

# 포스트 팬데믹 여행 의도에 관한 연구 : 코로나에 대한 지루함을 중심으로

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## Understanding Post-Pandemic Travel Intention: Boredom as a Key Predictor

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### ABSTRACT

**Purpose:** This study seeks to explore the impact of COVID-19-induced boredom, a prevalent form of pandemic-related stress, on travel motivation and post-pandemic travel intentions. Additionally, it examines the interplay among travel motivation, travel constraints, and the willingness to pay more for travel experiences in the post-pandemic context.

**Methods:** A PLS-SEM analysis was conducted to analyze the data. Data collection took place through an online survey in February and March 2021, with a total of 575 respondents participating. Participants provided responses regarding their current levels of boredom due to COVID-19, five different travel motivations, seven travel constraints, and their post-pandemic travel intentions. Additionally, participants were asked about their willingness to pay more for travel.

**Results:** This study highlights the significant role of COVID-19-induced boredom in predicting post-pandemic travel intentions and the willingness to pay more for travel. Contrary to previous perceptions, boredom emerges as a driving factor, enhancing travel intentions during the pandemic. Additionally, relaxation becomes the primary motivation for travel during COVID-19, and structural constraints exert a noticeable impact on travel intentions, challenging previous assumptions. Stress levels directly influence the willingness to pay more during travel experiences, expanding the understanding of additional payment behavior in the context of travel.

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**Conclusion:** This study offers practical insights for tourism stakeholders. Recognizing and addressing boredom in marketing strategies, implementing aggressive additional payment options, and focusing on relaxation-oriented travel products are recommended to cater to post-pandemic traveler preferences and revive the tourism industry effectively.

**Key Words:** COVID-19 Stress, COVID-19 Boredom, Travel Motivation, Travel Constraints, Willingness to Pay More

## 1. Introduction

The COVID-19 crisis has caused significant disruption around the world. As reported by the World Health Organization, there were more than 140 million confirmed cases of COVID-19, including over 3 million deaths, by April 2021. The pandemic has led to changes in behavior; people are now required to wear masks outside, avoid social gatherings, and quarantine if they are infected. To reduce the spread of the virus, countries worldwide have implemented rules that limit personal freedoms, such as maintaining distance from others and staying in quarantine (Anderson et al., 2020; Joo and Shin, 2020).

With these changes, some researchers suggest that stress levels have significantly influenced behavior during the pandemic (Boylan et al., 2021; Presti et al., 2020; Yan et al., 2021). High levels of stress from a serious pandemic and measures like quarantine and social distancing can also affect mental health (Yan et al., 2021). People experiencing various negative emotions during the pandemic has been noted as well (Duan and Zhu, 2020).

However, the tourism literature has not yet explored the relationship between stress and behavior. Research on COVID-19 in the tourism context can be categorized into three areas: assessing the impact on and resilience of the travel industry (Škare et al., 2021), the effectiveness of policies like social distancing and maintaining cleanliness (Shin and Kang, 2020; Yoo and Park, 2023), and travel behavior during the pandemic (Matiza, 2020; Nguyen and Coca-Stefaniak, 2020). These studies generally focus on functional aspects in an evolving environment but often overlook the psychological side of individuals.

The World Travel & Tourism Council has estimated that nearly 75 million jobs in the hospitality industry are at risk due to COVID-19. They also projected a potential loss of up to \$2.1 trillion in travel and tourism Gross Domestic Product (GDP) in 2020. Recovering the severely affected travel industry is expected to take longer than recovery from previous disasters (Škare et al., 2021). Speeding up the recovery of the travel industry depends on predicting customers' future travel behavior and creating effective strategies. This study uses boredom, a result of the prolonged pandemic, as a key factor to understand the relationship between people's stress and their future travel behavior.

This study poses the following questions: (1) How does boredom from COVID-19 influence travel motivation and future travel plans? (2) How do travel motivation and constraints impact future travel plans post-COVID-19? (3) Is there a significant link between boredom from COVID-19 and the willingness to pay more? The answers to these questions aim to understand how people's behavior changes in response to a

long-term pandemic and to find ways to help the travel industry recover.

## 2. Theoretical Background and Literature Review

### 2.1. COVID-19 boredom

Boredom is defined as a state of low arousal and dissatisfaction resulting from perceived monotony and repetition (Mikulas and Vodanovich, 1993). COVID-19 has introduced various stresses, including the risk of illness and fears about survival. Its highly contagious nature sets it apart from other diseases, leading to behavioral restrictions not only for patients and suspected cases but also for the general population. Countries have implemented various policies to prevent COVID-19's spread, such as social distancing and limiting social gatherings. While these policies may effectively contain the disease, they can also cause stress (Boylan et al., 2021). Initially, people complied with these policies due to high anxiety about the disease (Lima et al., 2020). However, as the pandemic has dragged on, boredom has become prevalent. Recent studies indicate that boredom is a common outcome of the COVID-19 situation (Boylan et al., 2021; Presti et al., 2020). For instance, isolation often leads to boredom as the primary stressor (Presti et al., 2020), and boredom significantly reduces compliance with policies (Boylan et al., 2021). Boylan et al. (2021) suggest that government-imposed restrictions induce boredom, which in turn leads to non-compliant behavior. Thus, boredom is a key factor in predicting behavior during the ongoing pandemic, yet research on this in tourism literature is limited.

Previous tourism studies have often treated traveling as a type of shopping, viewing destinations as products and travelers as potential buyers. Consequently, these studies mainly focus on functional aspects of the travel purchasing process, such as travel motivation (Jang and Wu, 2006; Kim and Eves, 2012), travel agency selection (Talwar et al., 2020), and the travel quality and customer satisfaction (Sung and Noh, 2023). However, with the growing recognition of travelers' emotional needs, recent studies have started to explore travel as a means of stress relief (Chen et al., 2016; Jordan et al., 2019). For example, Chen et al. (2016) examined tourism experiences as stress relievers, showing how travel alleviates work stress and enhances life satisfaction post-travel. Jordan et al. (2019) also found that travel significantly improves individuals' emotions and reduces stress. Since one of the major motivations for travel is to escape routine and stressful environments, travel plays an essential role in stress relief (Sonnentag and Fritz, 2007).

However, there is a lack of research on the relationship between stress and travel behavior. The pandemic has caused significant stress among people, and for some, traveling can mitigate this stress. Therefore, in this paper, we consider COVID-19-induced boredom as a vital variable to investigate the relationship between boredom and travel motivation, constraints, and intentions.

## 2.2. COVID–19 boredom and travel motivation

Stressful situations create a relationship between an individual and their challenging environment. In response to stress, people often seek various methods to manage it (Liang et al., 2019). Stress influences both perceptions and behaviors. For example, Maier and Wilken (2014) suggest that when people are under stress, their valuation of products or services diminishes compared to their stress-free state. Similarly, Zhang et al. (2020) found that the intensity of negative emotional responses in individuals varies with the perceived severity of the COVID–19 threat, particularly when they encounter price disparities in services.

Stress can also impact motivation. Vallerand (1997) describes a four-step process through which motivation influences behavior: (1) environmental factors, (2) psychological mediators, (3) motivation, and (4) consequence. Applying this framework to the current context, it can be proposed that (1) various environmental changes due to COVID–19, such as restrictions on social gatherings and self-isolation, (2) induce stress in individuals, (3) which then affects their travel motivation, (4) ultimately influencing their post-COVID–19 travel intentions. Prior studies have also verified the negative impact of emotions like anxiety and worry on travel motivation (Jang et al., 2009).

Therefore, it can be hypothesized that the level of boredom, as a manifestation of COVID–19-induced negative stress, may vary among individuals, potentially influencing their travel motivation and subsequent behavior. Based on this understanding, we propose the following hypothesis:

H1: COVID–19 boredom affects travel motivation.

## 2.3. Travel motivation

Travel motivation is defined as the psychological and biological needs and desires that activate, direct, and integrate an individual's actions and activities in the context of travel (Khan et al., 2019; Lu et al., 2016; Yoon and Uysal, 2005). It has been recognized as a crucial driver influencing people's behaviors in travel, impacting various aspects such as attitudes towards destinations (Hsu et al., 2010), destination choices (Jang and Cai, 2002), destination loyalty (Yoon and Uysal, 2005), and travel intentions (Li and Cai, 2012). Notably, there is a strong correlation between travel motivation and travel intentions (Hsu et al., 2010; Li and Cai, 2012; Lu et al., 2016).

The “push-pull model” is a well-known framework in travel research that categorizes motivation into two types: ‘push’ factors that drive an individual to travel and ‘pull’ factors that attract individuals to specific leisure services or destinations (Crompton, 1979; Gnoth, 1997; Goossens, 2000; Yoon and Uysal, 2005). Push motivation encompasses the internal desires that compel people to travel, while pull motivation pertains to the attributes of leisure activities or destinations that are appealing. Researchers have identified various factors as push and pull motivations. For instance, Goossens (2000) views travel motivation from an emotional standpoint, considering push factors as emotional needs and pull factors as emotional benefits. A study on British outbound tourists identified knowledge, escape, and socializing as significant push factors, while hygiene, cleanliness, safety, and price were notable pull factors (Jang and Cai, 2002).

Studies focusing on personal desires often emphasize push factors in travel motivation. For example, Hsu et al. (2010) used factors like knowledge, relaxation, novelty, and shopping to explore the relationship between expectations, motivation, and attitudes. Li and Cai (2012) investigated Chinese group tourists' travel motives using novelty, prestige, self-development, exciting experiences, and escape as key motivation variables. In researching the outbound travel intentions of Chinese senior citizens, Lu et al. (2016) employed knowledge enhancement, sensation seeking, self-fulfillment, socializing, pleasure-seeking, and escape as travel motivation variables. In line with these studies, we adopt six factors—novelty, prestige, self-development, exciting experiences, escape, and relationships—as travel motivation variables in this study.

We aim to explore how COVID-19-induced boredom influences people's travel motives and intentions. Stressful situations during the pandemic can alter behaviors; for example, shopping or engaging in activities to alleviate stress might become motivators for travel due to COVID-19 boredom. Therefore, we propose the following hypothesis:

H2. Travel motivation has a positive effect on post-pandemic travel intention.

## 2.4. Travel constraints

Travel constraints refer to a variety of factors that inhibit individuals from traveling (Bonn et al., 2016; Hung and Petrick, 2012; Jian et al., 2021; Khan et al., 2019). Initially, studies primarily focused on financial and time constraints as barriers to travel (Crompton, 1979). However, recent research has identified a broader range of constraints, including limited opportunities, transportation issues, overcrowding, lack of knowledge, ability, safety concerns, and governmental regulations (Hung and Petrick, 2012; Khan et al., 2019). These constraints are commonly categorized into three dimensions: structural, intrapersonal, and interpersonal (Crawford et al., 1991).

Structural constraints are external factors that impact an individual's ability to travel, such as financial limitations, transportation issues, and lack of knowledge. In the context of the ongoing pandemic, government-imposed travel restrictions and self-isolation requirements have also become significant structural constraints (Jian et al., 2021; Petersen et al., 2020). Intrapersonal constraints relate to personal safety and health concerns, particularly in this study, the fear of COVID-19 exposure during travel. Interpersonal constraints stem from the concerns of an individual's relatives and friends, such as their opinions or travel restrictions impacting group travel plans.

Several studies have shown that travel constraints negatively affect travel intentions (An et al., 2010; Bonn et al., 2016; Suhud and Allan, 2019). For instance, Suhud and Allan (2019) discovered that travel constraints diminished behavioral intentions among tourists visiting volcano sites in Indonesia. Similarly, constraints negatively influenced the intention to visit wine regions (Bonn et al., 2016). Nonetheless, psychological defense theory suggests that individuals often develop thoughts and feelings that counterbalance negative emotions (APA, 2013). For example, when leisure and recreational activities are unavailable due to factors like illness or pregnancy, people frequently reminisce about past recreational experiences to al-

leviate current stress and dissatisfaction (Jian et al., 2021). Similarly, when travel is restricted due to COVID-19, individuals may find solace in recalling past travel experiences and aspire to travel once the pandemic eases. Thus, it can be inferred that the greater the COVID-19-related constraints, the stronger the intention to travel post-pandemic. Based on this understanding, we propose the following hypothesis:

H3: Travel constraints have a positive effect on post-pandemic travel intention.

## 2.5. WTP more and COVID-19 boredom

Previous research on willingness to pay (WTP) more has primarily focused on how much extra customers are willing to spend for products or services that offer added functionality. For instance, Ioana-Daniela et al. (2018) examined why customers would choose a luxury cruise costing \$350 per day and discovered that customers' fantasies significantly influenced their willingness to pay more. Rahman and Reynolds (2016) argued that environmentally conscious customers are more inclined to stay in a green hotel and are willing to pay a premium for it. Similarly, Sánchez-Cañizares et al. (2020) explored the willingness to pay more for enhanced safety measures during travel amid the ongoing pandemic.

However, the decision to pay extra is not only influenced by additional functionalities but also by the emotional state of the consumer. This behavior has been extensively studied in the context of shopping. Shopping encompasses both the utilitarian aspect of satisfying a customer's needs through purchase and the hedonic aspect of enjoyment and pleasure (Arnold and Reynolds, 2003; Hirschman, 1984). Hirschman (1984) proposes that shopping experiences provide both cognitive (utilitarian) and emotional (hedonic) benefits, stimulating people's thoughts and senses. Notably, shopping is also recognized as a method for coping with stress (Arnold and Reynolds, 2003; Hama, 2001), where individuals shop to alleviate stress, diminish negative feelings, and indulge themselves. Moreover, the hedonic value significantly influences impulse buying behavior on airplanes (Ku and Chen, 2020). Despite the close relationship between WTP more and individual emotions, research in this area remains limited.

Travel inherently involves purchasing behavior. Travelers book hotels and restaurants, buy tickets for tourist attractions, and purchase souvenirs for friends and family. During this process, an individual's stress level can influence their purchasing decisions. In light of this, we propose the following hypothesis:

H4: The WTP more intention differs according to COVID-19 boredom levels.

Many studies reveal the relationship between WTP more and purchase intention. Using the theory of planned behavior, Salem and Salem (2018) find that customers' purchase intention of luxury fashion goods significantly affects the WTP more in the fashion industry. In tourism literature, Hultman et al. (2015) also employ the planned behavior theory as a framework to explore the WTP more for ecotourism and confirm that ecotourism intention is a strong antecedent to WTP more. Based on these studies, we propose the following hypothesis.

H5: Post-pandemic travel intention has a positive effect on the WTP more intention.

## 3. Materials and Methods

### 3.1. Survey Items

In this study, we aim to answer the following research questions: (1) How does COVID-19 boredom affect travel motivation and post-pandemic travel intention? (2) How do travel motivation and travel constraint affect post-pandemic travel intention? (3) Is there a significant relationship between COVID-19 boredom and the WTP more? As we consider customer perceptions, the survey method is selected to gather data and test the hypotheses.

The survey questionnaire is structured into two primary sections. The first section aims to gather demographic information from the respondents, including gender, age, property ownership, marital status, and educational background. The second section consists of 32 items related to travel, derived from previous research. These items encompass areas such as travel motivation, travel constraints, travel intent, and willingness to pay (WTP) more. Additionally, four items specifically addressing COVID-19-induced boredom, based on existing research, are included. The survey seeks to assess respondents' perceived levels of COVID-19 boredom, travel motivation, constraints, post-pandemic travel intention, and willingness to pay more.

A hypothetical scenario is presented in which COVID-19 has subsided, rather than completely ended. This approach is chosen for two main reasons. First, predicting the complete eradication of COVID-19 is challenging due to its high contagiousness. Second, it is anticipated that people might resume travel activities when they perceive a certain level of safety, even if COVID-19 has not been entirely overcome. This scenario serves as the basis for assessing respondents' intentions to spend more compared to their pre-COVID-19 travel experiences, examining whether people intend to manage their stress through additional consumption during travel.

Table 1 in the study details all the variables and survey items used. Travel motivation variables—novelty, prestige, self-development, activity, and relaxation—are adopted from Li and Cai (2012), while the three travel constraint variables—structural, interpersonal, and intrapersonal—are from Jian et al. (2021). The concept of post-pandemic travel intention is based on Nguyen and Coca-Stefaniak (2020), and the measurement of COVID-19 boredom is derived from Struk et al. (2017). Each item is rated using a five-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (5). Additionally, the model incorporating all these variables is depicted in Fig.1.

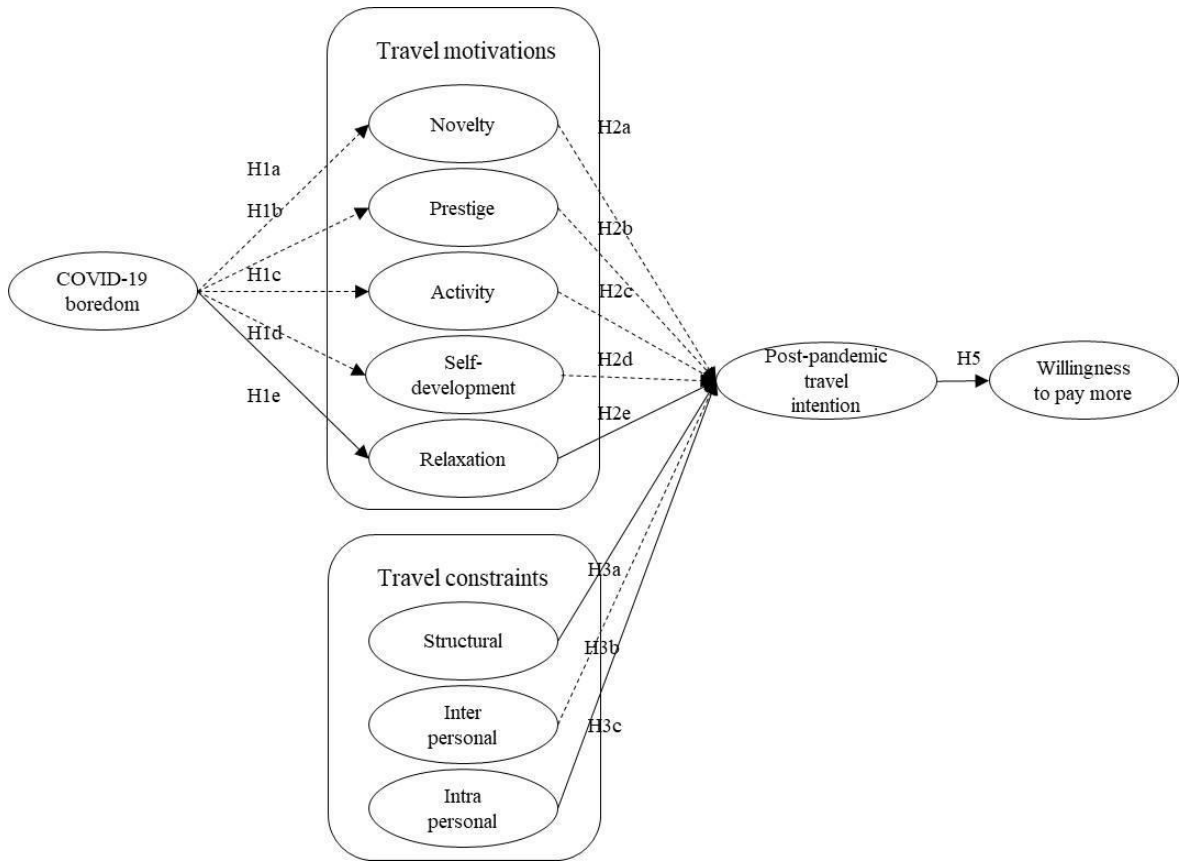


Figure 1. Model framework

Table 1. Survey Questionnaire

Variable	Measurement Item
Novelty motivation	NOV1—Experiencing something different
	NOV2—Feeling the special atmosphere
	NOV3—Observing other people in the area
	NOV4—Learning new things or increasing knowledge
	NOV5—Visiting places related to my interests
Prestige motivation	PRE1—Indulging in luxury
	PRE2—Having others know that I have been there
	PRE3—Shopping
Activity motivation	ACT1—Having adventuresome experience
	ACT2—Feeling the excitement
	ACT3—Meeting the locals



Variable	Measurement Item
Self-development motivation	SEL1—Feeling inner harmony
	SEL2—Developing my skills and abilities
	SEL3—Understanding more about myself
	SEL4—Having unpredictable experiences
Relaxation motivation	REL1—Being away from daily routine
	REL2—Release my work pressure
	REL3—Being free to act the way I feel
	REL4—Resting and relaxing
Structural constraints	STR1—Regional governments do not encourage people to travel during this time
	STR2—Currently, travel is restricted by rules and regulations
	STR3—Additional procedures, such as polymerase chain reaction tests, make traveling during the pandemic relatively difficult compared to the pre-pandemic era
Interpersonal constraints	TER1—My family and friends do not want to travel with me during this time
	TER2—My family and friends do not want to travel during this time
Intrapersonal constraints	TRA1—It is not safe to travel during this time
	TRA2—It is a very risky time for me to travel
Post-pandemic travel intention	INT1—If COVID-19 subsides, I am willing to travel to the city I originally planned to visit
	INT2—If COVID-19 subsides, I have plans to travel
	INT3—If COVID-19 subsides, I intend to travel.
Willingness to pay more	WTP1—If I travel after COVID-19, paying a higher price than usual for hotels and restaurants is acceptable to me
	WTP2—If I travel after COVID-19, I would be willing to pay more for the trip
	WTP3—If I travel after COVID-19, I would be willing to spare no expense for the trip
COVID-19 boredom	BOR1—After the COVID-19 outbreak, I find it hard to entertain myself
	BOR2—After the COVID-19 outbreak, many things I have to do are repetitive and monotonous
	BOR3—After the COVID-19 outbreak, I do not feel motivated by most things that I do
	BOR4—After the COVID-19 outbreak, much of the time, I just sit around doing nothing

### 3.2. Data Collection

We hired a survey research company to reduce bias that can occur during the respondent selection process. The target population's age was over 20 years with travel experience before the outbreak of COVID-19. All surveys were conducted online as the pandemic is not yet over. A total of 976 individuals were surveyed between February and March 2021 and 575 responded. As all questions were mandatory, no value was missing. Samples with insincere responses were eliminated from the final analysis. The collected data were analyzed using the SmartPLS 3.0 and Statistical Package for Social Science 26. Table 2 summarizes the demographic information of the respondents.

**Table 2.** Demographic statistics of respondents (N=575)

Measure	Value	Frequency	Percentage (%)
Gender	Male	288	50
	Female	287	50
Age	20–30	118	21
	30–40	115	20
	40–50	116	20
	50–60	114	20
	Over 60	112	19
Marital status	Single	243	42
	Married	332	58
Education	High school or below	105	18
	College	406	71
	Bachelor or higher	64	11
Monthly income(\$)	Under 2000	60	11
	200–400	186	32
	400–600	163	28
	600–800	78	14
	800–1000	48	8
	Over 1000	40	7

## 4. Results

The data were analyzed employing the partial least squares method using Smart PLS (version 3.0) statistical software package. This method has advantages when analyzing small samples and measurement scales because of its low constraints (Gefen et al., 2011). We first test the validity with factor analysis using this method. Next, by verifying the model hypotheses, we attempt to determine the factors that affect post-pandemic travel intention. We then apply the Statistical Package for Social Science 26 to verify the

difference in WTP more intention according to the COVID-19 boredom level. As the COVID-19 boredom groups are divided into two (high vs. low), an independent t-test was performed to validate if the difference in mean exists between the two boredom levels.

#### 4.1. Validity test

The appropriateness of the measurement model was confirmed based on reliability, convergent validity, and discriminant validity. Reliability was tested using the composite reliability (CR) value. Cronbach's alpha was determined to verify the internal consistency of each construct. As summarized in Table 3, all CR values and Cronbach's alphas exceeded 0.7, indicating no significant defect in internal consistency.

Convergent validity was verified based on two criteria: (1) all factor loadings of each item should exceed 0.7 and (2) the average variance extracted (AVE) from the constructs should exceed 0.5 (Fornell and Larcker, 1981). All factor loading and AVE values are greater than 0.730 and 0.637, respectively, satisfying the criteria.

Following the guidelines of Fornell and Larcker (1981), discriminant validity is verified if the square root of the AVE exceeds the correlation coefficient of the constitutional concepts. The discriminant validity values are summarized in Table 4. The square root values of the AVE, shown in bold, exceed the other correlation coefficient values; hence, discriminant validity is confirmed.

**Table 3.** Results of the confirmatory factor analysis

Construct	Items	Mean	SD	Loadings	Cronbach's alpha
Novelty motivation	NOV1	3.050	1.046	0.865	0.877
	NOV2	3.017	1.040	0.808	
	NOV3	2.664	0.994	0.750	
	NOV4	2.828	0.982	0.782	
	NOV5	3.430	0.989	0.848	
Prestige motivation	PRE1	2.802	0.999	0.885	0.791
	PRE2	2.723	0.979	0.931	
Activity motivation	ACT1	2.894	1.017	0.929	0.850
	ACT2	3.115	1.059	0.936	
	ACT3	2.770	0.983	0.757	
Self-development motivation	SEL1	3.701	0.847	0.836	0.837
	SEL2	2.925	0.969	0.730	
	SEL3	3.075	0.988	0.857	
	SEL4	2.941	1.033	0.762	
Relaxation motivation	REL1	3.922	0.834	0.892	0.890
	REL2	3.692	0.881	0.834	
	REL3	3.833	0.881	0.875	
	REL4	4.005	0.812	0.866	

Construct	Items	Mean	SD	Loadings	Cronbach's alpha
Structural constraints	STR1	3.616	0.921	0.787	0.807
	STR2	3.854	0.808	0.899	
	STR3	3.887	0.813	0.857	
Interpersonal constraints	TER1	4.003	0.811	0.920	0.840
	TER2	4.023	0.853	0.937	
Intrapersonal constraints	TRA1	3.563	0.911	0.873	0.899
	TRA2	3.713	0.844	0.994	
Post-pandemic travel intention	INT1	4.078	0.817	0.931	0.925
	INT2	4.115	0.847	0.941	
	INT3	4.275	0.811	0.925	
Willingness to pay more for travel	WTP1	2.997	1.042	0.939	0.938
	WTP2	3.000	1.086	0.956	
	WTP3	3.141	1.065	0.934	
COVID-19 boredom	BOR1	3.729	0.898	0.847	0.839
	BOR2	3.840	0.917	0.903	
	BOR3	3.365	1.031	0.751	
	BOR4	3.177	1.011	0.750	

Note. NOV = novelty, PRE = prestige, ACT = activity, SEL = self-development, REL = relaxation, STR = structural, TER = interpersonal, TRA = intrapersonal, INT = post-pandemic travel intention, WTP = willingness to pay more for travel, BOR = COVID-19 boredom

**Table 4.** Discriminant validity results

	CR	AVE	NOV	PRE	ACT	SEL	REL	STR	TER	TRA	INT	WTP	BOR
NOV	0.906	0.659	0.812										
PRE	0.904	0.825	0.632	0.908									
ACT	0.909	0.771	0.607	0.547	0.878								
SEL	0.875	0.637	0.623	0.516	0.573	0.798							
REL	0.924	0.752	0.476	0.343	0.434	0.612	0.867						
STR	0.885	0.721	0.074	0.129	0.100	0.172	0.255	0.849					
TER	0.926	0.862	-0.084	-0.099	-0.090	0.031	0.156	0.455	0.928				
TRA	0.933	0.876	-0.068	-0.024	-0.039	0.056	0.074	0.470	0.488	0.936			
INT	0.952	0.869	0.276	0.181	0.223	0.327	0.473	0.289	0.168	0.019	0.932		
WTP	0.960	0.890	0.261	0.251	0.254	0.294	0.276	0.178	0.070	0.010	0.354	0.943	
BOR	0.887	0.665	-0.018	0.054	-0.015	0.073	0.209	0.313	0.184	0.199	0.211	0.157	0.815

Note. NOV = novelty, PRE = prestige, ACT = activity, SEL = self-development, REL = relaxation, STR = structural, TER = interpersonal, TRA = intrapersonal, INT = post-pandemic travel intention, WTP = willingness to pay more for travel, BOR = COVID-19 boredom, CR = Composite Reliability, AVE = Average Variance Extracted

## 4.2. Hypotheses test

Next, we test the hypothesis of the proposed model. Complete bootstrapping with 1,000 subsamples was run for the significance testing. Of the total 14 hypotheses, five relationships were found to be significant. The proposed model explains 27.7% of the post-pandemic travel intention and 12.5% of the WTP more. The value of the standardized root mean residual was 0.058, which meets the criteria that this residual should be below 0.08.

The hypothesis test results are summarized in Table 5. First, the results demonstrate that COVID-19 boredom only affects relaxation motivation ( $=0.209$ ,  $p<0.001$ ). Therefore, H1e is supported. Second, only relaxation motivation was found to affect the post-pandemic travel intentions ( $=0.209$ ,  $p<0.001$ ). Thus, H2e is supported. Third, among the three constrain factors, structural constraints ( $=0.221$ ,  $p<0.001$ ) and intra-personal constraints ( $=-0.151$ ,  $p<0.01$ ) have a positive impact on post-pandemic travel intention. Therefore, H3a and H3c are supported. Fourth, people's travel intention positively impacts WTP more ( $=0.354$ ,  $p<0.001$ ).

Especially, the relationship from COVID-19 boredom  $\rightarrow$  relaxation motivation  $\rightarrow$  post-pandemic travel intention  $\rightarrow$  WTP more was statistically significant ( $=0.027$ ,  $p<0.01$ ), confirming that boredom is a significant predictor of travel intention and WTP more. Additionally, structural constraints  $\rightarrow$  post-pandemic travel intention  $\rightarrow$  WTP more was also significant, thus, proving that the structural constraint because of the pandemic negatively affects travel intention. However, the travel motive variables used as key variables in other studies, novelty, prestige, activity, and self-development, all have no significant effect on post-pandemic travel intention. Intrapersonal constructs also have no significant effect on post-pandemic travel.

**Table 5.** Hypotheses test results

		$\beta$	SE	$p$ - value	Result
H1a	COVID-19 boredom $\rightarrow$ Novelty	-0.018	0.055	0.751	Not Supported
H1b	COVID-19 boredom $\rightarrow$ Prestige	0.054	0.050	0.272	Not Supported
H1c	COVID-19 boredom $\rightarrow$ Activity	-0.015	0.051	0.766	Not Supported
H1d	COVID-19 boredom $\rightarrow$ Self-development	0.073	0.051	0.154	Not Supported
H1e	COVID-19 boredom $\rightarrow$ Relaxation	0.209	0.047	0.000***	Supported
H2a	Novelty $\rightarrow$ Post-pandemic travel intention	0.089	0.063	0.159	Not Supported

		$\beta$	SE	<i>p</i> – value	Result
H2b	Prestige → Post-pandemic travel intention	–0.040	0.054	0.460	Not Supported
H2c	Activity → Post-pandemic travel intention	–0.013	0.054	0.808	Not Supported
H2d	Self-development → Post-pandemic travel intention	0.045	0.062	0.471	Not Supported
H2e	Relaxation → Post-pandemic travel intention	0.364	0.061	0.000***	Supported
H3a	Structural → Post-pandemic travel intention	0.221	0.047	0.000***	Supported
H3b	Interpersonal → Post-pandemic travel intention	0.085	0.047	0.073	Not Supported
H3c	Intrapersonal → Post-pandemic travel intention	–0.151	0.056	0.007**	Supported
H5	Post-pandemic travel intention → Willingness to pay more	0.354	0.041	0.000***	Supported

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

To explore whether willingness to pay (WTP) more is influenced by the level of COVID-19-induced boredom, we conducted an independent sample *t*-test. The initial analysis revealed that the majority of respondents experienced high levels of COVID-19 boredom, with a mean score of 3.528 and a standard deviation of 0.792. For the purposes of this analysis, we categorized COVID-19 boredom into two groups: a low boredom group (COVID-19 boredom scores  $\leq 3$ ) and a high boredom group (COVID-19 boredom scores  $> 3$ ). The results, as depicted in Table 6, illustrate the outcome of the *t*-test comparing WTP more between these two boredom levels. It was found that the mean WTP more for the high boredom group was significantly greater than that of the low boredom group. This finding provides substantial support for Hypothesis 4 (H4), indicating a direct relationship between increased COVID-19 boredom and a higher willingness to pay more. The results of all hypothesis tests, including this significant finding, are comprehensively presented in Figure 2.

Table 6. t-test results

		Low boredom	High boredom	t	p-Value	Mean difference	95% Confidence interval of Diff	
							Lower	Upper
	N	164	164411	-3.135	0.002**	-0.289	-0.470	-0.108
WTP more	Mean	2.839	3.128					
	S.D	0.953	1.014					

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

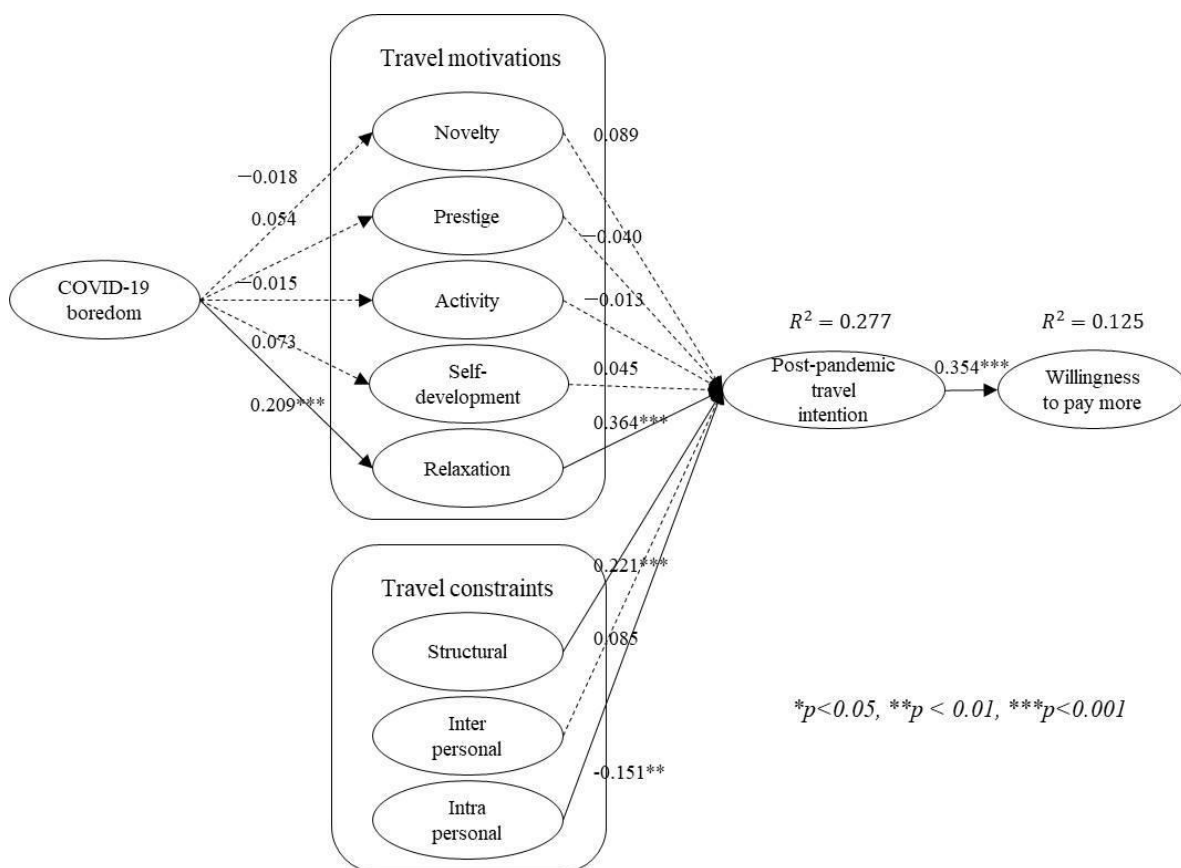


Figure 2. Structural model with estimated path coefficient

## 5. Conclusion

COVID-19 has led to an unprecedented negative impact on the tourism industry. Predicting people’s tourism behavior after the pandemic’s eradication is important, yet studies linking COVID-19-induced stress to the tourism industry are scarce. To address this gap, we consider COVID-19-induced boredom

as a key variable in predicting post-pandemic tourism behavior. This study is the first to explore the relationship between COVID-19 stressors, travel motivations, and post-pandemic travel intentions, including additional payment intentions. The results of this study are as follows:

This is the first study in tourism literature to confirm that COVID-19 stress, especially boredom, significantly predicts people's travel intentions. Our findings suggest that boredom not only precedes post-pandemic travel intentions but also influences willingness to pay (WTP) more. In contrast to previous studies where perceived risk, an emotional variable, was seen as inhibiting travel intentions (Sánchez-Cañizares et al., 2020), our study found that COVID-19-induced boredom actually enhances travel intentions. This aligns with research suggesting that over time, people become accustomed to the disease and, concurrently, bored, leading to rule-breaking behavior (Boylan et al., 2021). Our study is significant in proposing new variables for future research in the context of an unprecedented pandemic.

We discovered that relaxation is the primary travel motivation factor during the pandemic. While past studies highlighted novelty motivation as a key influencer of travel intention (Jang and Cai, 2002; Li and Cai, 2012; Lu et al., 2016), our study found that only the motivation for relaxation affects travel intention. This shift is attributed to the unique stress caused by COVID-19, altering travel motivations from those in typical situations. With various restrictions leading to increased boredom and lethargy, traveling for stress relief becomes more appealing. Hence, relaxation is the foremost travel motivation for those stressed by COVID-19.

Contrary to some previous studies that contend travel constraints do not affect travel intentions, our study suggests otherwise in the context of COVID-19. Typically, motivation trumps constraints in choosing travel destinations. However, during COVID-19, life and safety concerns, coupled with government regulations, make travel challenging. People's desire to alleviate negative feelings intensifies their nostalgia for past travel experiences and increases travel intentions despite constraints (Jian et al., 2021). Our model indicates that structural constraints have ironically increased travel intentions post-COVID-19. However, people's concerns continue even after the pandemic subsides, likely due to our survey being conducted during the pandemic's decline rather than its complete eradication. These ongoing worries likely maintain their role as a constraint until the pandemic is fully resolved.

Our study also reveals that people's intention to pay more during travel is influenced by their stress status. Previous studies on additional payments primarily focused on the value attributed to additional functions (Ioana-Daniela et al., 2018; Rahman and Reynolds, 2016). Our indirect effect results show that stress, particularly COVID-19-induced boredom, is a strong antecedent of increased WTP (COVID-19 boredom → relaxation motivation → post-pandemic travel intention → WTP more,  $p < 0.01$ ). We observed that the level of boredom influences WTP more. In stressful situations like COVID-19, people engage in behaviors to relieve stress, and shopping during travel serves this purpose. This aligns with studies indicating shopping's hedonic attributes and its role in stress relief (Arnold and Reynolds, 2003; Chiu et al., 2014; Hama, 2001). Our study pioneers the exploration of WTP more in the travel context, laying the groundwork for further research.



### 5.1. Practical implication

Our study offers practical implications for tourism practitioners and travel policymakers. First, travel managers should develop marketing and advertising strategies targeting customers with high levels of boredom. Our survey indicates that approximately 71.5% of respondents experience high boredom (mean = 3.528). Marketing managers and policymakers need to consider alleviating customer boredom as a critical factor. According to our findings, people are likely to seek relief from various stresses, including boredom, by traveling once COVID-19 subsides. The lower the stress levels, the more inclined people are to travel. Therefore, travel service providers should not only highlight the unique features of destinations but also create messages that resonate with the psychological needs of their target customers.

Second, practitioners should devise travel services with an aggressive strategy for additional payments, encouraging customers to spend more. In the post-pandemic era, our study found that travelers are more willing to spend extra due to increased stress. Travel demand is expected to surge after COVID-19 abates. However, intense competition is likely as many travel agencies vie for this opportunity. A strategic approach would be to offer affordable, basic travel packages with options for additional premium services. This strategy could provide a competitive edge in the post-pandemic tourism industry while aligning with customers' willingness to pay more.

Third, it is necessary to distribute expected travel demand by developing diverse products. The stronger the regulations, the greater the anticipated surge in travel demand. Nonetheless, as the COVID-19 pandemic is not yet over, overcrowding could heighten infection risks and detract from the travel experience, particularly since such congestion does not align with the relaxation motivation. Therefore, travel managers should prioritize relaxation and refreshment by creating travel products oriented towards small groups. These should focus less on tours, activities, and shopping, and more on reducing crowdedness to ensure a pleasant travel experience.

This study presents a variety of strategies that the travel industry, which has been depressed due to COVID-19, can utilize moving forward. By accurately understanding the post-COVID needs of customers and providing related services, the travel industry can expect to increase overall revenue through customer satisfaction and leveraging customers' willingness to make additional expenditures. This is anticipated to facilitate a swift recovery of the industry, which was devastated by the pandemic.

### 5.3. Limitations and Future Research

This study has several limitations. First, its geographic constraints to South Korea presents a significant limitation, particularly given the context of the low vaccination rates and strict social distancing measures in the country as of April 21, 2021. This specificity might not be entirely representative or applicable to other countries, especially those experiencing rapid vaccination progress and the easing of COVID-19 restrictions. The varying global response to the pandemic suggests that a similar model applied in different

countries could yield diverse insights into behavioral changes in response to the pandemic, thus enabling more generable results.

Second, the study's primary focus on COVID-19-induced boredom as a factor influencing people's travel intentions may overlook other critical factors. Research by Matiza (2020) and Zheng et al. (2021) indicates that travel fear and perceived risks also significantly impact travel intentions. Therefore, a more comprehensive analysis that incorporates these additional variables could broaden understanding of the factors influencing travel intentions during the pandemic.

Finally, the study's emphasis on post-pandemic travel intentions rather than actual travel behavior marks a crucial limitation. Theoretical models of travel intentions can differ significantly from actual travel behavior observed post-pandemic. In addition to these points, the study's reliance on survey-based predictive research, focusing on customer perceptions at a specific point in time, limits its ability to account for the evolving nature of customer attitudes and behaviors. As the pandemic situation changes, re-evaluating customer perceptions and comparing them with previous data could provide a more nuanced understanding of how travel intentions and behaviors have been transformed by the COVID-19 experience.

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## 저자소개

**박준성** 연세대학교 산업공학과 박사학위 과정중이다. 주요 관심분야는 고객 리뷰 데이터를 활용한 서비스 품질 및 고객 이탈이다. PLS-SEM, Hayes process macro, 자연어 처리 등 다양한 방법론을 활용한다. 이러한 다양한 접근 방식을 통해 서비스 품질 평가와 고객 이탈의 이해를 심화하고자 한다.

**박희준** 미국 George Washington University 공학경영 박사학위를 취득하고 현재 연세대학교 산업공학과 교수로 재직 중이다. 연세대학교 융합기술경영학과 전공주임과 YTN 'ESG코리아' MC로도 활동하였으며, 국가별 품질 경쟁력 수준 평가방법 개발, 녹색기술 확산을 위한 기술 분석 및 소비자 수용촉진 전략에 관한 연구 등을 수행하였다. 주요 관심분야는 혁신이론, 학습이론, 조직이론, 인적자원관리이론 및 정보기술관련 이론 등을 토대로 한 혁신경영 전략수립 및 평가방법론 개발 등이다.