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Abstract

Purpose

The present study reports on findings emerging from an international study focused on the COVID-19 pandemic impact on travel attitudes and behavioral intentions.

Design/Methodology/Approach

An online survey created with Survey Monkey was distributed to a sample of 216 international travelers who were at least 18 years of age.

Findings

The findings suggest that attribution theory (locus of control) may account for international travel. Individuals attributing the spread of COVID-19 to their own countries (internal locus of control) are more likely to travel abroad. Statistically significant differences are observed between various generational cohorts concerning perceived travel risk, domestic, and international travel.

Originality/Value

The impact of a health crisis on domestic and international travel conceptualized in a single model is absent from the literature. We propose a model to account for the influence of pandemics on tourists' attitudes and intentions to travel and whether attribution of blame influences travel destination choices (domestic or international).

Keywords: COVID-19, attribution theory, animosity, perceived travel risk, intentions to travel, China

Introduction

The novel "COVID-19" coronavirus disease was first detected in Wuhan, China, in December 2019 (Zhu, Zhang, & Wang, et al. 2020). Three months later, the World Health Organization declared a global pandemic. Containment measures to stop the spread of the virus, including lockdowns and border closures in most of the world's countries, brought tourism to a halt. In May 2020, the United Nations World Tourism Organization noted the COVID-19 pandemic had caused a 22% fall in global international tourism in Q1 of 2020, with a potential annual decline by 60-80%, leading to an estimated loss of US$80 billion (UNWTO, 2020).

This is not the first disease outbreak to lead to tourism uncertainty, travel interruptions and have economic impact; some on a global scale (Law, 2006). The SARS epidemic and later the H1N1 pandemic, for example, led to a considerable decrease in international arrivals with an estimated financial loss of $88B USD (UNWTO, 2020). The impact of the SARS outbreak in 2003 on China, Hong Kong, Singapore, and Vietnam's economies is estimated at $20 billion in lost GDP (Wilder-Smith, 2006). With a decline in around 70% of tourist arrivals across Asia, the outbreak was a major setback to the region's travel and tourism economy. The industry's growth rate slowed from 5% to 2.9% (Hong, 2009). In time, the world stopped the spread of the virus and eradicated the disease (Wilder-Smith & Freedman, 2020).

The COVID-19 pandemic is a major (if not the greatest) adverse health event of the 21st century. Early predictions of finding a vaccine or effective treatments within six to twelve months, allowing travel and tourism to resume to pre-crisis levels, was over-optimistic. As Gössling, Scott, and Hall (2020 p.2) note, 'within the space of months, the framing of the global tourism system moved from overtourism…to non-tourism.'

Despite continuous, timely research on the social impacts of COVID-19 on tourism and hospitality (Deloitte Access Economics 2020; Melly and Hanrahan 2020; Wen, Kozac, Yang, & Liu 2020) and future travel (Hotle, Murray-Tuite, & Singh 2020, Gössling et al. 2020) there is a lack of theory-based research (Jackson, 2019) to explain the effect of pandemics on the attitude and behavior of tourists. This study provides a new conceptual model underpinned by the attribution theory framework to provide new knowledge of tourists' attitudes and travel intentions.

The attribution theory is mainly used to explore whether a service failure is caused by the service provider or the customer (Choi & Cai, 2017). A service provider can be an airline, hotel, or a destination. A service failure can stem from either the process of service provision or its outcome (Huang, Zhang, Gursoy, & Shi, 2020). Recent findings on public perceptions of government culpability for the spread of COVID-19 supports the use of attribution theory as a theoretical framework when studying people's attitudes and travel intentions to particular holiday destinations. A case in point is China. A recent survey of the British public suggests that 64% of respondents appear to blame the Chinese government (i.e., the Ministry of Tourism) for not taking sufficient measures to contain the spread of the virus (Karyotis, 2020). Tourists who believe a foreign country could have done more to control a disease's spread may be less inclined to visit that country in the future. Similarly, domestic travel could decrease where populations believe that their governments could have done more. Based on attribution theory it is plausible that travelers could avoid China as a holiday destination if they perceive an outcome-based service failure (i.e., lack of biosecurity risk mitigation strategies and public health measures to keep tourists safe).

Few studies focus on the effect of attribution on tourism attitudes and behavioral intentions (Badu-Baiden, Adu-Boahen, & Otoo, 2016; Çakar, 2020), and none consider the

effect on future visitation intentions. This study extends the attribution theory's application to include perceptions of responsibility for the spread of COVID-19 by one's own country and other countries. Studies have examined the relationships between adverse health crises and international travel (Valencia & Crouch, 2008) or domestic travel (Cahyanto et al., 2016). The impact of a health crisis on domestic and international travel conceptualized in a single model is absent from the literature. This study tests a model examining tourists' attitudes and intentions to travel during a global pandemic and whether attribution of blame influences travel destination choices (domestic or international). Moving forward, this can inform tourism industry practitioners and policymakers on how to better respond to tourists' health concerns in the planning and implementation of their risk mitigation strategies and measures for tourism recovery.

Theoretical background

External/internal locus of control and behavioral intentions

Weiner's attribution theory explains how behavior is affected by common thoughts, influenced by expectations of satisfaction based on experience. The theory accounts for how people draw conclusions on the causes and effects of events (Weiner, 1980). This theory comprises four dimensions: internal vs. external locus of attribution and internal vs. external locus of control (Weiner, 2018). An underlying assumption is that a comparison between the outcome of an event and people's expectations forms the basis of their affective responses (Kim, Chang, Wong, & Park, 2014).

Attribution theory has been used to demonstrate that consumer reactions to product failure (i.e., gaps between expectations and outcomes) are predictable (Folkes, 1984). In tourism studies, it has been used to explain tourists' overall satisfaction with their travel experiences (Breitsoh, & Garrod, 2016; Choi & Cai,

2017; Jackson, 2019) and reactions to destination social responsibility (Su, Gong & Huang, 2019; Su, Lian & Huang, 2020).

A key concept associated with our study of attribution theory is locus of control. The concept refers to whether an individual interprets events in their lives as deriving primarily from their own doing or control (internal locus) or as caused by the behavior of another person or external circumstances (external locus) (Rotter, 1966). People's willingness to accept responsibility for what happens to them depends on their values and personality (Madrigal, 1995). Individuals leaning towards internal locus of control tend to believe that "they can take control of their lives." In contrast, those leaning towards external locus of control "tend to feel powerless" about events in their lives (Madrigal, 1995 pp.130-131). Locus "influences beliefs about who should solve problems", based on whoever's actions create the problem (Folkes 1987 p. 556).

Locus of control has been used to study future behavioral intentions (Hareli & Hess, 2008), including visitation of an international destination (Hsu & Chen, 2019). If tourists are harassed at a holiday destination, it may deter them from revisiting that location (Badu-Baiden et al., 2016). Perceptions of controllability can generate a range of emotions. Bad experiences mediated by uncontrollable causes may result in empathy or sympathy, whereas controllable causes can result in disgust and emotional reactions such as anger (Weiner, 2000).

When an event is considered preventable by a foreign entity's actions (i.e., external control) and it fails to act, negative emotion may develop towards that entity. Ang, Jung, Kau, Leong, Pornpitakpan, & Tan (2014) found that Malaysians, who thought that the USA could have controlled the development of the Asian economic crisis, were more likely to harbor animosity towards the USA. Karyotis (2020) found

that some individuals hold foreign and local governments responsible for the spread of COVID-19. This could influence tourists' future travel destination choices.

Since there are no previous studies on attribution of responsibility against a government for failing to stop the spread of a virus, this study uses local governments (one's government) as the internal locus of control and China as the foreign entity (external locus of control). China was chosen because the extent of media reports that suggest it had a role in the spread of COVID-19 outweigh similar reports against other countries. We consider,

H1a: External locus of control will be positively associated with animosity towards China.

H1b: External locus of control will be negatively associated with travelers' willingness to visit China.

H2a: Internal locus of control will be positively associated with travelers' willingness to visit China.

H2b: Internal locus of control will be positively associated with travelers' willingness to travel internationally.

H2c: Internal locus of control will be negatively associated with travelers' willingness to travel domestically.

Animosity

Klein, Ettenson, and Morris (1998) define animosity as 'anger related to previous or ongoing political, military, economic, or diplomatic events' (p. 90). Tourism (Abraham & Poria, 2019b; Moufakkir, 2014; Sanchez, Campo, & Alvarez, 2018; Stepchenkova, Shichkova, Kim, & Rykhtik 2017; Farmaki, Khalilzadeh, & Altinay, 2019) and

hospitality research (Kim, 2019), suggests that consumer animosity is likely to have long-term effects on travel behavior.

Countries/entities and private individuals inhabiting a target country as a collective can be targets of animosity (Abraham & Poria, 2019; Alvarez & Campo, 2019; Stepchenkova et al., 2017). Media reports on the outbreak of COVID-19 describe concerns about emerging animosity towards people of Asian descent and Chinese nationals (Clarke, 2020). Since the spread of the virus, anti-Asian assaults, harassment, and hate crimes have been reported in the USA, Italy, France and other countries. In the UK, there were more than 200 reported offences against Chinese nationals in the first three months of 2020 (Mercer, 2020). In Australia, a survey reported 178 incidents of racism against Asian Australians in a two-week period (Zhou, 2020). By May 8, 2020, the United Nations Secretary-General said on Twitter that "the pandemic continues to unleash a tsunami of hate and xenophobia, scapegoating and scare-mongering" and urged governments to "act now to strengthen the immunity of our societies against the virus of hate."(Gutteres, 2020). Animosity towards Chinese nationals is coupled with animosity harbored towards the Chinese Government, mainly over inadequate measures taken to halt the spread of the disease to other parts of the world (Silver, Devlin, Huang, 2020).

Animosity and intentions to visit China

Past research points to a relationship between animosity and intentions or willingness to visit a holiday destination (Sánchez, Campo, & Alvarez, 2018). A study by Stepchenkova et al. (2017) found that ongoing political discord between the US and Russia resulted in Russians harboring animosity towards the US. Consequently, the number of Russian tourists willing to visit the US decreased considerably (Statistica, 2020). The US imposed "designated persons sanctions" against Russia for invading and occupying Ukraine's

Crimea region and parts of eastern Ukraine. In 2016, Russian tourists traveling to the US decreased by 26% (Stepchenkova et al., 2017). We consider,

H3: Animosity towards Chinese nationals and the Chinese government will be negatively associated with willingness to visit China.

Risk Perception and willingness to travel

This study considers the relationship between risk perception, willingness to travel domestically or internationally for business or leisure, and infectious disease. Domestic travel covers travel within a country of residence, and international travel covers all other travel. Risk perception can influence tourists' destination choices, with most tending to choose low-risk destinations for holidays (Sönmez & Graefe, 1998) or the perceived safety of domestic travel (Dolnicar, 2005). More venturous types of travelers can be more inclined to travel abroad for holidays, even if the destination is affected by a crisis (Hajibaba, Gretzel, & Leischet al., 2015; Sönmez & Graefe, 1998). Much appears to depend on individual characteristics, the types of activities to be undertaken, perceived benefits of the risk-handling activity, and ability to absorb monetary losses (Dowling & Staelin, 1994) or other demographic characteristics (Roehl & Fesenmaier, 1992).

Law (2006) distinguishes types of risk as infectious diseases, natural disasters, and terrorism. Typically, there is more readily available information on domestic than international destinations influencing risk perceptions. Media reports of an outbreak of the Ebola Virus Disease (EVD) in Africa, for instance, deterred tourists from visiting Gambia, which was EVD free (Novelli et al., 2018).

Similarly, studies of risk perception and willingness to travel during the outbreaks of SARS in Asian countries demonstrate that tourists avoided these destinations,

regardless of actual infection rates (Cooper, 2005; Wilder-Smith, 2006). Rittichainuwat & Chakraborty (2009) observed that first-time travelers perceive health risks from SARS and HINI bird flu outbreaks more severely than frequent travelers, and may refrain from future travel. Studies also suggest that major disease outbreaks are associated with greater perceived risk concerning international travel (Cahyanto, Wiblishauser, Pennington-Gray, & Schroeder, 2016). This can also be observed with COVID-19 related government recommendations. For example, Germany's government recommended domestic instead of international travel for holidays in the fall and winter of 2020 (Sonnichsen, 2020). We consider,

H4a: Perceived travel risk will be negatively associated with willingness to travel to China.

H4b: Perceived travel risk will be negatively associated with willingness to travel internationally.

H4c: Perceived travel risk will be positively associated with willingness to travel domestically.

Past and future travel relationships

Past research suggests that past travel experience predicts future travel intentions (Lam & Hsu, 2006). Tourists who have visited a destination in the past are more likely to perceive it as safe (Sönmez & Graefe, 1998) and are likely to be less fearful to revisit destinations (Floyd et al., 2004). According to past research tourist demographics (l Sönmez & Tascli, 2019), coupled with several destination-inherent factors (facilities, quality of services, promotional activities, cost of living, cost of transportation, package price) determine revisit intentions, even in times of political instability (Seddighi and Theocharous, 2002). Hence, it may be argued that tourists who have visited an

international destination pre-COVID-19 are likely to revisit it once travel restrictions are relaxed. We consider,

H5a: Past international travel will be positively associated with willingness to travel internationally once travel restrictions are lifted.

H5b: Past travel to China will be associated with a willingness to travel to China once travel restrictions are lifted.

Methodology

The target population for this study was travelers. An online survey questionnaire created with Survey Monkey was distributed to a sample of individuals at least 18 years of age. The conceptual model tested in the present study is comprised of 4 latent variables (i.e., external control, internal control, animosity, and perceived risk) and 15 indicators. The proportion of indictors (*r*) to latent variables is 3.75 to 1. The modest sample size is consistent with Boomsma's (1982a, 1982b) minimum sample size recommendation (n=100) for a proportion of 4:1 ($r = 4$).

The questionnaire comprised two major parts. In the first part, 7 items were employed to measure perceived travel risk with a 5-point Likert scale (1-strongly disagree; 5-strongly disagree) adapted from Cahyanto et al. (2016). Intentions to travel domestically and internationally for business or leisure in the next 12 months was measured with items adapted from Floyd, Gibson, Pennington-Gray, & Thapa (2004). Animosity towards China was measured on a scale adapted from Klein et al. (1998). Locus of control (internal and external) was measured with items adapted from Ang et al. (2014). The second part of the questionnaire included socio-demographic characteristics such as gender, generational cohort, and education. Data was collected over the month of April 2020 during lockdowns and border closures in most of the world's countries. In line with

previous research (Chin, China, & Wong, 2018), we conducted a preliminary analysis using SPSS (version 25) before conducting measurement and structural analyses. A total of 256 questionnaire were distributed. 40 questionnaires were omitted due to incomplete data. The final dataset comprises a total of 216 usable questionnaires. SmartPLS (version 3.3.2) was used to assess the Proposed Research Model.

Findings

Sample profiling

The sample (n = 216) is comprised of 36.6% males and 60.7% females. The rest (2.6%) selected 'prefer not to say' as their answer (see Table 1). Generation-Y (born between 1980 – 2000) comprises the majority of the sample (66.8%), followed by baby-boomers (born between 1946 – 1965) who comprise 13.7% of the sample and generation-X (born between the mid-1960s and late 1970s) which accounts for 16.8% of the sample. The overwhelming majority of respondents are highly educated (87.4% hold a university degree).

Table 1. goes here

Validation of the conceptual model using CFA

Before analysis, all relevant items were reversed-scored. We used SmartPLS to test for internal consistency, fit of the proposed model (see Figure 1), and path analysis. Omitted from further analysis were items with loadings below the recommended 0.5 cutoff in the structured model (Filieri, Alguezaui, & Mcleay, 2015). Four items were dropped from the perceived travel risk construct (PTR7-10) and one item from internal control (IC3) due to falling below the 0.5 threshold. As shown in Table 2, all items loaded significantly on their respective constructs ($p < 0.001$). Factor loadings were all above 0.7 and significant

(p<0.01), suggesting an acceptable level of internal validity (Cheng, Lam, & Yeung, 2006). Furthermore, loadings were within the acceptable 0.6 to 0.9 range thus indicating unidimensionality. Convergent validity was assessed by estimating composite reliability and average variance extracted (henceforth referred to as AVE). Internal consistency was examined by assessing Cronbach's α and construct reliability values. As can be seen from Table 2, Cronbach's α values were at or above the 0.7 cutoff recommended by Fornell and Larcker (1981). The composite reliability values of all latent variables were at or above the recommended threshold of 0.6 (Fornell, 1992). In line with Fornell and Larcker (1981) recommendations, discriminant validity was estimated by assessing AVE (see Table 3).

Figure 1. goes here

Table 2. goes here

Table 3. goes here

Assessing structural model

The results of the hypothesized relationships are shown in Table 5. The Proposed Model accounts for 40% of the variance in animosity, 19% in willingness to travel to China, 18.5% in the intentions to travel internationally, and 3.7% in travel intentions domestically in the coming 12 months. Bootstrapping using a sample of 5000 was performed to calculate the t-statistic and strength of the relationships between the endogenous and exogenous constructs in the Proposed Model (Hair, Hult, Ringle, & Sarstedt, 2017). According to H1a, external locus of control will be positively associated with animosity toward China. This was supported by the data (β = 0.63, t = 16.976, p < 0.001). According to H1b, external locus of control will be negatively associated with willingness to travel to China. This was confirmed (β = -.021, t =

2.877, $p < 0.05$). A negative association was hypothesized between internal locus of control and the willingness to travel to China. The path is negative but insignificant. Hence, H2a is not supported ($\beta = -0.07$, $t = 1.102$, $p > 0.05$). H2b posits a positive relationship between internal locus of control and the willingness to travel internationally. This was corroborated ($\beta = 0.15$, $t = 2.182$, $p < 0.05$). According to H2c, internal locus of control will be negatively associated with the willingness to travel domestically. This was not confirmed by the data ($\beta = -0.03$, $t = 0.382$, $p > 0.05$). H3 posits that animosity will be negatively associated with willingness to travel to China, and this was supported by the data ($\beta = -0.20$, $t = 3.022$, $p < 0.05$). According to H4a, perceived travel risk will be negatively associated with the willingness to travel to China. However, this was not corroborated by the data ($\beta = 0.07$, $t = 1.774$, $p > 0.05$). H4b posits that perceived travel risk will be negatively associated with the willingness to travel internationally. This was supported by the data ($\beta = -0.21$, $t = 3.028$, $p < 0.05$). In contrast to the expectations of H4c, perceived travel risk was negatively associated with the willingness to travel domestically ($\beta = -0.18$, $t = 2.493$, $p < 0.05$). H4c is not supported by the data. Finally, according to H5a, past international travel will be positively associated with willingness to travel internationally in the next 12 months. This was not confirmed ($\beta = -0.35$, $t = 5.600$, $p < 0.001$). H5b posits past travel to China will be positively associated with a willingness to travel to China in the Future. This is not corroborated by the data ($\beta = 0.10$, $t = 1.751$, $p > 0.05$).

To assess the PLS path model's predictive relevance, Stone Geisser's Q^2 was estimated (Hair et al., 2017). Using the blindfolding technique, estimates were employed to supplant actual data points recursively at an omission distance of 7 (the default omission distance in SmartPLS). The analysis results corroborate the model's predictive relevance for all the variables in the Proposed Model (see Table 4). Finally, variation inflation factor (VIF) values were examined to test for possible multicollinearity issues, as shown in Table 5, VIF values

below the maximum value of 10. Thus, no multicollinearity exists between the constructs comprising the Proposed Research Model (Bock, Zmud, Kim, & Lee, 2005).

Discussion

Previous infectious disease outbreaks emerging from Asian countries such as severe acute respiratory syndrome (SARS) or HINI influenza (pandemic have had damaging impacts on travel and tourism. In this paper, we consider the impact of widespread travel restrictions during the COVID-19 pandemic on travel attitudes and behavioral intentions. This is the first study to also question whether a theoretical relationship between animosity towards a foreign country (China), blamed (attribution) for failing to contain the spread (locus of control) of an infectious disease beyond its borders, is associated with future domestic and international travel intentions.

The results indicate that at the time of the survey some participants harbored animosity toward China and its people for the new virus and its spread to other countries. This is consistent with similar suggestions in media reports (Karyotis, 2020; Willson, 2020). Weiner's attribution theory suggests that tourists are more likely to have positive affective responses (i.e., loyalty to a destination) if they attribute responsibility for a crisis to forces outside a destination's sphere of control. Conversely, a negative affective response will likely occur if tourists believe the harm was within the destination's control (Breitsohl & Garrod, 2016; Lee, 2004; Weiner, 1985). Studies suggest that attribution of blame is associated with consumer attitudes and behavior (Folkes, 1987). Jorgensen (1994) demonstrates that a fatal air crash, attributed to the airline rather than a force outside its control, can diminish consumer attitudes towards the company. Our findings suggest travelers holding a country liable for failing to control the spread of a highly contagious disease are likely to harbor animosity (an attitude) and avoid traveling to that country in the future (behavior). These findings support a

growing body of research demonstrating the detrimental impact that animosity can have on travel behavioral intentions (Khalilzadeh, 2018; Stepchenkova, Su, & Shichkova, 2018).

In line with previous research, our findings point to an inverse relationship between perceived travel risk and international travel (Park & Reisinger, 2010). This may be due to a positive relationship between self-efficacy and travel avoidance observed in previous research (Liao, Cowling, Lam, Ng, & Fielding, 2010). The mean score on the self-efficacy scale used in our study is well above the mid-point (M=4.13), suggesting that, overall, respondents believe that they are at a lower level of infection. This suggests that self-efficacy is a possible moderator in the relationship between perceived travel risk and travel avoidance and that tourism researchers should consider its inclusion in future studies.

In contrast to previous research (Floyd et al., 2004; Sönmez & Graefe, 1998), our study found a negative and statistically significant relationship between past international travel and willingness to travel internationally once travel restrictions are lifted. No significant relationship was observed between previous travel to China and willingness to revisit it in the future. This suggests that if a country is perceived as responsible for the spread of a disease, previous travel to that country may not be a reliable predictor of future travel intentions. This is perhaps distinguishable from the case of less extreme circumstances. The observed relationship between past travel and future intentions might be accounted for by a heightened risk perception associated with current international travel (M = 4.12) and consequential desire to postpone travel, especially among those (75.9%) who had recently traveled abroad (i.e. within the last 12 months).

Theoretical Implications

This presumably represents a frontier study, attempting to empirically explore the relationship between attribution theory and animosity in the context of future travel intentions, domestically and internationally, in the backdrop of a global pandemic. Some contextual factors should be taken into account. Animosity towards China was likely influenced by various factors, including unproven blame claims by other governments and the reiteration of these ideas in news media. This likely contributed to a rise in negative emotions. This disease has led to extremely difficult circumstances, giving rise to economic insecurity and mental wellbeing issues. The conceptualization of tourism attitudes and behaviors should include these factors. Past experience, while it is a critical variable in predicting future travel, other context-specific variables such as governments' control and management measures deployed during the pandemic and previous travel timing may be relevant in future predictions.

Practical implications

In contrast to previous research, our findings suggest that attribution theory (locus of control) can account for both international and domestic travel. Individuals attributing the spread of COVID-19 to their own countries may be less likely to visit local holiday locations. This may stem from a loss of trust by local populations in their governments' approach to controlling the virus's spread. Moving forward, in an attempt to restore or improve public confidence in engaging in travel and visiting tourism destinations, tourism practitioners and government authorities should consider adopting and enforcing the hygiene and containment measures recommended by public health officials and the World Health Organisation (social-distancing, avoiding crowds, hand hygiene).

This study indicates that once travel restrictions are relaxed, some people (e.g., 1/3 of those surveyed) intend to revisit China within the next 12 months for business purposes. Restoring the confidence of leisure travelers is likely to be the most critical factor in luring tourists back. Tourism practitioners and policymakers should be mindful of the possibility of animosity against China when planning future strategies for resuming tourism services. Open communication about the pandemic and its implications for tourists will be required to develop targeted PR campaigns. This equally applies to those organizations with interest in attracting Chinese tourists to their destinations. It is essential to be cognizant of the potential fear, anxiety, and loss of trust that can develop in tourists of countries that have been the target of negative publicity and allegations about a disease outbreak. Recommendations in other studies (e.g., Wen et al., 2020) on changes in Chinese travelers' consumption patterns associated with concerns about the COVID-19 pandemic may help develop possible future responses to these changes to attract tourists.

Experience suggests that countries and businesses should also have crisis-management plans ready in order to know how to react and which issues to address (Novelli et al., 2018). Measures taken in response to crises often center on "(1) infrastructure and reconstruction, (2) provision of financial assistance and human resources for tourism enterprises, (3) development of communication and marketing campaigns to promote tourism in existing and new markets" (Ritchie and Jiang (2019) p. 9).

Conclusions, limitations, and future research

The COVID-19 disease has taken an unprecedented toll on travel and tourism, lives, and livelihoods. This study demonstrates the value of attribution theory in explaining tourists' future travel intentions and behaviors in the context of widespread disease outbreaks. It joins an emerging body of tourism studies that

explain the need for policymakers and tourism and hospitality businesses to be aware and sensitive to the necessity of open communication and collaboration in planning and designing appropriate risk management measures and public relations campaigns to boost confidence in traveling.

Most notably, our study raises awareness that possible animosity against countries or governments (foreign or domestic) considered responsible for disease-related health threats can affect future tourists' travel intentions and behaviors. Animosity may be a useful factor to consider in future tourism studies associated with disease outbreaks. The intention of tourists to visit a holiday destination in the future may depend on how much they believe the destination acted on behalf of the greater social good (external motivation) in addressing the health, social, and economic consequences of the disease and its attempt to contain its spread, locally and globally.

Our study is limited in terms of the sample's size, and it is predominantly university educated, young, and female. Hence, extrapolation to other parts of the population or the broader global tourist population should be treated with care. Future research would benefit from a replication of the study using a larger sample. Since senior travelers tend to have more disposable income, this age group warrants further investigation. Income can be a predictor of travel intention but was not included in our survey instrument. We considered income too challenging to capture in our international study, which would involve comparing different currencies, varying levels of income, and standards of living. Income would be a useful control variable in future research.

Due to the multifaceted nature of the issues, further study needs to be conducted to determine whether the locus of attribution changes when travel restrictions are

lifted, people can return to work, treatments and a vaccine become available, and so on. At the time of the survey, little was known about the virus. Borders were closed, and containment measures to stop the disease spreading were in place in most countries. These factors may have contributed to biased responses. Although beyond the scope of our study, future research would benefit from examining the impact of COVID-19 with a focus on the internal vs. external locus of attribution dimensions of the attribution theory framework.

However, this may not be the only theoretical framework to explore the impact of COVID-19 on tourism behavior. Other theoretical frameworks may provide a different lens through which to explore tourism behavior in the context of a health crisis. A case in point, the Theory of Reasoned Action (henceforth referred to as TRA). TRA is comprised of seven constructs, three of which (perceived risks, attitude, and intention to visit) are part of our proposed conceptual model (Fishbein, 1979).

Future research would also benefit exploring the interplay of other demand variables such as length of stay, travel distance, and preferred holidays/activities, with animosity in the context of the COVID-19 pandemic. It can also be argued that the mishandling of a health crisis may taint a destination's image for a considerable time. Exploring the impact of global pandemic on destination image is worthy of further research.

The present study suggests travelers harbor animosity toward China as they attribute its spread to the initial mishandling of the pandemic by the Chinese government. COVID-19 became politicized leading to political conflicts especially between the US and China. Past research suggests political conflict leads to the development of negative stereotypes which may be difficult to change

(Farmaki, Antoniou, & Christou, 2019). Hence, the exploration of the relationship between the politicization of pandemics, stereotyping, and tourism behavior is worthy of further investigation.

The findings suggest that past travel experience may not be a reliable predictor of future travel intentions in times of major global pandemics. The growth in use of videoconferencing by business travelers, for instance, may account for a reduction in the necessity of business travel, and may continue to influence future business travel. However, the distinction between business and leisure travel was beyond the scope of the present study. This may be a worthwhile avenue for future research.

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Figure 1. Proposed model

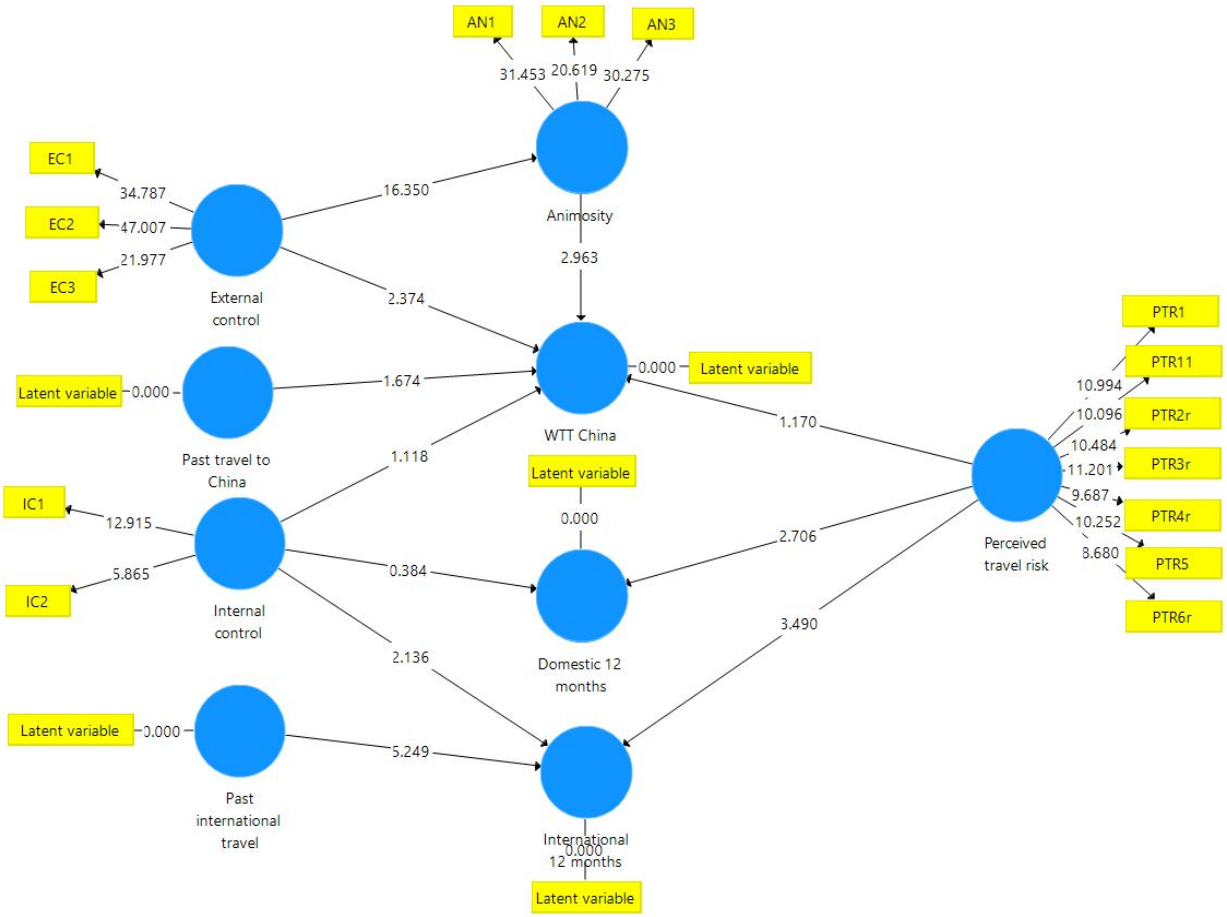

Table 1. Demographic description of data.

Variable	Feature	N	%
Gender	Male	70	36.6
	Female	116	60.7
	Prefer not to say	5	2.6
Generational cohort	Baby-boomers	26	13.7
	X-generation	32	16.8
	Y-generation	127	66.8
	Z-generation	5	2.6
Education	Less than high-school education	1	0.5
	Primary education	3	1.6
	Trade/technical qualification	4	2.1
	Secondary education	16	8.4
	University education	167	87.4

Table 2. Confirmatory factor analysis

Factor and corresponding item	Indicators	Factor loading	SE	t-statistic	Cronbach's alpha	CR	AVE
Perceived travel risk (PTR)					0.898	0.918	0.614
Domestic travel is risky now.	PTR1	0.778	0.005	9.159			
*Domestic travel is safe now.	PTR2	0.797	0.005	10.057			
*I would feel comfortable traveling domestically.	PTR3	0.824	0.005	17.594			
*I would feel comfortable traveling internationally.	PTR4	0.747	0.003	11.808			
International travel is risky now.	PTR5	0.789	0.004	10.908			
*International travel is safe now.	PTR6	0.762	0.006	7.966			
Dangerous to travel internationally right now.	PTR11	0.785	0.005	9.544			
External control (EC)					0.814	0.890	0.729
The Chinese could have prevented my country's economic crisis from happening.	EC1	0.874	0.001	35.875			
The Chinese government could have done more to prevent the spread of the virus globally.	EC2	0.875	0.001	46.708			
This is not the first time a global pandemic has emerged in China. The local population should have known to engage in preventive actions faster to avoid spreading the virus.	EC3	0.811	0.001	23.220			
Internal control (IC)					0.701	0.834	0.717
My country's government could have avoided the current economic problems resulting from the Coronavirus.	IC1	0.913	0.006	9.248			
My country's government could have done more to prevent/slow down the spread of the virus.	IC2	0.775	0.007	6.831			
Animosity (AN)					0.762	0.861	0.673
China's government is responsible for the global spread of the virus.	AN1	0.824	0.001	30.979			
Chinese citizens travelling on business have brought the virus into my country.	AN2	0.815	0.002	21.167			
Tourists from China and other countries brought the virus into my country.	AN3	0.822	0.001	29.400			

Table 3. Discriminant validity

Construct	AN	IC	EC	PTR
AN	**0.820**			
IC	0.322**	**0.846**		
EC	0.651**	0.314**	**0.853**	
PTR	0.009	-0.022	0.005	**0.783**

Notes: AN, animosity; IC, internal control; EC, external control; PTR perceived travel risk. Diagonals represent the square root of the AVE. Other entries represent the correlations. *p⩽0.05; **p⩽ 0.01 (two-tailed)

Table 4. Stone Geisser's Q^2 Values

Variable	SSO	SSE	$Q^2 = (1\text{-SSE/SSO})$
Animosity	648.000	478.133	0.262
International travel	216.000	179.793	0.168
WTT China	216.000	183.202	0.152
Domestic travel	216.000	214.565	0.007
External control	648.00	648.00	
Internal control	432.000	432.000	
Past international travel	216.000	216.000	
Past travel to China	216.000	216.000	
Perceived travel risk	1512.00	1512.00	

Note: Q^2 values greater than zero point to a model's predictive relevance for a dependent latent variable.

Table 5. Standardized path estimated and hypothesis testing

Hypothe-sis (H)	Paths	Path coefficients	SD	t-statistic	Result	VIF
H1a	EC ->AN	0.638	0.038	16.976**	Supported	1.000
H1b	EC->WTT China	-0.215	0.075	2.877*	Supported	1.735
H2a	IC->WTT China	-0.072	0.073	1.102	Unsupported	1.162
H2b	IC->International travel	0.151	0.074	2.182*	Supported	1.009
H2c	IC->Domestic travel	-0.031	0.077	0.382	Unsupported	1.003
H3	AN->WTT China	-0.204	0.067	2.945*	Supported	1.743
H4a	PTR->WTT China	0.077	0.059	1.774	Unsupported	1.009
H4b	PTR->Intentions to travel internationally	-0.211	0.064	3.028**	Supported	1.004
H4c	PTR->Intentions to travel domestically	-0.187	0.073	2.493*	Supported	1.003
H5a	Past international travel ->international travel	-0.358	0.062	5.600**	Unsupported	1.008
H5b	Past travel to China->intentions to travel to China	0.107	0.062	1.715	Unsupported	1.065

SD = Standard Deviation; P < 0.05,* P < 0.001**.