and focus on travel concerns. Thus far, much of the literature has focused on the demand side, meaning the impact of social as well as mainstream text media on

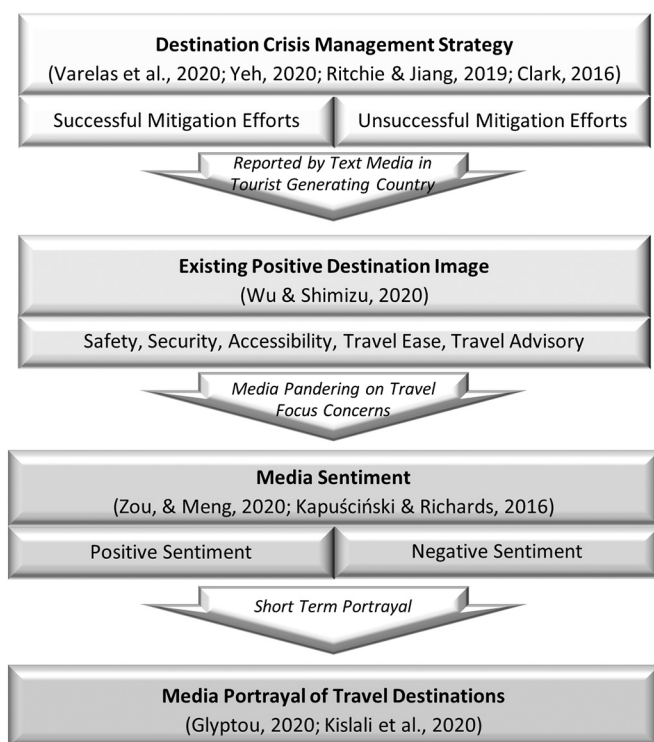


Fig. 5. Destination crisis management and media portrayal.

tourists' behavior. Negative sentiments emerge when a destination's crisis management fails, and when the strategy is successful, the sentiments and portrayals about the destination tend to move in the positive direction. Despite all the good reputation of a destination, newspaper reports can move parallel to the direction of the crisis management outcomes within a short period of time. Media framing theory addresses tourists' perceptions of risk based on media portrayal of a destination's crisis management strategy and threat level (Kapuściński & Richards, 2016). Prospective tourists depend on a number of news sources to gain a sense of a destination's image (Govers et al., 2016). Avraham & Ketter, 2017 highlight the fact that destinations use three groups of strategies to promote their images during and after tourism crises:

"(1) source-focused strategies (media cooperation and media relations, physical/economic threats and media blockage, and internet use as an alternative source), (2) message-focused strategies (ignoring the crisis, negative image acknowledgement, scale of crisis reduction, counter-message delivery, association with well-known brands and celebrities, tackling the crisis and the spin of liabilities into assets), and (3) audience-focused strategies (patriotism and personal/national heritage, and target audience change)" (p. 780; see also Speakman & Sharpley, 2012).

In contrast, with the COVID-19 pandemic, governments instead closed borders and disallowed international flights. Maldives is one of the most unusual destinations that offered quarantine for tourists (Steinmetz, 2020). As discussed earlier in the literature review, restoration or mitigation efforts on bad publicity, alert us to an audience approach, news sources approach and messaging (Avraham & Ketter, 2017). Engaging the literature, we may have to consider a fourth option, postponing promotional efforts of the destination's image until the crisis is resolved. During this period, monitoring the messages delivered in the newspapers can be useful to understand media framing and implement public relations to repair any negative sentiments expressed.

6. Conclusion

The results highlight the importance of successful crisis management and a quick response in maintaining a destination's reputation. New

Zealand had one of the strictest lockdowns in the world, which led to the declined number of new cases below 10, in less than a month from the first alert in the country. Most cases in the country were imported so closing its boarder to all non-citizens and residents was a prompt solution and may have contributed to more positive news portrayals within all four sentiment clusters of this study. Although other countries like Singapore applied the lockdown strategy, it took months to get the situation under control. The success of New Zealand relies on their early response to target the elimination strategy. Initially, unlike other countries where infection rates sky-rocketed within a short time, Singapore appeared to be containing the outbreak. However, it was very slow to adopt mitigating measures that other countries around the world were adopting; initially, it even discouraged its citizens to wear face masks when the rest of the world was scrambling to manufacture or import them due to global shortage. As the numbers of new infections soared to hundreds in daily reporting, public officials in Singapore and abroad dropped their views of the country as a "gold standard" bearer. By April 2020, it had one of the highest infection rates in Asia. These findings demonstrate the importance of crisis management commensurate with the destination's reputation portrayed by the news frame. Particularly, the results of the tourism cluster sentiment highlight the association between health crisis management and tourism.

This study provides a better understanding of the role of destination crisis management and communication in news framing. Methodologically, the use of sentiment analysis allows for an understanding of the way tourist generating markets news media reports about a destination's health crisis and its management. This study contributes to media framing theory in the tourism context by investigating the frames production during a pandemic crisis, confirming the association between crisis management and news media portrayal. The results highlight the significant role of crisis management in the process of media framing formation. One of the theoretical implications of this research applies to the crisis management strategies as an indicator of sentiments framed by news. The assumption here, is when media framing contains a lot more negative portrayal the outcome of those sentiment expressed will have a negative reputation for the destination. The relationship between media framing and the level of positive and negative sentiment expressed by the newspapers is a way to understand the narrative portrayed by the newspapers. This is confirmed in our finding that the negative sentiment expressed in newspapers was higher for SG and lower for NZ based on the media sentiment analysis. Therefore, theoretically the relationship between newspapers reporting and the mitigation efforts are presented through expressed sentiments that carry meaning resulting in the destination's portrayal.

The media response can be temporary or fundamental based on the severity and nature of the crisis (Potter, 2011). In that sense, observations of destination marketing require a concerted effort in representing, even during a pandemic, a challenge that is recognizably not too easy and calls for further research on ways in which tourism authorities can ascertain the situation and mount a confidence-building campaign on the outcomes of the crisis management approaches.

Crisis communications is important now more than ever with media (traditional and new) increasing the exposure of the crisis by adding to and creating this exposure. The portrayal generated by the newspapers is an important factor in the way a destination is depicted in the tourist-generating country (Stepchenkova & Eales, 2011). This study found that New Zealand and Singapore were depicted in an acceptable mean range, but soon fell, -0.51 for the former and -2.88 for the latter, underlining the importance of crisis management, crisis communication, and destination presentations by the media. The sentiments extracted from this newspaper coverage analysis show clearly that shifts in destination image can indeed parallel the (un)successful crisis management and communication, as in the cases of New Zealand and Singapore.

Given the understanding that the success or failure of a destination's crisis management and communication strategies can be noticed by a tourist-generating country's newspapers, destination policy makers

must be mindful of being fully involved in mitigating the pandemic crisis while at the same time being able to feed tourist-generating countries with positively packaged news. This is easier said than done, because during the heat of a crisis, destination policy makers are often more concerned with containing and eliminating the spread of the infections than in focusing on how the international media are consuming and arbitrarily disseminating the reality.

Governments and tourism sectors are two of the interested parties of the news frames. The outcome of this research also suggests that policy makers, responsible for managing the international messaging and public image must seriously consider communication through newspapers as reflective of the extent mitigation efforts of the crisis is successful. A successful management of media framing can lead to reduced damage of a destination's reputation during the crisis. One way of reducing the amount of negative newspaper's portrayal is to emphasize proactive crisis communication strategies. Finally, crisis communication strategies should include public relations and media communication on a timely manner to avoid any negative sentiments.

7. Limitations and future studies

This study does not discuss responses to control and minimize the negative effects of news frames during crises. What should the government and industry do during negative news framing? Future research is needed to develop emergent media management strategies and practical outcomes to counter the negative effects of news frames. This research is also limited by its short duration of three months. The results may differ for longer periods of crisis. The research focused on traditional newspapers. An aggregation of sentiments combining traditional media and social media could also be analyzed to understand the compass of awareness related to the destination's position during a crisis.

The qualitative approach of sentiment analysis also presented some limitations. Future research could conduct a quantitative approach to test the correlation between the number of new cases and the number of newspaper articles and/or sentiment analysis. Again, the results of this study are based on a sample of two countries; future research with a larger sample size may increase the generalizability of the results.

Finally, there is also a need to identify the extent to which some destinations mold the national newspaper coverage to spread negative messages against most popular destinations with the aim of promoting domestic tourism flows (or inhibit those directed to the most popular destinations). Such a study would also be helpful in relation to the actual outcomes of the managerial implications and strategies implemented to manage the crisis.

Future studies conducted with a cross-sectional study approach to the relationship between media portrayals and destination crisis management strategies can be relevant to an in-depth comparative study of the newspapers and social media sentiments. Since the newspapers are a social institution where national forces coalesce over a hyped topic, so too are social media, where many individuals or groups of individuals either anonymously or as identifiable individuals express their sentiments. An aggregation of sentiments combining news from newspapers and social media could also be analyzed to understand the compass of awareness related to the destination's position during a crisis.

The value of this analysis is quite stark, given that we now understand the importance of a successful crisis management strategy and quick response, especially during a health pandemic, can benefit a destination's good reputation. This can indeed be a useful point of reference to understand the sentiments presented to the public in the tourist-generating countries that shape the outcome of travelers deciding on their plans.

CRedit authorship contribution statement

K Thirumaran: Conceptualization, Methodology, Validation, Investigation, Writing - original draft, Writing - review & editing,

Supervision. **Zohre Mohammadi:** Methodology, Software, Formal analysis, Validation, Investigation, Writing - original draft, Visualization, Writing - review & editing, Project administration. **Zahra Pour-abadin:** Methodology, Investigation, Writing - original draft, Writing - review & editing. **Simona Azzali:** Methodology, Investigation, Writing - original draft. **Karen Sim:** Investigation.

Declarations of Competing Interest

None.

References

- Abdullah, W. J., & Kim, S. (2020). Singapore's responses to the COVID-19 outbreak: A critical assessment. *American Review of Public Administration*, 50(6–7), 770–776. <https://doi.org/10.1177/0275074020942454>.
- Alaoui, I. E., & Gahi, Y. (2019). The impact of big data quality on sentiment analysis approaches. *Procedia Computer Science*, 160, 803–810.
- Altheide, D. L. (2020). Pandemic in the time of trump: Digital media logic and deadly politics. *Symbolic Interaction*, 43(3), 514–540.
- Anglemyer, A., Baker, M. G., & Wilson, N. (2020). Successful elimination of covid-19 transmission in New Zealand. *The New England Journal of Medicine*, 383(8), e561–e563. <https://doi.org/10.1056/NEJMc2025203>.
- Avarham, E. (2013). Battling stereotypes of terror and wars: Media strategies for marketing tourism to Middle Eastern countries. *American Behavioral Scientist*, 57, 1350–1367.
- Avraham, E. (2020). Combating tourism crisis following terror attacks: Image repair strategies for European destinations since 2014. *Current Issues in Tourism*, 1–14.
- Avraham, E., & Ketter, E. (2017). Destination image repair while combatting crises: Tourism marketing in Africa. *Tourism Geographies*, 19(5), 780–800.
- Bremmer, I. (2020). The best global responses to COVID-19 pandemic. *Time*. Retrieved from <https://time.com/5851633/best-global-responses-covid-19/>.
- Buhalis, D., & Sinarta, Y. (2019). Real-time co-creation and oneness service: Lessons from tourism and hospitality. *Journal of Travel & Tourism Marketing*, 36(5), 563–582.
- Cakar, K. (2018). Critical success factors for tourist destination governance in times of crisis: A case study of Antalya, Turkey. *Journal of Travel & Tourism Marketing*, 35(6), 786–802.
- Chaulagain, S., Wiitala, J., & Fu, X. (2019). The impact of country image and destination image on US tourists' travel intention. *Journal of Destination Marketing & Management*, 12, 1–11.
- Chee, H. Y., Xin, C. K., & Busch, J. (2020). *In Focus*. Singapore: Revitalising and Repurposing Hotels.
- Chen, H., Huang, X., & Li, Z. (2020). A content analysis of Chinese news coverage on COVID-19 and tourism. *Current Issues in Tourism*, 1–8.
- 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, L., Manthiou, A., Tang, L. R., Shin, J., & Morrison, A. (2014). A comparative study of consumer panic buying, herd mentality, changing discretionary spending and the role of the media in influencing behaviour. *Journal of Risk and Financial Management*, 13(8), 166.
- Choi, M., & McKeever, B. W. (2019). News framing of avian flu: Media advocacy and response to a public health crisis. *Newspaper Research Journal*, 40, 451–466.
- Chong, D., & Druckman, J. N. (2007). Framing theory. *Annual Review of Political Science*, 10, 103–126.
- Clark, R. A. (2016). *Business continuity and the pandemic threat: Potentially the biggest survival challenge facing organisations*. Ely, England: IT Governance Publishing.
- Cousins, S. (2020). New Zealand eliminates COVID-19. *The Lancet (British Edition)*, 395(10235), 1474. [https://doi.org/10.1016/S0140-6736\(20\)31097-7](https://doi.org/10.1016/S0140-6736(20)31097-7).
- Cox, N. (2020). New Zealand and covid-19: A swift and firm response. *Round Table (London)*, 109(3), 332–333. <https://doi.org/10.1080/00358533.2020.1757287>.
- Crouch, D., Jackson, R., & Thompson, F. (2005). *The media and the tourist imagination: Converging cultures* (1st ed.). London: Routledge.
- De Kressal, P. G. (2020). *Even with protests, recession and coronavirus, Hong Kong is a better bet than*. Singapore: South China Morning Post. Retrieved from <https://www.scmp.com/comment/opinion/article/3085695/even-protests-recession-and-coronavirus-hong-kong-better-bet>.
- De Vreese, C. H. (2005). News framing: Theory and typology. *Information Design Journal & Document Design*, 13(1), 51–62.
- Dudo, A. D., Dahlstrom, M. F., & Brossard, D. (2007). Reporting a potential pandemic: A risk-related assessment of avian influenza coverage in U.S. newspapers. *Science Communication*, 28(4), 429–454.
- Fogarty, A. S., Holland, K., Imison, M., Blood, R. W., Chapman, S., & Holding, S. (2011). Communicating uncertainty—How Australian television reported H1N1 risk in 2009: A content analysis. *BMC Public Health*, 11(1), 181.
- Frias, D., Rodriguez, M., Castaneda, A., & Buhalis, D. (2012). The formation of a tourist destination's image via information sources: The moderating effect of culture. *International Journal of Tourism Research*, 14(5), 437–450.
- Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology*, 39(5), 355–357.

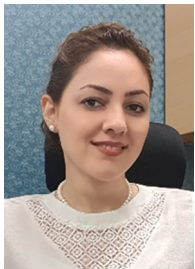
- Glyptou, K. (2020). Destination image co-creation in times of sustained crisis. *Tourism Planning & Development*, 8(4), 1–23.
- Gonzalez, C., Dana, J., Koshino, H., & Just, M. (2005). The framing effect and risky decisions: Examining cognitive functions with fMRI. *Journal of Economic Psychology*, 26(1), 1–20.
- Govers, R., Go, G., & Kumar, K. (2016). Promoting tourism destination image. *Journal of Travel Research*, 46(1), 15–23.
- Gulley, A. (2020). *New Zealand has “effectively eliminated” coronavirus. Here’s what they did right.* National Geographic. Retrieved from <https://www.nationalgeographic.com/travel/2020/04/what-new-zealand-did-right-in-battling-coronavirus/>.
- Hanlan, J., & Kelly, S. (2005). Information sources and iconic Australian tourist destinations. *Journal of Vacation Marketing*, 11(2), 163–177.
- Hilton, S., & Hunt, K. (2011). UK newspapers’ representations of the 2009–10 outbreak of swine flu: One health scare not over-hyped by the media? *Journal of Epidemiology and Community Health*, 65(10), 941–946.
- Ho, C., Lin, Y., Yuan, Y., & Chen, M. (2016). Pre-trip tourism information search by smartphones and use of alternative information channels: A conceptual model. *Cogent Social Sciences*, 2(1).
- Japutra, A., & Keni, K. (2020). Signal, need fulfilment and tourists’ intention to revisit. *Anatolia*, 1–15.
- Jeannie Hahm, J., & Tasci, A. D. A. (2019). Country image and destination image of Brazil in relation to information sources. *Journal of Hospitality and Tourism Insights*, 95–114. <https://doi.org/10.1108/jhti-04-2019-0057>.
- Jonas, A., Mansfeld, Y., Paz, S., & Potasman, I. (2011). Determinants of health risk perception among low-risk-taking tourists traveling to developing countries. *Journal of Travel Research*, 50(1), 87–99.
- Kapusiński, G., & Richards, B. (2016). News framing effects on destination risk perception. *Tourism Management*, 57, 234–244.
- Kilgo, D. K., Yoo, J., & Johnson, T. (2019). Spreading ebola panic: Newspaper and social media coverage of the 2014 Ebola health crisis. *Health Communication*, 34, 811–817.
- Kisilali, H., Kavartzis, M., & Saren, M. (2019). Destination image formation: Toward a holistic approach. *The International Journal of Tourism Research*, 22(2), 266–276 (2020).
- Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travelers. *International Journal of Tourism Research*, 9(4), 233–242.
- Kurohi, R. (2020). Coronavirus detection in Singapore ‘gold standard’ for case detection: Harvard study. *In The Straits Times*. Retrieved from <https://www.straitstimes.com/singapore/coronavirus-detection-in-singapore-gold-standard-for-case-detection-harvard-study>.
- La, V., Pham, T., Ho, M., Nguyen, M., Nguyen, K. P., Vuong, T., ... Khuc, Q. (2020). Policy response, social media and science journalism for the sustainability of the public health system amid the COVID-19 outbreak: The Vietnam lessons. *Sustainability (Basel, Switzerland)*, 12(7), 2931. <https://doi.org/10.3390/su12072931>.
- Lepp, A., & Gibson, H. (2003). Tourist roles, perceived risk and international tourism. *Annals of Tourism Research*, 30(3), 606–624.
- Liu, Y.-C., Li, L.-J., Yen, S.-Y., & Sher, P. J. (2018). What makes Muslim friendly tourism? An empirical study on destination image, tourist attitude and travel intention. *Advances in Management and Applied Economics*, 8(5), 27–43.
- Loxton, M., Trusckett, R., Scarf, B., Sindone, L., Baldry, G., & Zhao, Y. (2020). Consumer behaviour during crises: preliminary research on how coronavirus has manifested consumer panic buying, herd mentality, changing discretionary spending and the role of the media in influencing behaviour. *Journal of Risk and Financial Management*, 13(8), 1–21.
- McCauley, M., Minsky, S., & Viswanath, K. (2013). The H1N1 pandemic: Media frames, stigmatization and coping. *BMC Public Health*, 13(1116), 1–21.
- Mercille, J. (2005). Media effect on image: The case of Tibet. *Annals of Tourism Research*, 32(4), 1039–1055.
- Mikulić, J., Sprčić, D. M., Holiček, H., & Prebežac, D. (2018). Strategic crisis management in tourism: An application of integrated risk management principles to the Croatian tourism industry. *Journal of Destination Marketing & Management*, 7, 36–38.
- Min, K. S., Martin, D., & Jung, J. M. (2013). Designing advertising campaigns for destinations with mixed images: Using visitor campaign goal messages to motivate visitor. *Journal of Business Research*, 66(6), 759–764.
- Ministry of Business, Innovation and Employment (MBIE). (2018). *New Zealand Tourism Forecast 2018–2024*. Retrieved from <https://www.mbie.govt.nz/assets/5c05b7bfce/nz-tourism-forecasts-2018-2024-report.pdf>.
- Ministry of Health (New Zealand). 2020. COVID-19 – Current Cases. Retrieved from <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-current-cases>.
- Ministry of Health (Singapore). (2020). Past Updates on COVID-19 Local Situation. Retrieved from <https://www.moh.gov.sg/covid-19/past-updates>.
- Mizrachi, I., & Fuchs, G. (2016). Should we cancel? An examination of risk handling in travel social media before visiting Ebola-free destinations. *Journal of Hospitality and Tourism Management*, 28, 59–65.
- Mohammed, B., & Tarik, S. (2020). The universal impact of the health crises on the international tourism: The COVID-19 pandemic as a case. *Business Excellence and Management*, 10(S.I. 1), 98–111.
- Mokhtar, F. (2020). How Singapore flipped from virus Hero to cautionary tale. *In Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2020-04-21/how-singapore-flipped-from-virus-hero-to-cautionary-tale>.
- Ogbodo, J. N., Onwe, E. C., Chukwu, J., Nwasum, C. J., Nwakpu, E. S., Nwankwo, S. U., ... Ogbaeja, N. I. (2020). Communicating health crisis: A content analysis of global media framing of COVID-19. *Health Promotion Perspectives*, 10(3), 257–269.
- Ong, S. E. (2020). Singapore and covid-19: In the forefront of response efforts? *Round Table (London)*, 109(3), 334–335. <https://doi.org/10.1080/00358533.2020.1757288>.
- Parrey, S. H., Hakim, I. A., & Rather, R. A. (2019). Mediating role of government initiatives and media influence between perceived risks and destination image: A study of conflict zone. *International Journal of Tourism Cities*, 5(1), 90–106.
- Perles-Ribes, J. F., Ramón-Rodríguez, A. B., Moreno-Izquierdo, L., & Torregrosa Martí, M. T. (2018). Winners and losers in the Arab uprisings: A Mediterranean tourism perspective. *Current Issues in Tourism*, 21(16), 1810–1829.
- Perles-Ribes, J. F., Ramón-Rodríguez, A. B., Rubia-Serrano, A., & Moreno-Izquierdo, L. (2016). Economic crisis and tourism competitiveness in Spain: Permanent effects or transitory shocks? *Current Issues in Tourism*, 19(12), 1210–1234.
- Phelps, A. (1986). Holiday destination image—The problem of assessment: An example developed in Menorca. *Tourism Management*, 7(3), 168–180.
- Potter, J. W. (2011). Conceptualizing mass media effect. *Journal of Communication*, 61(5), 896–915.
- Promsivapallop, P., & Kannaovakun, P. (2017). A comparative assessment of destination image, travel risk perceptions and travel intention by young travellers across three ASEAN countries: A study of German students. *Asia Pacific Journal of Tourism Research*, 22(6), 634–650.
- Ramachandani, N. (2019). Will Jewel be Changi’s Game Changer?. *In The Business Times*. Retrieved from <https://www.businesstimes.com.sg/branch/will-jewel-be-changis-game-changer>.
- Rasmussen, R. K., & Merckelsen, H. (2014). The risks of nation branding as crisis response: A case study of how the Danish government turned the Cartoon Crisis into a struggle with Globalization. *Place Branding and Public Diplomacy*, 10(3), 230–248.
- Razak, N. A. (2020). Health and tourism: Implications of COVID-19 pandemic to the Malaysian travel and hospitality industry. *International Journal of Supply Chain Management*, 9, 663–670.
- Ribeiro, M. A., Woosnam, K. M., Pinto, P., & Silva, J. A. (2018). Tourists’ destination model. *Journal of Travel Research*, 57(3), 279–295.
- Ritchie, B. W., & Jiang, Y. (2019). A review of research on tourism risk, crisis and disaster management: Launching the annals of tourism research curated collection on tourism risk, crisis and disaster management. *Annals of Tourism Research*, 79, 102812.
- Santic, M., Bevanda, A., & Bijaksic, S. (2016). Influence of media on creation of a tourist destination image/utjecaj medija na kreiranje imidza turistickie destinacije. *Informatologia*, 49(3/4), 180.
- Sigala, M. (2011). Social media and crisis management in tourism: Applications and implications for research. *Information Technology & Tourism*, 13(4), 269–283.
- Simone, P. (2007). Preface: The tsunami of 26 December 2005, PATA’s initial responses. In E. Laws, B. Prideaux, & K. Chon (Eds.), *In Crisis Management in Tourism*. U.K.: CABL.
- Smith, K. C., Rimal, R. N., Sandberg, H., Storey, J. D., Lagasse, L., Maulsby, C., ... Links, J. M. (2013). Understanding newsworthiness of an emerging pandemic: International newspaper coverage of the H1N1 outbreak. *Influenza and Other Respiratory Viruses*, 7(5), 847–853.
- Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management*, 32(6), 1310–1323.
- Speakman, M., & Sharpley, R. (2012). A chaos theory perspective on destination crisis management: Evidence from Mexico. *Journal of Destination Marketing & Management*, 1(1–2), 67–77.
- Stats NZ. (2019). International Travel: January 2019. Retrieved from <https://www.stats.govt.nz/information-releases/international-travel-january-2019#:~:text=In%20the%20January%202019%20year,were%203.02%20million%20up%20145%2C800>.
- Steinmetz, J. (2020). What about quarantine in an overwater bungalow in Maldives?. *In E Global Travel Industry News*. Retrieved from <https://www.eturbonews.com/577304/what-about-quarantine-in-an-overwater-bungalow-in-maldives/>.
- Stepchenkova, S. (2009). *A proposal for a Dynamic Destination Image Index: Concept, construction, and validation*. Purdue University.
- Stepchenkova, S., & Eales, J. S. (2011). Destination image as quantified media messages: The effect of news on tourism demand. *Journal of Travel Research*, 50(2), 198–212.
- Tao, Y., Zhang, F., Shi, C., & Chen, Y. (2019). Social media data-based sentiment analysis of tourists’ air quality perceptions. *Sustainability*, 11(18), 5070.
- Ting, V. (2020). To mask or not to mask: WHO makes U-turn while US, Singapore abandon pandemic advice and tell citizens to start wearing masks. *In The South China Morning Post*. The South China Morning Post. Retrieved from <https://www.scmp.com/news/hong-kong/health-environment/article/3078437/mask-or-not-mask-who-makes-u-turn-while-us>.
- Varelas, S., & Apostolopoulos, N. (2020). The implementation of strategic management in Greek Hospitality Businesses in times of crisis. *Sustainability*, 12(17), 1–14 (7211).
- Wang, F., Xue, T., Wang, T., & Wu, B. (2020). The mechanism of tourism risk perception in severe epidemic—The antecedent effect of place image depicted in anti-epidemic music videos and the moderating effect of visiting history. *Sustainability*, 12(13), 5454. <https://doi.org/10.3390/su12135454>.
- Wang, Z., Irwin, M., Cooper, C., & Srivastava, J. (2015). Multidimensions of media multitasking and adaptive media selection. *Human Communication Research*, 41(1), 102–127.
- Wilson, S. (2020). Pandemic leadership: Lessons from New Zealand’s approach to COVID-19. *Leadership*, 16(3), 279–293. <https://doi.org/10.1177/1742715020929151>.
- Wong, C., & Yusof, Z. M. (2020). Time to all foreign workers out of dorms? Health experts weigh in. *In The Straits Times*. Retrieved from <https://www.straitstimes.com/singapore/time-to-allow-foreign-workers-out-of-dorms-health-experts-weigh-in>.
- Wong, J. E. L., Leo, Y. S., & Tan, C. C. (2020). COVID-19 in Singapore—Current experience: Critical global issues that require attention and action. *JAMA: The*

Journal of the American Medical Association, 323(13), 1243–1244. <https://doi.org/10.1001/jama.2020.2467>.

- Wu, L., & Shimizu, T. (2020). Analyzing dynamic change of tourism destination image under the occurrence of a natural disaster: Evidence from Japan. *Current Issues in Tourism*, 1–17.
- Yeh, S. (2020). Tourism recovery strategy against COVID-19 pandemic. *Tourism Recreation Research*, 1–7.
- Yeoman, I., & McMahon-Beattie, U. (2006). Tomorrow's tourist and the information society. *Journal of Vacation Marketing*, 12(3), 269–291.
- 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.
- Zarocostas, J. (2020). How to fight an infodemic. *The Lancet*, 395(10225), 676.
- Zhai, X., Luo, Q., & Wang, L. (2020). Why tourists engage in online collective actions in times of crisis: Exploring the role of group relative deprivation. *Journal of Destination Marketing & Management*, 16, 100414.
- Zou, Y., & Meng, F. (2020). Chinese tourists' sense of safety: Perceptions of expected and experienced destination safety. *Current Issues in Tourism*, 23(15), 1886–1899.



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