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INFORMATION SOURCE AND DESTINATION CHOICE: MEDIATION OF PERCEPTION OF COVID-19 PANDEMIC IMPACTS AND PERCEPTION OF DESTINATION

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Abstract. The tourism industry has changed at its core in response to the emergence of economic vitality, climate change, and notably the recent COVID-19 outbreak. This study's objectives are (1) to examine the factors affecting tourists' destination choices, including their information sources, their perceptions of their destinations, and their perceptions of the COVID-19 pandemic's impact and (2) to determine which of these factors play the most critical mediating role (i.e., perception of COVID-19 pandemic impact or perception of destination) in the relationship between information source and destination choice. Data from an online survey data of 645 respondents from Vietnam and MTurk were analyzed using SPSS version 22, Smart PLS 2.0 and Hayes Process 3.5. Our empirical findings suggest that (1) information source positively influences destination choice, (2) perception of the COVID-19 pandemic's impact acts as a key mediator in the relationship between information sources and destination choices, and (3) perception of destination ranked first as the most vital factor in tourists' destination choices. Our studies also discovered that the relationship from Information sources -> Perception of destination -> Destination choice is the strongest effect on travelers among the three indirect relationship. Our research will be of the greatest benefits to tourism stakeholders or tourism businesses as a foundation for further exploration into consumers' behavior and attitudes toward destinations and help them to promote efficient emergency-response plans.

Keywords: tourists' destination choices, information sources, perceptions of destinations, perceptions of the COVID-19 pandemic's impact.

JEL Classification: Z3, Z32.

Introduction

Tourism is an integral part of many national economies. The popularity of travel destinations is significantly influenced by consumer choice. The key motivations for travel include recreation and self-actualization, physical factors, social interaction, and visit to relationships (Mohamad & Jamil, 2012). Along with the continuous growth of the general economy, citizens' income has undergone remarkable growth in recent years, generating increased demand for tourism. Tourist destinations and tourism-related businesses worldwide have consequently witnessed a pronounced shift in consumer confidence and travel behavior.

The global economy has been impacted by the sudden and enormous blow to the tourism industry arising from the COVID-19 pandemic that began in late 2019. Although tourism research has incorporated studies on the potential effects of global climate change, no study to date has afforded equivalent appreciation to pandemics, with studies tending to emphasize individual country impacts rather vulnerability at the whole-system level. Nonetheless, several earlier studies have warned of the major threat to society, economies, and tourism posed by epidemics (Barry, 2004; Gössling et al., 2020; McKercher & Chon, 2004).

Scant empirical studies on the effects of pandemics on the tourism industry, particularly the new pneumonic disease first announced in Wuhan, China, on 31 December 2019, have been conducted hitherto. The impact of the COVID-19 pandemic on the international economy, including on tourism, has been tremendous, even in its early stages (Zenker & Kock, 2020). A sharp decline in international tourism to 78% in 2020 caused a loss of US$1.2 trillion in tourism export revenues, which is considered to be the largest tourism downturn in history (World Tourism Organization [UNWTO], 2020b). Tourism is a vital

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source of employment (1/10 jobs worldwide are directly related to tourism) (UNWTO, 2020b) and major GDP contributor, and COVID-19's impact is a central point of discussion in international economics. Borders were closed, cruise ships docked, entire aircraft fleets grounded, and hotels, restaurants, and tourist attractions closed in response to the pandemic. The number of international tourists travelling to Vietnam in March 2020 was 449,000, a decline of 63.8% from the preceding month and 68.1% from the previous year (Nguyen, 2020). Within the burgeoning discussions and studies about tourism and the effects of COVID-19, scholars unanimously recommend approaching the pandemic as a transformational catalyst (Mair, 2020, March 30). Consequently, it is necessary to examine the factors influencing tourists' destination choices in times of COVID-19 pandemic which may help corporate managers or travel agencies devise unique strategies to response to this crisis.

Individual's combination of diverse cognition and affection is defined as destination image which changes over time (Zenker & Kock, 2020). It is worth examining how the coronavirus pandemic has changed the images of specific destinations.

Several studies have advocated understanding consumer behavior and decision-making processes in the tourism industry during pandemics times (Sheth, 2020; Sigala, 2020) to understand the tourist's image of the destinations and initiate the strategy to enhance public awareness during this global crisis. Therefore, this research aims at (1) examining the factors affect the tourists' decision of destination choice including their information source, their perception of destination, and perception of the pandemic impacts; (2) determining which factors play the most critical mediating role in the relationship between information source and destination choice. Specifically, by using perspectives of consumer behaviors and destination choice, the study analyzes the roles of information source, perception of destination, and perception of pandemic impact in destination choice. The mediating roles of perception of destination and pandemic impact are investigated in relation to tourists' decision-making to offer practical guidance for managers and policy makers in the tourism and hospitality industry.

1. Literature review

1.1. Destination branding

One means of communicating a destination's unique identity is by differentiating it from its competitors. Representations of travel destinations in the consumer's memory are critical in the tourist decision-making process. This poses a significant problem for destination management organizations, requiring an extensive portfolio of destination branding and customer-based brand equity (Keller, 2016; Konecnik & Gartner, 2007; Yoon & Uysal, 2005). A brand is a combination of tangible and intangible components. Destination branding theory guides the evaluation of a tourist destination's brand. Destination branding is an important marketing strategy tool for travel destinations because it emphasizes the difference between different destinations and from there it creates market opportunities. Several studies have examined destination branding, which has recently been integrated with destination image (Cardoso et al., 2019), and evaluated brand equity (Keller, 2016; San Martín et al., 2019), destination awareness (Kim et al., 2014), place attachment (Loureiro & Sarmento, 2019), perception (Qu et al., 2011) and satisfaction (Chen & Dwyer, 2018). Destinations with stronger brands and more inspiring images are more likely to be preferred by visitors (Cardoso et al., 2019).

1.2. Destination choice

Consumer behavior involves activities, ideas, experiences, or decisions that satisfy consumer needs and wants. The study of consumer behavior in tourism not only concerns purchasing; it also concerns how things affect our lives and how we feel about ourselves and one another. The complexity of decision-making regarding destination choice has resulted in several studies based on different theories of consumer decision-making (Masiero & Qiu, 2018). Many studies have examined how past experience influences destination choice, recognizing satisfaction as a precondition for re-visit (Huang & Hsu, 2009). Owing to today's ready availability of information, Jeong and Shin (2019) revealed that information sources and not only past experiences are key in motivating and stimulating travel experiences at the selected destination.

Destination choice is often considered to involve a blend of different destination attributes (Stabler et al., 2009). According to Wu et al. (2011), the factors influencing tourist destination choice encompass three categories: 1) destination attributes, such as available tourist attractions (Wu et al., 2011) facilities, and quality of offered service (Awaritefe, 2004); 2) destination accessibility, encompassing travel distance, travel fares, or available travel modes; and 3) situation factors, such as weather conditions (Hamilton, 2004), political circumstances (Fuchs & Reichel, 2006), or pandemic situation (Kock et al., 2016) is mentioned. Likewise, crowdedness and seasonal differences (Huybers, 2003), ranking of attractions at the destination (Train, 1998) are considerably impact on tourist destination choice. The current study focuses on perception of destination (e.g. tourist attractions, service quality, weather) and perception of situation factors with particular reference to perceptions of the COVID-19 pandemic and how it impacts destination choice.

1.3. Information sources

Akalamkam and Mitra (2018) stated that information sources may comprise internal or external information. Internal information derives from one's memories of previous experiences (Coromina & Camprubí, 2016), while external information is consciously collected from a

person's external environment (Coromina & Camprubí, 2016). If a traveler does not have prior knowledge of a destination, outside sources of information, offline or online are their only choice (García-Milon et al., 2020). Nowadays, the availability of external information has increased due to the emergence of the Internet – online websites and social networking platforms – travel agencies and new devices (e.g., tablets, mobile phones, wearable devices, and smart TVs) (Akalamkam & Mitra, 2018).

Tourists determine whether to travel to a specific destination after creating an image based upon these information sources. Travel agents and tourism businesses may derive significant advantages from proper use of available sources in the right situation, in promoting destinations. Details on specific destinations, which visitors sometimes seek, is a particularly effective means of promoting the tourism industry. Information sources on a destination significantly impact traveler decision-making and destination selection, including whether or not visitors intend to return and how they perceive their destination choice. Tourist activity dictates how information is found and how that information is used (Um & Chung, 2019). Information sources are an important element of the overall traveler experience as they can drive and stimulate destination choice (Jeong & Shin, 2019). Therefore, we hypothesize the following:

Hypothesis (H1): Information source (IS) positively affects destination choice (DC).

During the 1918 influenza pandemic, a third of the world's population is estimated to have become infected because information on preventing the spread of the disease was not readily available. Now, however, in the 21st century, it is easier to disseminate such information via social media. Therefore, in the face of the COVID-19 outbreak, information source (IS) is a key means of communication between people and external news (up-to-date information) even while physically separated. Such information can promote safety and educate people on the dangers of the pandemic and how they might prevent it from spreading. Aside from the internet, word-of-mouth communication is a key means of imparting information.

The ability to judge a source's reliability regarding perceptions of the pandemic's impact is extremely critical. False or inaccurate information may be disseminated to instill fear or command attention. Consequently, it is crucial to establish how trustworthy an IS is. Sources worldwide indicate that nations experiencing high flows of international tourists will likely experience more cases and deaths attributed to COVID-19 (Farzanegan et al., 2020). Individuals are thus advised to consult a variety of sources to access better information on the pandemic's impact.

Hypothesis (H2.1): Information source (IS) positively affects perception of the COVID-19 pandemic's impact (PC).

Numerous studies have investigated the effect of information sources and cognitive perception on destination choice. A tourist may spend several weeks researching a destination and constructing the perceived image of the place from ISs. A tourist assesses a destination's value based on weather, accommodation, cost, quality, and residents via internal or external information. Subsequently, each visitor forms their own opinion about their desired destination. Information may be gathered from communication with friends or relatives: Word-of-mouth communication is given considerable weight (Jonas & Mansfeld, 2017) and may be considered one of the most significant factors in perception of destination (Karl & Schmude, 2017).

Hypothesis (H3.1): Information source (IS) positively affects perception of destination (PD).

1.4. Perception of COVID-19 pandemic's impact (PC)

The COVID-19 pandemic has prompted all destinations around the world to impose travel restrictions, according to research by the World Tourism Organization (UNWTO). The COVID-19 pandemic has affected many aspects of our lives, not least the tourism industry (UNWTO, 2020a). Under the new context, tourism managers must anticipate and react wisely to withstand the crisis (García-Milon et al., 2020). Following earlier study, new statistics from the United Nations specialized agency for tourism indicate that 100% of destinations now have restrictions in place. Of these, more than 80% of destination had pandemic related restrictions in effect for four or more weeks, and no destination had removed those restrictions as of 20 April. COVID-19 Research conducted by the United Nations specialized agency for tourism, evaluating restrictions up to 1 September, found that a total of 115 destinations (53% of all destinations worldwide) have lowered travel restrictions, an increase of 28 since 19 July. Of these, two have abolished all restrictions, while the other 113 do have certain stringent policies in place.

Perception of the pandemic's impact may be critical in predicting tourists' destination choices (Kock et al., 2016). Analysis of different attitudes toward the pandemic impact may help to positively influence consumers' destination choices during the recovery phase of crisis (Hajibaba et al., 2015). Other studies have shed light on how destinations are chosen by specific groups (e.g., visiting friends and relatives), who represent a potentially promising target segment for the industry's recovery (Backer & Ritchie, 2017). Tourists are more likely to avoid destinations with an increased safety risk such as a pandemic outbreak (Neuburger & Egger, 2020).

Thus, we propose Hypothesis 2.2.

Hypothesis (H2.2): Perception of the COVID-19 pandemic's impact (PC) positively affects destination choice (DC).

Understanding how tourists view information about a destination is critical for decision-making in marketing

and management between private companies and policy makers (Wöber, 2003). The role of IS is identified as crucial in forming the customer's commitment. Information cues are selected by people, affecting their choices. During the pandemic or post-COVID-19, information is considered the key decision-making tool. Tourists' commitment to destinations has been shaken by the pandemic. False information represents a hidden threat that impacts tourists' commitment. Non-official information sources about the destination during the pandemic are responsible for the destination's image and brand and the tourist's attitude, as tourists' choices are re-shaped. While destination information has been made regarding travelers' destination choice behaviors (Jeong & Shin, 2019), the criticality of travelers' perception of COVID-19's impact and its effects on their destination choices have been rarely uncovered. Hence, hypothesis 2 was proposed:

Hypothesis (H2): Perception of the COVID-19 pandemic's impact (PC) mediates the relationship between information source (IS) and destination choice (DC).

Although the tourism industry is most severely impacted by the number of international visitors, domestic tourism will also be hampered due to fears of COVID-19 spreading. Perception of destination can see as destination image which comprises an individual's diverse cognitive and affective collections as perceived in relation to a destination (Kock et al., 2016). Existing research indicates that images may be perceived differently across time and circumstance. Therefore, the coronavirus pandemic can reshape images of unique destinations. In particular, many destinations with high infection rates may see their images turn into something other than what potential tourists attribute to them. Zenker and Kock (2020) indicated that potentially affected imaging aspects include views of the health infrastructure, protection or otherwise Covid-19-impaired connections, such as nightlife, mass tourism, or packed experiences. Two coronavirus-induced scenarios of destination have been empirically tested and measured. First, the destinations subjected to COVID-19 may face an obligation in future attempts to attract travelers because of their worsened reputation, particularly among those tourists who are risk-sensitive and vulnerable. Second, in the another hand, these destinations may gain value from a benevolent attitude of future tourists who choose these coronavirus-shaken destinations to economically support them. (Zenker & Kock, 2020). From discussion, we propose the following:

Hypothesis (H4): Perception of the pandemic's impact (PC) positively influences perception of destination (PD).

1.5. Perception of destination (PD)

According to The White Paper on Development and Promotion of Tourism in the Northern Cape (Department of Environmental Affairs and Tourism, 2005), tourists' perceptions of destinations are of principal importance, as they play a valuable part in marketing. Perception may be defined as the process by which an individual select, organizes, and interprets stimuli into a meaningful and coherent picture of the destination. Many definitions of destination branding have focused on destination image but not necessarily limited to the traditional branding concept in marketing fields (Barnes et al., 2014). Destination image is defined as an individual's knowledge (beliefs), feelings, and perceptions regarding a particular destination (Fakeye & Crompton, 1991). PD develops based on six image factors: priority, attractiveness for overnight stays, resources, facilities, peripheral attractiveness, and reputation (Obenour et al., 2005). Another study conducted by Hui and Wan (2003) demonstrated tourists' perceptions of Singapore using eight cognitive image dimensions: leisure and tourist facilities, shopping and food culture, local residents and nightlife, political stability, adventure and

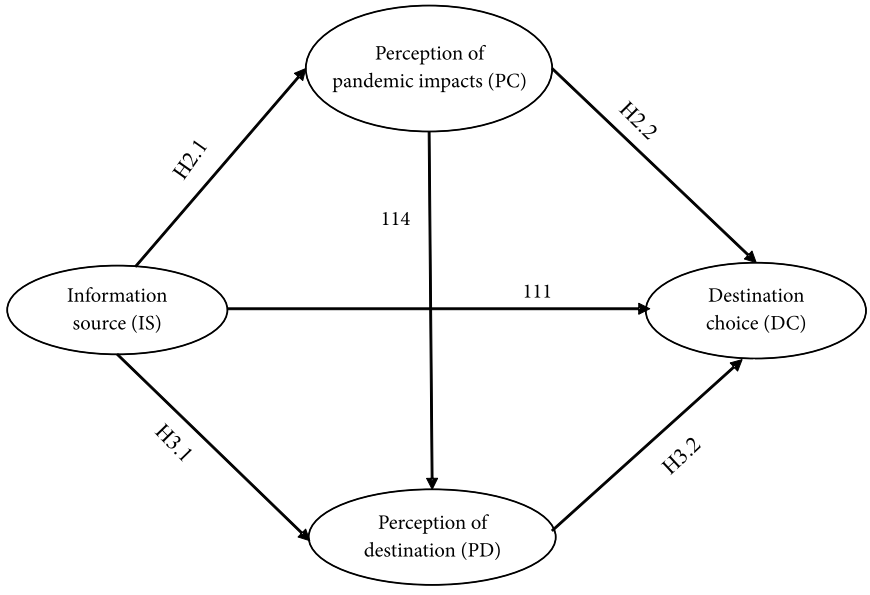


Figure 1. Theoretical Study Model

nature, history, cleanliness, and personal protection and convenience. Lertputtarak (2012) assessed PD based on eight items as beautiful landscapes, interesting tourist attractions, reasonable expenses, friendly locals, high-level security, comfortable weather, well-known destination and nightlife entertainment. Destination perception is influential in the destination selection process (Chen & Tsai, 2007) and in determining tourists' awareness of their traveling decisions that dictate their behaviors. Hence, it is clear that consumer behaviors reflect perceptions, which impact destination choice considerably.

Hypothesis (H3.2): Perception of destination (PD) positively impacts destination choice (DC).

Hypothesis (H3): Perception of destination (PD) mediates the relationship between information source (IS) and destination choice (DC).

Having reviewed the literature, the theoretical gaps on destination choice behavior have been identified. The study model is depicted in Figure 1.

2. Methodology

2.1. Sample selection

Convenience sampling was used in this research which included 645 respondents – 278 from Vietnam and 367 from MTurk from different countries – comprising richly experienced travelers with different characteristics to diversify the research outcomes. MTurk stands for Amazon Mechanical Turk. Amazon Mechanical Turk as an academic research platform for collecting data that address issues of validity, reliability, and ethics which are presented (Sheehan, 2018). Crowdsourcing platforms like Amazon's MTurk are commonly used by scholars to collect data from particular groups of respondents (Strickland & Stoops, 2019). We set up a Human Intelligence Task (HIT) in MTurk specifically to filter eligible employees to complete the survey. The convenient sample in Vietnam was collected through google form.

The samples of both time periods from Vietnam and MTurk were derived from the same sampling frame. We used data by combining these two sources since the pandemic influences the tourists disregard of their countries or nationalities.

The original survey in English was used the back translation method into Vietnamese by two experts to ensure that the measurement is translated fluently and linguistically accurate. Respondents have to answer two questions before they response for main survey. They are (1) Prior to Covid-19, Have you ever taken a trip? To ensure that if they are frequent travelers, they will be able to proceed with the main survey; (2) If remove the travel ban, which allow you to make journey to any destination you wish. What destination would you want to travel? This question is not used for analysis purpose, rather to remind respondents about the destination they would like to travel before they answer survey.

The overall sample consisted of 46.5% male and 53.5% female participants from the following countries: 43.1% Vietnam, 43.3% USA, 9.9% India, and 3.7% other countries, such as Brazil, Canada, England, and France. Participants within the age range 25–44 years accounted for the largest proportion (272 respondents; 42.2%), while most had attended college to undergraduate level (66.8%). The detailed results are presented in Table 1.

Table 1. Demographic of respondents

Characteristics	Total		Vietnam		MTurk	
	N	%	n	%	n	%
Number of respondents	645		278		367	
Gender						
Male	300	46.5	96	34.5	204	55.6
Female	345	53.5	182	65.5	163	44.4
Nationality						
Vietnam	278	43.1	278	100	0	0
USA	279	43.3	0	0	279	76.0
India	64	9.9	0	0	64	17.4
Others	24	3.7	0	0	24	3.7
Age						
18–24	228	35.3	170	61.1	58	15.8
25–44	272	42.2	69	24.8	203	55.3
45–65	141	21.9	39	14.1	102	27.8
Over 66	4	0.6	0	0	4	1.1
Marital status						
Married	353	54.7	94	33.8	259	70.5
Unmarried	292	45.3	184	66.2	108	29.5
Studies						
Junior high school & Vocational school	36	5.6	14	5	22	6.0
College and undergraduate	431	66.8	222	79.8	209	56.9
Postgraduate	178	27.6	42	15.2	136	37.1

2.2. Measurement

Measurement variables considered for each construct used in this research are shown in Table 2. The statements in the measurement used in this research were designed according to related literatures, self-developed and experts' opinions. After a draft was completed, a pilot test was carried out with experts and users familiar with travel in order to ensure the content validity of the survey. The wordings and phrases were modified to remove vagueness. A total of four constructs were used. First, DC was measured on three items adopted from a previous study (Hsu et al., 2009). Second, IS was defined as the origin of information informing individuals about something as a means of providing knowledge. Six validated items were used to measure IS (Hsu et al., 2009). Third, PD was measured

by eight items adapted from previous studies (Lertputtarak, 2012). Finally, PC items were self-developed with expert consultants. The survey comprised two sections. The main section measured the respondents' perception of each construct in the research model. In the other section, several demographic characteristics were listed. The research construction and items included in the questionnaire are presented in Table 2. The questionnaire used a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Table 2. Variables and items included in the questionnaire

Variables	Items	Measurements
Information Source (IS)	IS 1	Based on available information, I assess how attractive destinations impact tourists' decisions compared to others.
	IS 2	My destination is frequently selected based on public information.
	IS 3	The information provides an ideal destination choice.
	IS 4	I will gather word-of-mouth information before I start my trip.
	IS 5	I will be worried about my destination choice if I cannot get information.
	IS 6	I will be confident when I obtain information on the destination.
Perception of Destination (PD)	PD 1	Beautiful landscapes, wonderful nature.
	PD 2	Interesting tourist attractions.
	PD 3	Reasonable expenses.
	PD 4	Friendly locals.
	PD 5	High-level security.
	PD 6	Comfortable weather.
	PD 7	Well-known destination.
	PD 8	Nightlife entertainment.
Perception of COVID-19 Pandemic's Impact	PC 1	I cannot find sufficient and reliable information for traveling during this crisis.
	PC 2	The COVID-19 pandemic discourages my personal traveling intentions.
	PC 3	Traveling is not safe during this pandemic.
Destination Choice (DC)	DC 1	I already know the destination, but I need more information to decide whether or not I will travel there.
	DC 2	I will travel there as long as it is possible.
	DC 3	I prefer to visit this destination over any others that have the same characteristics.
	DC4	I will gather information before I start my trip.

2.3. Statistical data analysis

The data obtained from the questionnaires were coded, captured, and edited. Different types of statistical analysis were applied to process the data. While the descriptive statistics were used to analyze the subjects' profiles, Cronbach's reliability alpha analysis was utilized to assess the internal consistency of the questionnaire. Measurement model, structural equation model, moderating effects were subsequently tested. The Statistical Package for Social Science (SPSS) software version 22, Partial Least Square (Smart PLS- version 2), and Hayes Process 3.5 were used for the data analysis.

3. Results and discussion

The Results and Discussion section includes the methods that were used to clarify the connection among these main factors. First, the measurement model was tested using confirmatory factor analysis. The structural model and Sobel test were then examined for the four factors (IS, PC, PD, and DC).

3.1. Measurement model

Cronbach's Alpha is used to test the internal consistency of the indicators or each studied construct. As shown in Table 3, Cronbach's α values were calculated ranging from 0.722 to 0.913, which are above the recommended value of 0.70 (Hair, 2010). Therefore, all constructs were internally consistent and reliable.

Table 3. Reliability and validity of the constructs

Construct	Item	Cronbach's Alpha	Standardized Factor Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Information Source (IS)	IS1	0.911	0.844	0.931	0.693
	IS2		0.845		
	IS3		0.855		
	IS4		0.822		
	IS5		0.781		
	IS6		0.844		
Pandemic COVID-19 (PC)	PC1	0.722	0.701	0.843	0.645
	PC2		0.847		
	PC3		0.870		
Perception of Destination (PD)	PD1	0.913	0.813	0.929	0.624
	PD2		0.820		
	PD3		0.808		
	PD4		0.821		
	PD5		0.718		
	PD6		0.840		
	PD7		0.750		
	PD8		0.739		
Destination choice (DC)	DC1	0.845	0.815	0.895	0.680
	DC2		0.826		
	DC3		0.832		
	DC4		0.826		

According to Hair (2010) recommended that all standardized factor loadings is above 0.70, these factor in the model were significant, ranging from 0.708 to 0.870. Convergent validity of the CFA results should be supported by composite reliability (CR) and average variance extracted (AVE). As we can see from Table 3 indicates, the CR and AVE values ranged from 0.843 to 0.931 and 0.624 to 0.693, respectively, all above their recommended levels. Hair (2010) stated that the estimates of CR and AVE should be higher than 0.700 and 0.500, respectively. Discriminant validity is established using the latent variable correlation matrix, which has the square root of AVE for the measures on the diagonal and correlations among the measures as the off-diagonal elements (Table 4). Discriminant validity is determined by looking down the columns and across the rows and is deemed satisfactory if the diagonal elements are larger than off-diagonal elements (Fornell & Larcker, 1981).

Table 4. The latent variable correlation matrix: Discriminant validity

	DC	IS	PC	PD
Destination choice (DC)	0.825			
Information Source (IS)	0.648	0.832		
Pandemic COVID-19 (PC)	0.579	0.595	0.803	
Perception of Destination (PD)	0.761	0.644	0.634	0.790

Note: Square root of AVE is on the diagonal.

3.2. Structural equation model

The standardized path coefficient shows the effect between the constructs of the model, as the figures that follow indicate. Figure 2 demonstrates a significant relationship between IS and DC (H1: β1 = 0.521, t = 8.903, p –value < 0.001), showing that H1 was supported.

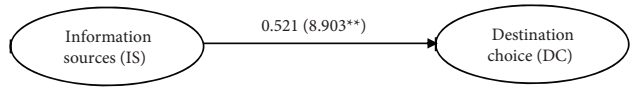


Figure 2. The result of direct effect

As Figure 3 and Table 5 illustrate, when adding the mediator PC into the relationship between IS) and DC, IS shows a robust positive effect on PC (H2.1: β = 0.595, t = 9.312, p < 0.001). Additionally, the relationship between PC and DC is particularly significant, (β = 0.416, t = 5.843, p < 0.001). Therefore, H2.2 was supported.

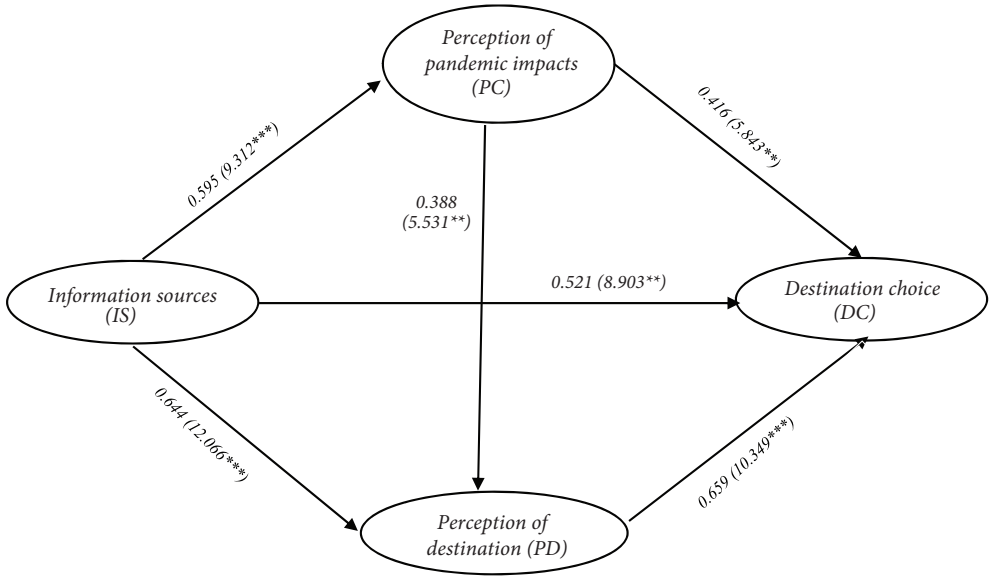
Table 5. Relationship between variables diagram

Path	β	Se	t	p-value	Hypothesis	Hypothesis support
IS -> DC	0.521	0.058	8.903	***	H1	Supported
IS -> PC	0.595	0.064	9.312	***	H2.1	Supported
IS -> PD	0.644	0.053	12.066	***	H3.1	Supported
PC -> DC	0.416	0.071	5.843	**	H2.2	Supported
PC -> PD	0.388	0.070	5.531	**	H4	Supported
PD -> DC	0.659	0.064	10.349	***	H3.2	Supported

Note: * p < 0.05, ** p < 0.01, *** p < 0.001.

A significant, positive path was identified from IS to PD (β = 0.644, t = 12.066, p < 0.001): thus, H3.1 was supported. The path between perception of destination and destination choice was significantly positive (β = 0.659, t = 10.349, p < 0.001), supporting H3.2. These results are consistent with previous studies (Jeong & Shin, 2019). PC has a significant positive effect on PD (β = 0.388, t = 5.531, p < 0.01). Hence, H4 was supported.

IS, PC, and PD combined accounted for 59% of the variance of DC (R^2 = 0.59). Only IS counted for 35% of variance of PD (R^2 = 0.35).



Note: * p < 0.05, ** p < 0.01, *** p < 0.001.

Figure 3. The result of the mediation model

Table 6. The results of indirect effects

Path	β	Se	β	Se	Sobel – z	Hypothesis
IS → PC → DC	0.595 (*a1*)	0.064 (Sea_1)	0.416 (b_1)	0.071 (Sea_2)	4.957**	H_2 supported
IS → PD → DC	0.644 (*a2*)	0.053 (Sea_2)	0.659 (b_2)	0.064 (Seb_2)	7.856**	H_3 supported

Note: * p < 0.05, ** p < 0.01, ***p < 0.001; IS – Information Source; PC – Perceptions of Pandemic's impact; PD – Perception of Destination; DC – Destination choices.

According to Hayes (2013), the Sobel z-test is used to compare the indirect effect of two mediators (here PC and PD).

The Sobel test (Table 6) verified that PC has mediation effects in the model. The result, yielded as z = 4.957**, indicated that H2 was supported. Figure 3 shows that PC has R^2 = 0.35, meaning that PC's influence strength prediction as IS in the model is 35%. This result implies that better destination choice can be achieved through a high level of PC. Therefore, in the current context of the global pandemic, tourists should consider not only information about destinations but also PC before undertaking destination decision-making.

Regarding H3, the Sobel test showed z = 7.856**, indicating that H3 was supported. Additionally, PD has R^2 = 0.51 (in Figure 3). This means that IS and PC accounted for 51% of PD and that tourists' DC can be improved through a high level of PD.

3.3. The comparison of indirect effects

Briefly, the indirect effect of IS on DC via PC (Ind1), PD (Ind2), and both mediators simultaneously (Ind3) are significant because no zero is contained in the intervals in percentile 95% CI method.

To observe the difference among indirect effects, we look at the "indirect effect contrast" in Table 7. Based on the comparison of Ind1 and Ind2, we can claim that Ind2 shows a stronger mediation effect of PC and PD on DC than Ind1 (of –0.246 to –0.068 of percentile 95% CI). Second, between Ind1 and Ind3, the result from percentile 95% CI shows –0.126 to 0.017, has zero (0) contained, which means that the Ind3 is somewhat stronger than Ind1 but that the difference is not significant. Third, comparison of the pair Ind2 and Ind3 yields the following: percentile 95% CI is 0.027 to 0.181, reflecting that Ind3 has a weaker mediation effect than Ind2. Finally, the comparison of the three indirect effects is as follows: Ind2 > Ind3 > Ind1.

Table 7. Path comparison of indirect effects

Mediator	Point Estimate	Product of Coefficients	Bootstrapping	
			Percentile 95% CI	
		SE	Lower	Upper
Indirect				
Ind1	0.055	0.028	0.003	0.109
Ind2	0.213	0.030	0.154	0.273
Ind3	0.107	0.022	0.067	0.155
TOTAL	0.375	0.040	0.298	0.455
Indirect effect contrast				
Ind1 vs Ind2	–0.158	0.045	–0.246	–0.068
Ind1 vs Ind3	–0.053	0.036	–0.126	0.017
Ind2 vs Ind3	0.105	0.039	0.027	0.181

Note: Ind1 = IS → PC → DC 1.000 bootstrap samples, Ind2 = IS → PD → DC, Ind3 = IS → PC → PD → DC.

This result indicates that PD has strongest impact on the relationship between IS and DC. More importantly, it is emphasized that PC as mediator, which affects PD, shows the strongest relationship among the four aspects under investigation. In the current context of the pandemic, PD emerges as the most important factor for tourists, and therefore it is essential that destinations' images be improved and enhanced. A high level of PC helps tourists to understand their destination's situation, leading to better destination selection. This study has coherently demonstrated the combined effects of these four terms.

Conclusions & limitation

Findings & discussion

In this research, destination choice was examined with two mediators – PC and PD – proving increasingly essential for tourism organizations to have outstanding performance in the long-term basis. The main purpose of this study is to systemize basic theoretical issues regarding tourists' behavior, with clarification of tourists' mechanisms and psychological process in destination selection using a theoretical research model. Applying different theoretical perspectives, we identified three elements affecting destination choice – IS, PC, and PD. This study contributes to the academic literature by elucidating how destination information, perception of Covid-19 pandemic's impact and perception of destination influence destination choice during a pandemic lockdown and travel restriction.

From a practical view, this research offers useful evidence and customers insights into the destinations choices, tourism stakeholders and promotes the development of the tourism industry during and after the COVID-19 pandemic. Based on a sample of 645 respondents of different nationalities, professions, ages, gender, our empirical findings indicate that IS, PC, and PD are positive significant

variables on which tourists rely heavily when choosing destinations.

Clearly, the extent of the destination image in relation to destinations hit by pandemic is a multifaceted phenomenon that is influenced by a variety of factors. Besides IS, the perception of pandemic's impacts and perception of vulnerable destination in this regard has changed the way individuals choose to travel and experience destinations.

Among the three antecedent variables, PD is the factor that has the greatest effect on DC. In the days of Covid-19, PD holistically includes the ambience of city destinations, the environment and people, as well as natural and tourist attractions, overpassing IS and PC in destination selection. After pandemic is controlled and residents are vaccinated, the emphasis should shift to healthy destination tourism, which can be leveraged as a rich source of social participation, cultural transformation, and long-term growth.

This research result is considered to be a response to the demand for empirical research to recover tourism destinations after the pandemic. This factor covers city destination ambiance, environment, and people as well as natural and touristic attractions. Our findings suggest that marketers or agents must better understand that the images used to advertise a destination can attract or repel tourists (Reisinger & Mavondo, 2005). For example, brochures should convey safety, security, and beautiful landscapes or similar characteristics. Key destination attributes can be marketed in various ways (Lepp & Gibson, 2008).

IS ranked as the second most significant factor and is related to the availability of information about the destination. Tourists for whom prior information is not a priority may be regarded as somewhat adventurous, with a flair for exploring the unknown. This finding corroborates those of Jacobsen and Munar (2012) indicating that information is considered crucial to tourists' destination choices. It is critical to invest in the development of credible ISs and efficient technical mechanisms to update and offer sufficient information for tourists and travelers, such as mobile apps self-service kiosks, in-room technologies for entertainment and destination e-shopping (e.g. virtual reality in destination tourism), robots, artificial intelligence enabled websites and chatbox for customer communication and services, digital payments (Sigala, 2020).

Regarding PC, the specific issue is the COVID-19 pandemic. Within a month after the virus was first recognized as having infected humans late last year in an open seafood and animal market in Wuhan, the first industry to be hit hard and seriously affected was "tourism". Contrary to expectations, PC is likely to have a significant impact on destination choice. This determinant will significantly affect travelers' decisions, emphasizing that tourism organizations must reflect on their capabilities to devise smart strategies.

More interestingly, however, is the correlated relationship between the two mediations. This study proposes a new analysis to ascertain which mediation has the greatest determining influence on destination choice. After thorough analysis, we conclude that tourists would rather rely on PD over IS. As mentioned above, IS plays a key role in decisions undertaken in the context of the pandemic. This means that, for example, if countries have reputations for swift recovery, as does Vietnam, tourists are more likely to visit that country after the travel ban. Vietnam symbolizes a pandemic victory as the majority of developed countries have failed to address this question.

Tourism stakeholders may benefit from this study. Along with their professional experiences, they can take advantage of our findings to formulate a comprehensive strategy targeting tourists' perceptions to minimize the risk of outbreak strikes, both locally and globally, and to increase their market share in this thriving industry following the lifting of pandemic-related restrictions, including travel bans. Moreover, the sequential mediators – PC and PD – are paramount in anticipating consumers' destination choices and promoting effective marketing plans to create additional value for destinations from the tourist's perspective. The pandemic and PD pose interesting challenges and create opportunities for providers, managers, and policy makers in the hospitality and tourism industry.

Local governments are required to provide a sound understanding and awareness of pandemic impact PC to match their vaccination campaign with the tourists' expectation. It is critical for authorities to offer all-inclusive packages including plane tickets, lodging, a brief cultural visit, and vaccinations, which can reduce tourists' negative perception of pandemic impact and enhance their PD of vaccine destination. By having vaccinated against Covid-19, you can mix positive destination business with pleasurable DC.

By contrast, our findings suggest that no matter how serious the pandemic is out there, tourists still desire to visit their dream destinations. In May 2020, CNN Travel stated that Wuhan ranked first among all destinations that domestic travelers expect to visit after the travel ban and quarantine, whereas in the same survey from December 2019 to January, 2020, Wuhan ranked eighth. Contrary to this, America became a less desirable destination after its failure to mitigate the pandemic. This finding supports UNWTO's (May, 2020) forecast of scenarios whereby normalization will take place gradually. Monthly declines in arrivals have begun to recede in the last few months, and no remarkable or long-lasting worsening of the pandemic has since further affected travel conditions.

Limitations and suggestions for future research

Several limitations in this study may be taken as opportunities for future research. First, this research only tested the relationship between IS and DC through two mediators – PC and PD – but it did not examine the relationship between tourists' characteristics and DC. Moreover, apart from the quantitative methodology, we recommend that future studies apply qualitative research to better understand the underlying reasons from different perspectives on the topic.

In addition, we offer several recommendations for future researchers. First and foremost, although all the surveyed respondents have abundant experience of traveling to different countries, we suggest that future studies consider the effects of tourists' characteristics. Most respondents were Vietnamese, USA and India. We recognized that this may be a part of the limitation, but the contribution of this study is worthy and applicable for those countries. Further studies may take a wider sample in different areas in the world and have a cross-culture comparison. Second, owing to data limitations, future studies should gather more information to carry out deeper investigations that may contradict our findings. Finally, we firmly believe that our findings may be utilized to study other phenomena in fields such as psychological studies (perception), marketing management (information sources), and pandemic response (COVID-19) among others.

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Author contributions

Two authors have contributed equally.

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