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Perceived risk, anxiety and international travel decisions in post-pandemic context: The case of Bali

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The data presented in this study are available on request from the corresponding author.

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ABSTRACT

Understanding international tourists' decision-making during periods of uncertainty is crucial for tourism recovery and destination management. Despite the significant disruption of global travel caused by COVID-19, limited empirical research has examined how tourists' risk perception and anxiety influence international travel decisions following border reopening. Therefore, this study investigates the factors influencing such decision-making by integrating risk perception and anxiety into the theory of planned behavior (TPB). This study has developed a theoretical framework that combines risk perception, anxiety and TPB. A quantitative approach was used to measure inbound tourists' decision-making for their trip to Bali after COVID-19. Self-administered surveys consisting of ten sections (physical, psychological, financial and time risks, anxiety, attitude, subjective norms, perceived behavioral control, travel decisions and socio-demographic factors) were distributed to respondents. A total of 487 valid responses were analyzed using partial least squares structural equation modeling. Findings show that perceived behavioral control, subjective norms and attitudes significantly influence international tourists' travel decisions. Perceived behavioral control showing the strongest predictive value. While perceived psychological or physical risks did not directly affect travel decisions, all risk dimensions significantly increased travel-related anxiety. Implications for destination management organizations and marketing professionals in the post-pandemic era are discussed.

KEYWORDS

anxiety, Bali, decision making, risk perception, theory of planned behavior

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1. Introduction

The first public announcement of COVID-19 was made by the World Health Organization (WHO) on January 30, 2020, and six weeks later, it was declared as a pandemic (Callaway et al., 2020; WHO, 2020). Tourism is one of the industries most affected by the COVID-19 epidemic and a comparison of international tourist arrivals in 2019 with data available in March 2023 shows a decline of 19% (World Tourism Organization [UNWTO], n.d.b). It was estimated that international travel dropped 72% in 2020, resulting in 1.1 billion fewer international tourists worldwide (UNWTO, n.d.a). The economic contribution of tourism to GDP almost halved between 2019 and 2021, from US$3.5 billion to US$1.9 billion (UNWTO, n.d.a).

Indonesia comprises over 17,000 islands, the most famous of which is Bali (Babolian Hendijani, 2020). According to Statista Research Department (2025), in December 2021, only 163,620 international tourists visited Indonesia. This significantly impacted industries that support tourism, with a 98.6% decrease compared to January 2020 (12,238,000 visitors). The objective of this research is to discover the consequences of the COVID-19 pandemic on international tourists' travel decisions to Bali. This island is one of the most popular tourist destinations in Southeast Asia (Thung et al., 2024) and heavily depends on tourism (Ramadhani et al., 2024). Most international tourists to Indonesia visit Bali (Pham & Nugroho, 2022), and this island is better known than Indonesia itself (Purnamawati et al., 2022).

To support this study, the theory of planned behavior (TPB) by Ajzen (1988, 1991) is applied to better understand the factors that influence decisions to travel to Bali and is one of the most widely used models for predicting specific decisions. The TPB model was extended to include the following components: psychological, financial, time and physical risks, and anxiety to account for the fact that the decision to travel abroad in the context of a (post-)pandemic is influenced by additional factors. Fears, such as fear of contagion (Fan et al., 2023), are important drivers of behavior (Taylor, 2019) and lead to risk aversion (Smith et al., 2016). With a wide range of practical and theoretical implications, current research plans to clarify the complex process of deciding to travel abroad by examining the interaction of these variables.

Several studies have examined travelers' risk perceptions after health crises (Cahyanto et al., 2016; Cheng et al., 2022; Wang & Karl, 2021) and during COVID-19 (Flaherty & Nasir, 2020; Liu et al., 2021; Luo & Lam, 2020; Neuburger & Egger, 2021; Rather, 2021; Sánchez-Cañizares et al., 2021; Sujood et al., 2022). However, little research has been conducted into how the international opening of tourist activities influences travel decisions, anxiety and individual risk perceptions. This study uses an extended TPB model to examine how different types of risk and anxiety affect decisions to travel to Bali.

Based on previous studies and the identified research gap, this study aims to examine how multiple dimensions of risk perception and travel-related anxiety influence international tourists' travel decision-making by extending TPB. Specifically, this study analyzes the effects of physical, psychological, financial, and time risks on travel decisions, as well as the mediating role of anxiety in shaping TPB components and travel decisions.

The work contributes to the tourism literature by providing empirical insights into international tourists' decision-making under conditions of perceived risk and anxiety. The findings offer practical implications for destination management organizations and tourism marketers seeking to reduce perceived uncertainty and strengthen tourists' confidence in international travel. The findings of this research will not only be applicable to Indonesia but also can be helpful for other destinations that heavily depend on tourism.

2. Literature review

Theoretically, this paper is based on the extension of TPB. Because unprecedented uncertainty affects attitudes and behaviors under social influence (Bae & Chang, 2020), this extension provides structural guidance for the research model. It is also consistent with Ajzen's (2019, p. 317) statement that the TPB is "open to the inclusion of additional predictors". This study added four dimensions of risk perception and anxiety into the original framework, providing a more complete understanding of why people travel abroad, in this case to Bali, after the reopening of borders in the post-COVID era.

2.1. Theory of planned behavior (TPB)

The theory of planned behavior builds on the earlier theory of reasoned action (TRA), introduced by Fishbein and Ajzen in 1975. In TRA, so-called intentional factors like attitudes or subjective norms are responsible for the decisions of each person. The term 'attitude' is used to describe how an individual perceives a particular behavior. 'Subjective norm' describes the social pressure that every individual perceives which can either encourage or discourage a person to show a particular behavior (Ajzen, 1991; Liu et al., 2021). Because there is no complete self-control over one's own behavior, the TRA was expanded to the current TPB by adding perceived behavioral control (PBC) (Park et al., 2017), a third dimension measuring the control an individual perceives over their behavior (Musa et al., 2024).

In this study, 'attitude toward international travel' describes the personal feelings and evaluations associated with traveling to a foreign destination

like Bali during COVID-19. 'Subjective norm toward international travel' refers to the expected influence and expectations that friends and family had on people's travel decisions during the pandemic, measuring how others' opinions support or detract from travel in current circumstances. 'Perceived behavioral control to travel abroad' assesses if (potential) tourists believe in their ability to travel to foreign destinations, such as Bali. Before traveling, they evaluate their skills, the available information, and the necessary resources to make such a decision.

The TPB is considered one of the most valuable models to measure the perceptions of health concerns and tourists' protective behavior (Huang et al., 2020). Therefore, many studies in a tourist context (Hüsser & Ohnmacht, 2023; Meng & Cui, 2020; Rather, 2021; Sujood et al., 2022) have used the model or extended it to predict consumer behavior. Recent research has integrated additional psychological constructs into TPB, such as confidence in tourism recovery or risk awareness (Sun et al., 2024).

Several TPB-based studies (Juschten et al., 2019; Liu et al., 2021; Meng & Cui, 2020) have shown significant correlations between the attitudes, subjective norms, perceived behavioral control of individuals, and their decision to travel (abroad). Here, the decision to travel is equivalent to traveling to Bali. In congruence with current literature, attitudes, subjective norms and perceived behavioral control are hypothesized to significantly influence the decision to travel abroad:

H_1: The decision to travel to Bali is significantly influenced by a person's attitude.

H_2: The decision to travel to Bali is significantly influenced by the subjective norms a person perceives.

H_3: The decision to travel to Bali is significantly influenced by perceived behavioral control.

2.2. Risk perception dimensions

Tourism research defines risk differently (Le & Acordia, 2018; Reisinger & Mavondo, 2005). In general, three types of risk are differentiated: absolute, objective and perceived (Seabra et al., 2013). Perceived risk is the focus of most risk studies in tourism and is directly related to behavior (Cui et al., 2016) which means that tourists can only experience risks related to themselves (Ma et al., 2020; Reisinger & Mavondo, 2005). The subjective norm interpretation of risk involves evaluating the uncertainty of tourism experiences (Huang et al., 2014) and considering possible losses, negative impacts and exposure. Therefore, tourists evaluate risks more on their intuition and subjective factors than on rational and objective decisions (Chen & Zhang, 2021).

Tourism risk perception is multidimensional and interdisciplinary (Godovykh et al., 2021; Lin et al., 2022). Several types influencing perceived travel risk have been identified in the consumer behavior literature. Models with up to 22 travel-related risks consider different possible hazards (Hasan et al., 2017) including physical, health, financial, time, performance, functional, equipment, facility, social, psychological, temporal and communication (Zhan et al., 2022).

One of the key factors influencing tourists' risk perception is the decision-making process, which can affect their choice of destination and ultimately the decision to travel (Karl et al., 2020; Yeung & Yee, 2020). Therefore, the TPB has been extended to include financial, physical, psychological and time risks as four central dimensions of risk perception in pandemic situations.

Financial risk refers to the potential for economic loss resulting from higher prices or poorer quality services caused by COVID-19 (Artuğer, 2015; Dash, 2021; Perić et al., 2021; Rudyanto et al., 2021). Physical risks include sanitation, health or safety issues, as well as infectious risks (Artuğer, 2015; Dash, 2021; Zhan et al., 2022). Psychological risks are related to a lack of courage, the fear of others' opinions, and the epidemiological situation in general (Artuğer, 2015; Perić et al., 2021; Rudyanto et al., 2021). Time risk refers to the potential perception of not having used the time efficiently (Artuğer, 2015; Taşçıoğlu & Yener, 2021; Yağmur & Doğan, 2017).

Given that any perceived risk involves some expected loss, it can significantly influence attitudes toward international travel (Sánchez-Cañizares et al., 2021). A tourist's risk perception is associated with a destination, for example, Bali. It can have a strong impact on tourists' decision-making to visit or revisit that destination (Allameh et al., 2015; Chen et al., 2017; Hasan et al., 2017). According to the four applied risk perception dimensions (Artuğer, 2015; Perić et al., 2021; Yi et al., 2020), the following hypotheses are proposed:

H_4: Perceived financial risk and the decision to travel to Bali are significantly related.

H_5: Perceived physical risk and the decision to travel to Bali are significantly related.

H_6: Perceived psychological risk is significantly related to the decision to travel to Bali.

H_7: Perceived time risk is significantly related to the decision to travel to Bali.

2.3. Anxiety

One hundred years after Austrian psychoanalyst Sigmund Freud coined the term 'travel anxiety', the description of a new wave of travel phobia seems to be very relevant (Flaherty & Nasir, 2020). Even though there is no unique definition in the literature, anxiety can be described as an emotional response to stress or real or perceived risk (Luo & Lam, 2020). In other words, anxiety arises from exposure to real or perceived risk (Reisinger & Mavondo, 2005). Travel to any destination involves some degree of uncertainty and risk (Luo

& Lam, 2020), however, individuals vary widely in their perception of risk and the resulting potential fear or anxiety. In general, international and exotic travel appears to be associated with greater personal health and safety risks than domestic travel (Zenker et al., 2021).

Anxiety is an emotional and cognitive response (Cacioppo et al., 1979). It expresses the concerns and worries that tourists may have about their safety, health and general well-being when traveling abroad during a health pandemic. These fears may influence their planning intentions and decision-making processes (Gui et al., 2023). Under normal circumstances, healthy travelers show moderate anxiety levels and tend to have positive emotions both before and during their holidays (Zenker et al., 2021). However, some situations lead to elevated levels of risk perception and travel anxiety, such as terrorist attacks (Isaac & Van den Bedem, 2021), war or political problems (Çakar, 2021), crime (Ozascilar & Mawby, 2024), cultural or linguistic misunderstandings (Nagai et al., 2020), and pandemic situations (Zenker & Kock, 2020).

Several researchers (Joo et al., 2019; Luo & Lam, 2020) have shown that pandemic situations can have serious and lasting effects on risk perception, resulting in travel anxiety. It is therefore hypothesized that the perception of different aspects of risk will have a significant effect on anxiety (Cui et al., 2016; Rokni, 2021; Ryu & Fan, 2022):

H_8: Perceived financial risk and anxiety about traveling to Bali are significantly related.

H_9: Perceived physical risk and fear of traveling to Bali are significantly related.

H_{10}: Perceived psychological risk and fear of traveling to Bali are significantly related.

H_{11}: Perceived time risk and fear of traveling to Bali are significantly related.

2.4. The decision to travel abroad

A mental process results in a decision to travel or not with Karagöz et al. (2021) stating that the cognitive process affects action and converts motivation into behavior. According to Henthorne et al. (2013), an increase in risk perception, and consequently anxiety, leads to tourists being less motivated to visit a destination. Therefore, tourists will prefer to visit low-risk and avoid high-risk destinations (Belias et al., 2022). Previous research (Bae & Chang, 2020; Nazneen et al., 2020; Neuburger & Egger, 2021) has confirmed that travel restrictions imposed during a pandemic increase the perceived risk among travelers and have a significant impact on their travel decisions. Based on current research, it is hypothesized that there is a significant correlation between tourists' anxiety and their decision to make a trip abroad:

H_{12}: Anxiety is significantly related to the decision to travel to Bali.

2.5. The relationship between anxiety, attitudes, subjective norms and perceived behavioral control

Perceived risk, along with the resulting anxiety, describes the possible level of loss that can affect attitudes toward a behavior (Bae & Chang, 2020) which will be equated here with the attitude toward international travel. Since Luo and Lam (2020) and Rather (2021) found that a high-risk perception of travel during COVID-19 significantly impacts the intention to travel, hypothesis 13 is formulated as follows:

H_{13}: Fear and willingness to travel to Bali are significantly related.

Subjective norm (Ajzen, 1991) refers to the perception of social pressure to show a certain behavior. The question here is whether a person's decision to travel abroad depends on the opinions of others, such as friends, family or colleagues. Research has shown that perceived risk is critical in establishing subjective norms (Bae & Chang, 2020; Rahmafitria et al., 2021) while Featherman and Fuller (2003) suggest that consumers tend to believe that as perceived risk increases or is already elevated, referents will become more reluctant to endorse a product or service purchase. In general, as perceived risk increases, an individual will believe that others will have a more negative opinion of their travel decision. According to the existing literature, the following hypothesis was proposed:

H_{14}: When traveling to Bali, there is a significant correlation between anxiety and subjective norm.

Perceived risk and its resulting anxiety are thought to influence the perceived behavioral controllability of a particular action (Huang et al., 2020). The greater the potential risk (financial, physical, psychological or temporal) or the greater the perceived uncertainty, the less control people will feel over traveling abroad. Higher levels of perceived uncertainty about the consequences of a decision have been found to significantly impact control (Ma & Kay, 2017). Therefore, this study hypothesized:

H_{15}: The anxiety associated with traveling to Bali is significantly related to perceived behavioral control.

This study considers risk dimension and anxiety as multiple factors that influence travel decision-making. This integrated perspective recognizes that making travel decisions is a complex process and is influenced by various cognitive, emotional and contextual factors. By considering these factors together, this research captures the multidimensional nature of tourism decision-making. The theoretical framework of the study is presented in Figure 1, which is based on previous findings. It illustrates the relationship between the decision to travel abroad, which is the dependent variable, and the previously discussed independent

variables. This theoretical framework goes beyond simple correlations and examines the mechanisms and processes underlying tourism decision-making. This depth of analysis provides a richer insight into the decision-making process.

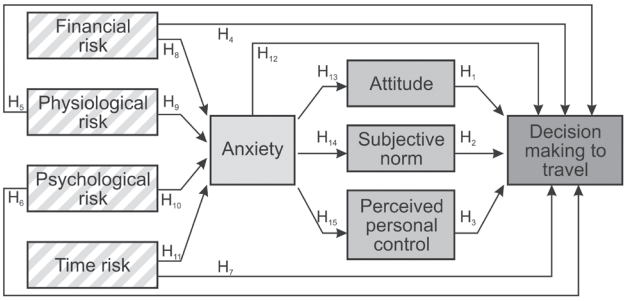

Figure 1. Theoretical framework
Source: authors

3. Research methodology

A quantitative method was used to measure inbound tourists' travel decisions to Bali after COVID-19 and a self-administered questionnaire with four sections (risk, anxiety, TPB and socio-demographic information) was sent out. After the government opened the borders for tourism activities, the study sample consisted of inbound tourists who had traveled to Bali, Indonesia. Convenience sampling was used in this research, and questionnaires were randomly distributed to inbound tourists volunteering for the study. Convenience sampling is often chosen when researchers have limited access to the entire population they wish to study (Sekaran & Bougie, 2016) and in the case of Bali, it took a lot of work to reach all international tourists after the government allowed them to travel, especially when they were spread all over the island. By using such sampling, the researchers were able to obtain data from these tourists who were easily accessible. Questionnaires were distributed at several popular beaches and some tourist areas around Bali. To ensure the eligibility of the participants, they were required to answer a filtering question before accessing the questionnaire (i.e., "Are you visiting Indonesia for tourism activities?").

The use of clearly identified constructs ensured construct validity and reliability. All answers were gathered based on a five-point Likert scale (1 – *strongly disagree* to 5 – *strongly agree*). The first section of the questionnaire was prepared to identify different aspects of risk and consisted of 24 questions (Artuğer, 2015; Dash, 2021; Perić et al., 2021; Rudyanto et al., 2021; Taşçıoğlu & Yener, 2021; Yağmur & Doğan, 2017; Zhan et al., 2022). The second part of the survey comprised seven questions to measure tourist anxiety (Luo & Lam, 2020; Yang & Wong, 2020). The third part consisted of 19 questions and measured TPB items (Perić et al., 2021).

The final section was related to the socio-demographic information of the participants. To confirm the validity, the investigators modified some of the items of the questionnaire to adapt them to the specific context of international tourism during a global crisis, such as COVID-19. Partial least squares structural equation modeling (PLS-SEM) was conducted using Version 3 of SmartPLS software (Hair et al., 2013) because the hypotheses made different assumptions about data distribution. The maximum number of formative constructs or the maximum number of antecedents leading to a construct (Barclay et al., 1995), whichever was greater, was multiplied by 10 to determine the minimum sample size to test the model. The model did not include formative constructs. This process yielded a minimum sample size of 90 but to evaluate the data, a sample size of 500 was deemed adequate (Hair et al., 2013). They were checked for missing data before analysis and a total of 487 valid questionnaires (response rate: 97.4%) were applied in the study after removing incomplete responses. The questionnaire was prepared in English, and data collection was between May and July 2022.

4. Results

4.1. Description of the participants

The description of the participants, shown in Table 1, revealed that the proportion of female is slightly higher than that of male (51.7% versus 48.3%). Half of the participants were between the ages of 19 and 30 years old (50.3%). More than half of the participants had a college degree (n = 277; 56.9%), were single (n = 260; 53.4%), and had set up their itinerary (n = 355; 72.9%).

Table 1. Description of the participants

Participants		Number	Percentage (%)
Gender	Male	235	48.3
	Female	252	51.7
Age	<18	27	5.5
	19–30	245	50.3
	31–40	118	24.2
	41–50	67	13.8
	>50	30	6.2

Table 1 (cont.)

Participants		Number	Percentage (%)
Education	High school or below	148	30.4
	Diploma	62	12.7
	Bachelor's	208	42.7
	Master's/PhD	69	14.2
Marital status	Single	260	53.4
	Married	189	38.8
	Separated/ divorced	21	4.3
	Widow/widower	17	3.5
Mode of travel	Backpack/family	355	72.9
	Tour group	132	27.1

Source: authors.

4.2. Reliability and validity

Anderson and Gerbing (1988) suggested a two-step model for testing. First, the measurement model was evaluated, followed by a structural model to check reliability, validity and predictive ability. Cronbach's alpha and composite reliability (*CR*) were used to analyze item reliability and all items were above the threshold of 0.7, as suggested by Nunally and Bernstein (1994). In addition, the average variance extracted (AVE) of above 0.5 supported the convergent validity of the variables (Fornell & Larcker, 1981). Confirmatory factor analysis was used to evaluate the measurement model and three items were excluded for insufficient correlation with the factor (PBC 4 = 0.430, finance 1 = 0.641, and time 1 = 0.421). According to Farrell and Rudd (2009), low factor loadings (less than 0.7) may indicate problems with the factor structure being represented. The factor loadings for the remaining items were higher than the recommended value. The discriminant validity of the items was tested by the heterotrait-monotrait ratio of correlations (HTMT). The HTMT assumes that the square root of a construct's AVE must be larger than its correlations with other latent items. Two reflective variables are discriminately valid when HTMTs are less than 0.9 (Ringle et al., 2024). The discriminant validity of the constructs was further supported by factor loadings greater than 0.7 and exceeding cross-loadings (Hair et al., 2013). Tables 2 and 3 depict the reliability and validity assessment of the items.

Table 2. Mean, standard deviation (*SD*), item loadings, reliability and validity

Variable	Mean	*SD*	Item	Loading	Cronbach's alpha	Composite reliability (*CR*)	Average variance extracted (AVE)
Decision	4.125	0.974	Int-1	0.903	0.888	0.931	0.817
			Int-2	0.944			
			Int-3	0.863			
Perceived behavioral control	3.760	0.815	PBC-1	0.728	0.869	0.904	0.655
			PBC-2	0.871			
			PBC-3	0.884			
			PBC-5	0.740			
			PBC-6	0.803			
Subjective norms	4.095	0.838	SN-1	0.824	0.922	0.941	0.763
			SN-2	0.917			
			SN-3	0.886			
			SN-4	0.892			
			SN-5	0.845			
Anxiety	2.202	1.022	Anxiety-1	0.855	0.938	0.950	0.731
			Anxiety-2	0.788			
			Anxiety-3	0.891			
			Anxiety-4	0.829			
			Anxiety-5	0.822			
			Anxiety-6	0.918			
			Anxiety-7	0.873			

Attitude	4.215	0.716	Attitude-1	0.735	0.869	0.905	0.656
			Attitude-2	0.808			
			Attitude-3	0.857			
			Attitude-4	0.817			
			Attitude-5	0.745			
Finance	2.622	1.053	Finance-2	0.867	0.915	0.936	0.747
			Finance-3	0.861			
			Finance-4	0.884			
			Finance-5	0.786			
			Finance-6	0.891			
Physiological	2.189	1.045	Physiology-1	0.873	0.923	0.939	0.721
			Physiology-2	0.869			
			Physiology-3	0.861			
			Physiology-4	0.853			
			Physiology-5	0.807			
			Physiology-6	0.831			
Psychological	2.515	1.024	Psychology-1	0.781	0.900	0.922	0.664
			Psychology-2	0.895			
			Psychology-3	0.880			
			Psychology-4	0.860			
			Psychology-5	0.721			
			Psychology-6	0.736			
Time	2.020	0.845	Time-2	0.847	0.929	0.946	0.779
			Time-3	0.856			
			Time-4	0.892			
			Time-5	0.901			
			Time-6	0.897			

Source: authors.

Table 3. Matrix of heterotrait-monotrait ratio of correlations (HTMT)

Variable	Decision	Perceived behavioral control	Subjective norms	Anxiety	Attitude	Finance	Physiological	Psychological	Time
Decision	–	–	–	–	–	–	–	–	–
Perceived behavioral control	0.867	–	–	–	–	–	–	–	–
Subjective norms	0.765	0.804	–	–	–	–	–	–	–
Anxiety	0.502	0.497	0.530	–	–	–	–	–	–
Attitude	0.635	0.622	0.676	0.472	–	–	–	–	–
Finance	0.471	0.453	0.524	0.797	0.436	–	–	–	–
Physiological	0.423	0.431	0.529	0.803	0.427	0.851	–	–	–
Psychological	0.374	0.395	0.473	0.790	0.374	0.862	0.895	–	–
Time	0.298	0.300	0.387	0.749	0.335	0.637	0.682	0.650	–

Source: authors.

4.3. Structural model

The hypothesized relationships were investigated in the following step. The R^2 data in Table 4 suggest that fear, attitude, subjective norms, PBC and decision to travel explained 70.1, 19.6, 25.7, 24.5, and 66.2% of the variation, respectively. Stone-Geisser's Q^2 (Fornell & Larcker, 1981) was used to evaluate the predictive power of the structural model. Hair et al. (2013) suggested cross-validated redundancy to estimate the predictive relevance of the model. A Q^2 value greater than zero indicates the predictive relevance of an endogenous latent variable. As shown in Table 4, all constructs had Q^2 larger than zero, confirming predictive validity. Table 5 summarizes the results of analysis. According to the findings in Table 5, all hypotheses except H_5 and H_6 were confirmed. Therefore, all other hypotheses were accepted. The results of the hypothesis testing are presented in Figure 2.

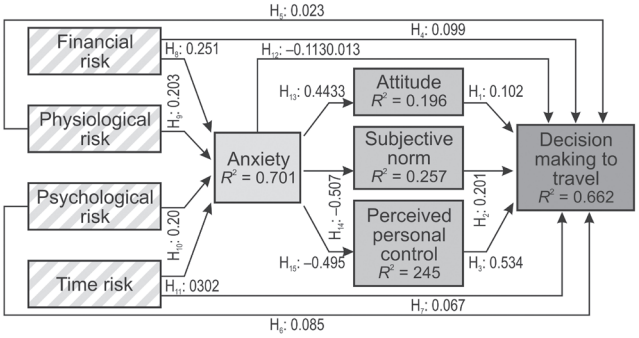

Figure 2. Hypothesis testing results
Source: authors

Table 4. Results of coefficient of determination (R^2)

Construct	R^2	Standard deviation (*SD*)	*p*-value	Stone-Geisser' Q^2
Anxiety	0.701	0.024	0.000	0.508
Attitude	0.196	0.033	0.000	0.121
Subjective norms	0.257	0.038	0.000	0.194
Perceived behavioral control	0.245	0.034	0.000	0.150
Decision	0.662	0.030	0.000	0.528

Source: authors.

Table 5. Direct relationships

Hypothesis testing	β	*t*-test	*p*-value	Result
H_1: Attitude → decision	0.102	2.810	0.002	Supported
H_2: Subjective norms → decision	0.210	4.897	0.000	Supported
H_3: Perceived behavioral control → decision	0.534	13.056	0.000	Supported
H_4: Finance → decision	–0.099	1.908	0.028	Supported
H_5: Physiological → decision	0.023	0.375	0.354	Rejected
H_6: Psychological → decision	0.085	1.558	0.060	Rejected
H_7: Time → decision	0.067	1.688	0.046	Supported
H_8: Finance → anxiety	0.251	5.746	0.000	Supported
H_9: Physiological → anxiety	0.203	4.115	0.000	Supported
H_{10}: Psychological → anxiety	0.201	3.974	0.000	Supported
H_{11}: Time → anxiety	0.302	8.040	0.000	Supported
H_{12}: Anxiety → decision	–0.113	2.579	0.005	Supported
H_{13}: Anxiety → attitude	–0.443	11.881	0.000	Supported
H_{14}: Anxiety → subjective norms	–0.507	13.787	0.000	Supported
H_{15}: Anxiety → perceived behavioral control	–0.495	14.756	0.000	Supported

Source: authors.

5. Discussion

The results show a significant negative correlation between anxiety and tourist decision-making. In other words, a decreasing level of anxiety leads to an increasing level of travel decision. This finding is consistent with the results of prior studies (Luo & Lam, 2020; Zhu & Deng, 2020). Therefore, the decision to travel overseas will increase when tourists have less anxiety about traveling abroad. Anxiety has a significant and negative impact on perceived behavioral control, subjective norm and attitude; as anxiety decreases, attitude, subjective norm and perceived behavioral control increase. Previous studies have confirmed these negative relationships (Bae & Chang, 2020; Fu et al., 2015). According to Magano et al. (2021), anxiety about becoming infected with the COVID-19 virus leads to changes in human behavior, including changes in leisure and vacation behavior.

A significant and positive correlation was found between the four risk dimensions discussed (physical, psychological, financial and time) and tourist anxiety, which aligns with previous research (Bae & Chang, 2020; Reisinger & Mavondo, 2005). Thus, people are more anxious when risk perceptions are higher. Gudykunst and Hammer (1988) suggested a strategy for managing anxiety and risk reduction in which high levels of anxiety and fear lead people to view the destination as being less safe and to remove it from their planning list (Reisinger & Mavondo, 2005). In addition, the greater the risk associated with a travel destination, the less likely individuals are to visit it (Sönmez & Graefe, 1998). Emotions of worry and fear may continue to deter international travel during pandemics.

Financial risk was found to be significant and negative in determining whether to travel. According to previous research, the COVID-19 pandemic has increased the risk of financial loss because of higher prices and an economic recession (Dash, 2021; Perić et al., 2021). As uncertainty, economic insecurity, and unemployment have increased, people have become more cautious about expanding their consumption and have postponed their demand for consumer durables and services (Sheth, 2020). Therefore, people consider this when planning a trip abroad due to increasing unemployment, economic recession and rising prices caused by the pandemic. It was also found that time risk has a significant and positive effect on the decision to travel overseas, which contradicts previous studies (Taşçıoğlu & Yener, 2021; Yağmur & Doğan, 2017). This contradiction can be explained by the fact that tourists are now more short-term oriented, using the advantages of open borders and fewer travel restrictions to realize their travel plans.

The study itself could not show any correlation between perceived physiological and psychological risk and tourists' intention to travel to another country. Only a few previous studies support these findings, such as Jiang et al. (2022) for psychological aspects and Li et al. (2022) or Zhou et al. (2024) for physiological. Other investigators demonstrated that psychological and physical risks are significantly correlated with the decision to travel abroad (Rudyanto et al., 2021; Zhan et al., 2022).

6. Conclusions

The results of this research confirm that TPB is a valid framework for explanations in the context of tourism during a major economic crisis. Attitude, PBC and subjective norms are shown to have a significant influence on travel decisions. These findings are in line with previous tourism studies using the TPB in similar contexts (Bae & Chang, 2020; Li et al., 2020; Sujood et al., 2022). Of all elements of the model, the PBC tends to have the largest influence on travel decisions so marketing communications to potential visitors should emphasize the ease and hassle-free nature of visiting Indonesia. Attitudes play a role in the decision-making process, but the impact is relatively small.

Individuals' risk perceptions, fears, and beliefs associated with their specific cultural group also play an important role in deciding whether to travel abroad. That is why marketing campaigns should emphasize the positive aspects of traveling to Bali with safety precautions, and support from health professionals and government agencies. The findings will be insightful for destinations to be better prepared for a similar pandemic in the future. It helps destinations to have different scenarios for battling pandemic conditions. Based on these findings, the present study provides important practical and theoretical contributions.

6.1. Theoretical contributions

Theoretically, this study contributes to the existing literature by explaining how different risk perceptions, as well as travel anxiety, influence the decision-making process of international visitors to travel overseas during a pandemic. Most tourists associate visiting different destinations and meeting new people with an unfamiliar situation and need a certain level of safety when planning a holiday. Health concerns have become an important issue while traveling during a pandemic. To develop interventions that promote safety among travelers, it is key to understand the role of risk and anxiety in tourist behavior. The current research aims to extend knowledge of how risk and anxiety influence tourists' decision-making by applying an extended TPB model that includes these variables.

Consequently, this research will provide a more detailed understanding of tourists' intention-based

behavior during an outbreak of an infectious disease in the future. This theoretical fram ework improves TPB's predictive power, especially when applied to different destinations. The results of this study are significant, and they offer researchers a theoretical basis for future investigation into risk perception and the anxiety of tourists.

Most travel behavior models were developed in Western societies. Nevertheless, this study suggests that a TPB-based model is also applicable in a developing and therefore non-Western society (Pahrudin et al., 2021). Indonesia has invested in tourism to rejuvenate its industry and attract more inbound tourists. Furthermore, this study contributes to the existing literature by showing changes in people's behavior, which contrasts with previous findings. The results also show that physical and psychological risk dimensions did not significantly influence tourists' decisions to travel overseas during COVID-19.

Finally, the work makes a valuable contribution to the academic tourism literature by focusing on a global event that severely disrupted societies and daily life. Given the strong possibility of further waves of COVID-19, the results of this work can serve as a valuable basis for future studies that respond to Gössling et al.'s (2020) call for longitudinal analyses of short- and long-term changes in tourist behavior.

6.2. Practical implications

The findings provide an important contribution to the tourism practice in Indonesia and worldwide. Like other serious infectious diseases, COVID-19 is expected to reappear every four to five years. That is why it is important to be prepared for future waves (Kim, 2020). To ensure concrete preparation, international tourism stakeholders must provide a well-thought-out strategic plan. By highlighting the key factors that influence tourists' preventive behavior, the study can serve as a valuable guide providing practitioners with information they can use to develop more appropriate risk management programs.

The results show that tourists' travel intentions decrease with higher levels of anxiety, which has significant implications for the design of effective promotional strategies to reduce tourists' anxiety before traveling abroad. Destination management organisations and other professionals can reduce travel anxiety by providing more detailed information about the risk level (Paredes et al., 2023). Tour operators, who offer in-depth information, can also try to minimize tourists' anxiety and increase their feeling of security when making decisions.

According to traveler anxiety, marketers should offer solutions that reduce tourists' perceived risks (e.g. by providing more detailed information about the destination) or reposition the destination image by offering packages that lower traveler anxiety and promote tourism. This can be achieved through clear and transparent communication about the safety measures and health protocols in place.

During a severe pandemic, destinations should focus on potential tourists with a fully functioning destination environment. To reduce risk perception and increase tourists' decisions to travel, destinations should use different media and update tourism news. Social media is the most effective tool to disseminate COVID-19 risk information. However, the tourism sector needs to improve its communication strategy by providing tourists with information on how to minimize the health risks of COVID-19.

How tourists perceive travel risks can influence their decision to travel internationally and the possibility of visiting a particular destination (Yadav et al., 2024). These issues reflect the characteristics of destinations that matter to tourists and help to understand what makes a destination attractive. This can be achieved by reducing the perception of travel as risky and tourism marketers and stakeholders can encourage potential tourists to travel. Physical and psychological risks did not influence tourists' intentions to travel abroad. Focusing on the mitigation and management of risk dimensions that are important to tourists, such as financial and time risks, can influence travelers' choice of destinations, for example, by providing flexible booking options, insurance coverage and information on how travelers can effectively manage their time in a destination.

During pandemics, stakeholders and tourism authori-ties should enhance risk management and therefore reduce the perceived risk perception of tourists. DMOs should try to increase the safety and security perception of tourists by reducing physical, psychological, time and financial risks. Policy makers can use the results of this research to develop more effective policies for tourism during COVID-19. Understanding the impact of fear and risk perceptions, they could develop targeted interventions and support the tourism industry. At a societal level, this research can contribute to developing strategies for revitalizing local economies. If those responsible can address tourists' concerns and encourage people to travel to Bali, the region can benefit economically by creating jobs and improving livelihoods.

6.3. Limitations and future suggestions

The existing limitations of this research could be used as a base for future work. These limitations include the use of cross-sectional data, collected only at a single point in time, which affects the generalizability. To solve this limitation, research data should be collected over multiple periods. Long-term data collection is an

ideal way of investigating the impact of TPB elements on tourist decision-making. Furthermore, data should not only be collected during the stay of tourists, but also before their departure. This helps to find out more about the potential risks they experience during their holidays.

Current research has investigated how four different risk factors and tourists' anxiety influence travel decisions. Further studies could expand the applied theoretical framework to include motivational and emotional aspects that guarantee a better understanding of inbound tourists' decisions to travel abroad in times of pandemic. Although the findings of this study are limited to tourists in general. They cannot be applied to a specific group of tourists. It is suggested that future researchers test the theoretical model for a special group or type of travel Indonesia offers, such as nature, cultural, sports, religious or food tourism.

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