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Determinant factors of customers' purchase intention on the usage of travel shopping application

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Abstract

Nowadays, online reservations to fulfill traveling needs have been widely expanded. Existing travel applications have multiple offerings to maintain customers or grab potential buyers. Therefore, it is essential to identify determinant factors of customers' purchase intention on online travel shopping application usage. This study applied the Technology Acceptance Model, Diffusion of Innovation Theory, and Theory of Planned Behavior as theoretical perspective guidance. There were 253 responses collected via an online survey. The data were analyzed using structural equation modeling (SEM). The result of this study showed that purchase intentions (PIN) were determined by communicability (CMB), attitude (ATD), and perceived behavioral control (PBC). Unlike PBC, which directly relates to PIN, brand awareness (BAW) did not contribute directly but was fully mediated by CMB. In addition to that, BAW did have a positive association with CMB. Meanwhile, ATD on the usage of travel apps was prevalently formed by perceived relative advantages (PRA) and perceived technological congruence (PTC). ATD also played a mediating role between PRA and PIN. However, it did not apply between PTC and PIN. These results may help the travel providers focus on strategies to generate the PIN.

Keywords: Travel application (travel-apps), communicability, attitude, perceived behavioral control, purchase intention

Introduction

Before the pandemic, traveling had become one of the activities listed to do among workers, students, and families. It is common for Indonesians to make domestic trips to visit family members or friends, followed by recreational, personal, and business purposes (Statista, 2022a). In times of pandemics, when the government firmly restricts traveling activities, it even becomes appealing for people to make plans and do staycations to have short refreshments. Now that vaccines have overcome the pandemic and the rate of COVID-19 patients is significantly decreasing, the desire to travel becomes even greater. A study conducted by Expedia Group and Wakefield Research suggested that after the two years of the

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enduring global pandemic, people value travel and personal time more than ever (Expedia, 2022).

The online travel booking segment is one of the largest in the travel industry. Booking through digital channels and online platforms has become easier. The use of travel applications has been growing along with the relaxation of community activities and the opening borders in various countries. As mentioned by Business of Apps, the travel applications users have reached 94 million people in 2021. The amount increased to 52.46% compared to 2020, when the pandemic emerged (Rizaty, 2022). Statista also stated that revenue projection in the Travel & Tourism market would reach US$716.80 billion in 2022. In this market, 73% of total revenue will be generated through online sales by 2026 (Statista, 2022b). However, statistics also reveal that 48% of users uninstall applications due to poor performance (Keren, 2019). There is no room for slow or non-performing applications. The applications should be consistent and compatible with consumer values and travel needs (W. Wang, 2019).

On the contrary, users will also delete applications once their needs are fulfilled. Thus, customer loyalty becomes another challenge for travel providers. In addition, the conversion rates on travel applications are only 0.7%, the lowest among other digital selling lines (Deane, 2022).

With such above circumstances, there is a great necessity to understand the factors that motivate users to make purchases in travel applications. Ample studies in this area primarily focused on satisfaction, adoption intention, and user engagement. Nevertheless, there is a lack of research on what drives users to purchase travel online (Coves-Martínez et al., 2022).

Knowing how the adoption of travel apps affects marketing results is essential (Chen et al., 2021). Still, user behavior regarding usage and purchase intention has to be distinguished. The promptness and eagerness to adopt or use a system are what usage refers to. Meanwhile, the probability of purchasing a product is what purchase intention is about (Vahdat et al., 2021). Since closing deals on platforms is the main initiator for the service providers to maintain systems and derive monetary benefits, more profound studies on user purchase intention are significantly needed (Jang et al., 2018).

To sum up, understanding determinant factors of the customers' purchase intention is crucial for travel operators to create proper actions that maximize opportunities to get the attention of customers or potential customers to open the applications, execute the purchase transactions, and re-do these things in the future.

Among studies about travel application and purchase intention, limited research focused on the market in Indonesia. Previous studies examined how users manage the complexity of internet applications (Lim et al., 2022; Reynolds & Ruiz de Maya, 2013; Z. Huang & Mou, 2021). However, many people today have become tech-savvy because they use smartphones, notebooks, and other internet tools in their daily lives (Rafdinal, 2021). Thus, technological congruence (Lim et al., 2022; Rogers et al., 2019), which fits the customer, is a further case to analyze instead of complexity.

According to existing research, the impact of brand awareness on purchase intention varies (W. T. Wang & Li, 2012; Azzari & Pelissari, 2020; Sriwardiningsih & Zulkarnain, 2021). Nevertheless, few works of literature specifically explained its impact on the usage of travel applications. Therefore, this research will explore how brand awareness will affect the customers' purchase intention on travel applications.

This study is aimed to find the key aspects of customers' perspectives on their purchasing actions or plans. It will test brand awareness, perceived relative advantages, perceived technological

congruence, and perceived behavioral control as independent variables to create purchase intention. Furthermore, it will examine the mediating effect of attitude and communicability. The result of this research is expected to improve the discernment of the travel application providers to propose and implement precise strategies to transform opportunities into definite outcomes.

Travel Application

Mobile technologies and applications are prevalent, and they are constantly growing and changing the behavior of consumers and providers (Dorcic et al., 2019). Smartphones have significantly influenced tourists seeking information about travel and trip experiences (W. Wang, 2019).

Travel applications are applications that travelers can use for their traveling activities. From the view of travelers, travel activities may have three stages: pre-travel, on-site, and post-travel (Kuen Yi et al., 2019). It may include researching, making itineraries, using a map or navigation tools, booking tickets and hotel reservations, creating a packing list, using local transportation and food deliveries, checking the weather, budgeting expenses, and making a journal. Google Map, Google Trip, Pack Point, Booking, Uber, Trabee Pocket, and Polarsteps are applications that support tourists to get them a sound travel experience.

In this study, travel applications refer to mobile travel applications that assist users in doing research on destinations, finding preferable transportation (flights, trains, buses) and accommodation deals (hotels, apartments, villas, travel packages, events, rentals, spas, and dinings), booking the products and services as well as executing related payments.

Since this research was performed in Indonesia, the travel applications are Traveloka, Tiket.com, Agoda, Pegi-Pegi, and others such as Booking.com and KAI Access.

Attitude (ATD) Drivers

Perceived Relative Advantages (PRA)

When people are willing to adopt innovation, they expect that the new idea is better than the existing one. PRA refers to the stage at which an innovation is perceived as superior to the ideas it supersedes or replaces. It has become key in forming the ATD toward a behavioral intention (R. T. Huang, 2018). Mobile applications for travel information and activities in recent years have increased rapidly and now have become a necessary travel kit for almost everyone. The PRA has become a critical factor for users using mobile travel apps (Fang et al., 2017).

In a study perfomed by Ali et al. (2021), the advantages of using mobile travel applications, such as information and service quality, have significantly affected user engagement and forming an attitude (ATD) of using smartphones to order travelling needs online. Another study by Lim et al., (2022) mentioned that the more users benefit from executing transactions from travel applications than from other platforms, the more likely they are to use the applications

The PRA is formulated as a multidimensional construct. Choudhury & Karahanna (2008) stated that convenience, trust, and efficacy of information acquisition are constructs that build PRA. Research by Amaro & Duarte (2015) showed more comprehensive constructs mentioning that PRA consists of five aspects: time-saving, financial advantages, convenience, product variety, and enjoyment.

Thus, in this study, those five aspects will be used as what users perceived as having advantages of using travel applications rather than other platforms. These perceived advantages are likely factors that build the attitudes of users toward shopping in travel applications, as proposed by the following hypothesis:

H_{1a}: PRA of users is positively associated with their ATDs toward travel applications.

Perceived Technological Congruence (PTC)

Technology adoption is well explained by the Technology Acceptance Model (TAM). It explained that perceived usefulness and perceived ease of use are determinants of user acceptance over technology (Davis, 1989). In other words, users can accept the technology if it is useful and easy to use.

The use of technology in the travel industry has become a dynamic process involving all stakeholders and broader aspects of tourism (Rafdinal, 2021). It has become common for users to use technology to get information about travelling at any time from any place. Thus, users' needs were no longer about usefulness and ease of use of technology but moved forward to a greater level. Innovation is all it takes to fulfill expectations. A study stated that TAM should be integrated into adopting the innovation model (Legris et al., 2003).

Rogers et al. (2019), in their Diffusion of Innovation Theory (DOI) stated that five features of innovation are relative advantages, compatibility, complexity, trialability, and observability. In this study, PTC refers to compatibility, which encompasses the invention of new technologies and explains the fit between technologies and consumer needs (W. Wang, 2019). Compatibility is the degree to which an innovation is perceived to conform to individuals' values, lifestyles, experiences, and needs (Rogers et al., 2019). Thus, PTC is defined as the degree to which users perceive the travel applications as consistent or compatible with consumer values and travel needs. Prior research revealed that travel applications should evolve continuously to meet traveler lifestyle and needs because they are critical in forming an attitude toward purchasing travel products (W. Wang, 2019). The perception of travel applications as a proper way of fulfilling travel needs would form positive attitudes of users in using the travel application (Lim et al., 2022). Hence, PTC will lead travelers to have positive ATDs toward travel applications.

H_{1b}: PTC of users is positively associated with their ATDs toward travel applications.

Communicability (CMB) Drivers

Brand Awareness (BAW)

Although the internet has allowed users to get as much information as possible and adopt any applications available, travel providers do not remain silent. The research found that digital marketing activities are essential in building BAW (Krishnaprabha & Tarunika, 2020). Thus, companies make plenty of efforts to ensure that customers know their brands and that they are valuable.

BAW is the capacity of a consumer to identify and recall the brand in various situations (D.Aaker, 1991). BAW helps the customers make direct contact with the company. It is related to the strength of the brand node or memory trace, where consumers can identify the brand under different conditions (Aulia & Briliana, 2017). Users may use travel applications that they recognize in their memory.

A study by Hernández-Méndez et al. (2015) explained that tourists are greatly influenced by the comments and opinions of their friends and relatives when arranging travel. Hence, any decisions relating to the use of travel applications may derive from BAW and the social effect of friends and family (communicability). For travelers and marketers, a positive perception of a brand is critical because it may impact the tourists' intention of spreading any positive reviews on traveling (Lemmetyinen et al., 2016), in this case, travel applications. Therefore, this study investigates the impact of BAW on CMB.

H_2: BAW of users is positively associated with CMB.

Purchase Intention (PIN) Drivers

Tian et al. (2021) study revealed the relationship between the usage of mobile travel applications and BAW. However, investigations on BAW to PIN have varied results. Studies by Mulyantina (2019) and He et al. (2013) showed that BAW significantly influences PIN. In contrast, other studies by Sriwardiningsih & Zulkarnain (2021) and Azzari & Pelissari (2020) confirmed that BAW is insufficient in generating consumers' purchase intent. Whether the BAW of travel applications affects customers' PIN will be investigated further in this study.

H_3: The BAW of users is positively associated with PIN.

Communicability (CMB)

The tourism literature indicates that information sharing matters (Kim et al., 2021). When somebody learns about a brand, he will probably use it and adopt the applications. Recommendations from friends and family are something to consider, especially regarding traveling. Such recommendations are assumed to be a credible source of information for purchase decisions. Using prior experience from other travelers, users expect to prevent making wrong decisions as the tourism products vary in terms of type and prices (Buhalis et al., 2019).

CMB refers to how the experiences, testimonies, and opinions from family and friends will affect the users' decisions on their online activities (Morrisonn et al., 2012). Users tend to follow the same actions when someone they know booked or reserved certain travel products.

A study confirmed that social factors had become the factors that affected the customers' PIN over the use of mobile applications (Vahdat et al., 2021). In other research, Lim et al. (2022) found that communicability is a psychological element that significantly influences purchase intentions in travel applications. The opinions of families and friends are considerably important for users in making travel purchase decisions (Essiz & Mandrik, 2022). Specifically, the influence of CMB to purchase intention, as the form of social effect, will be tested in this study by the following hypothesis:

H_4: The CMB of users is positively associated with PIN.

Attitude (ATD)

The definition of ATD is a mental position with regard to a fact or state or a feeling or emotion toward a fact or state (Merriam-Webster, n.d.). Another definition states that ATD is a bodily state of readiness to respond in a characteristic way to a stimulus such as an object, concept, or situation (Merriam-Webster, n.d.). ATD is a feeling or way of thinking that affects a person's behavior (Merriam-Webster, n.d.).

There is crucial relation between ATD and behavioral intentions. According to Ajzen (1991), in his Theory of Planned Behaviour (TPB), highly accurate predictions over behavioral intentions can be created from the ATD towards behavior, subjective norms and perceived behavioral control or PBC (PBC will be explained in the next section). However, due to uncertainty of the exact nature of these relations (Ajzen, 1991), this study will test the relationship of ATD toward behavior intention, that is, PIN.

Research in the tourism social networks found that consumer attitudes positively affect their PIN toward group package tours (Lin, Y.-C., Li, C.-L., Hsiao, Y.-W., & Chen, 2019). Meanwhile, another study revealed that positive ATD towards applications would increase the frequency of accessing applications and then increase the PIN from the platforms. Thus, the users who show positive ATD toward the travel applications will have a higher PIN (Hsu & Lin, 2016). As mentioned above,

this research will test the relationship between the ATD of users toward PIN.

H_5: The ATD of users is positively associated with the PIN.

Perceived Behavioral Control (PBC)

TPB is a well-established model used in numerous research from many fields of study (Tornikoski & Maalaoui, 2019). As mentioned in the "Attitude Section", PBC is one of three aspects that construct human behavior (Ajzen, 1991). PBC represents the extent to which a person feels they have control over performing the desired behavior when faced with internal and external barriers and is often operationalized as self-efficacy (Bandura, 2010). In other words, a person believes that behavior in question is under his or her control (K. Wallston, 2001). It is also defined as the ease or difficulty of the behavior (K. Wallston, 2001). For example, a person feels it is challenging to use a travel application or, on the contrary, feels easy and confident to use it.

Now that people are familiar with smartphones and that technological tools are more user-friendly, it results in a higher degree of self-efficacy and controllability of the users (Lim et al., 2022). These conditions have affected the consumers to book rooms and other reservations regarding their holiday plans by using travel applications (Christina & Yasa, 2021). Nowadays, applications preserve online booking features which enable consumers to see detailed and more transparent information about the hotel rooms and facilities and any specific regulations on behalf of the hotels being booked (Christina & Yasa, 2021). Thus, it can be considered that if users have control and confidence when using travel apps, there will be a positive result concerning purchase intention (Lim et al., 2022).

Thus, this study will test the relationship between users' PBC and their PIN.

H_6: Users' PBC positively affects PIN.

Mediating Effects

Mediating Effect of ATD

In research, ATD is regularly used as a psychological construct to measure an object's influence on behavioural intentions (Jiang et al., 2021). ATD helps provide an overall picture describing users' reactions and what causes them (Ajzen, 1991). Several studies showed that ATD is critical as the mediator of PRA and compatibility (PTC) to behavior intention (Lim et al., 2022; Amaro & Duarte, 2015). Therefore, as a component of DOI, PRA and PTC need to be tested to determine whether they will impact the PIN mediated by ATD, specifically for online travel activities. This research proposes the following hypotheses:

H_7: ATD mediates the relationship between PRA and PIN

H_8: ATD mediates the relationship between PTC and PIN

Mediating Effect of CMB

There are multiple studies learning about how BAW affects PIN. However, research shows the importance of communication as a mediating role between BAW and PIN (Mulyantina, 2019). In the world of tourism, communication plays a significant role. It can also enhance the image of platforms, agencies, or firms and influence the consumers' PIN (Lin, Y.-C., Li, C.-L., Hsiao, Y.-W., & Chen, 2019). Another research found that social influence regarding e-commerce platforms will impact PIN (Chen et al., 2021). This study will test the mediating effect of CMB between BAW and PIN by using the following hypothesis:

H9: CMB mediates the relationship between BAW and PIN.

The research model is presented in Figure 1.

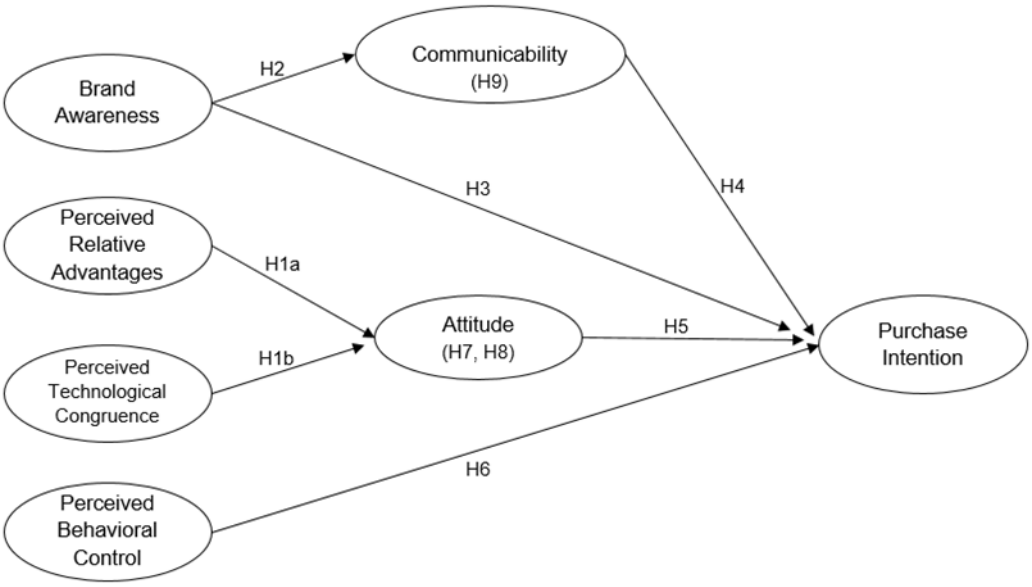

Figure 1. The Conceptual Framework

Method

This research used a non-probability sampling method with a purposive sampling technique. Data collection was created by performing an online survey using Google Forms held in June 2022. The questionnaire used Bahasa Indonesia and was divided into two parts. The first part explored the characteristics of respondents. The second part contained statements describing variables that construct purchase intentions which consist of Perceived Relative Advantages (PRA), Attitude (ATD), Communicability (CMB), Perceived Behavioral Control (PBC) and Purchase Intention (PI). The PRA contains five dimensions that are measured separately: Convenience (CV), Time-Saving (TS), Financial Advantage (FA), Product Variety (PV), and Enjoyment (EJ). All constructs are scaled using a 5-point Likert Scale ranging from a score of 1 for Strongly Disagree to 5 for Strongly Agree.

This study used SPSS AMOS 23 as statistical software. A descriptive analysis, reliability test and validity test were performed. The structural equation model (SEM) was set to analyse measures and assess the hypotheses.

The following question represents the criteria of respondents:
Have you ever used any travel applications? If the respondents answered "No," they will be excluded as samples.

A total of 260 respondents participated in filling out the questionnaire. Yet, the number of valid samples in this study was 253 respondents. The characteristics of respondents are displayed in Table 1.

The respondent profile comprises 111 male and 142 female respondents. It primarily represents those aged 31-40 (106 respondents, and 41-50 (86 respondents), for 41.9% and 24%, respectively. Most work as Civil Servants/ASN (43.1%) and Private/BUMN employees (37.9%) with income ranging from Rp5 million to above Rp20 million per month. Statistics showed that 61,7% of the respondents use multiple applications to process their travel needs. Traveloka, Tiket.com, and Agoda are the often-used applications, but generally, respondents combine these travel applications to make comparisons that will benefit them more.

Within a year, 108 respondents (42,7%) executed 2 transactions, 82

respondents (32,4%) made 3 to 5 transactions, and the remaining 63 respondents (24,9%) processed more than 5 transactions.

Table 1. Respondent Profile

Characteristic	Frequency	%
Gender		
Male	111	43.59
Female	142	56.1
Age		
18-30	48	19.0
31-40	106	41.9
41-50	86	34.0
>51	13	5.1
Occupation		
Student	3	1.2
Private/BUMN Employee	96	37.9
Civil Servants	109	43.1
Enterpreneur	23	9.1
Others	22	8.7
Monthly Income		
Below Rp5.000.000	22	8.7
Rp5.000.000-Rp10.000.000	58	22.9
Rp10.000.000-Rp15.000.000	53	20.9
Rp15.000.000-Rp20.000.000	55	21.7
Above Rp20.000.000	65	25.7
Travel Application		
Agoda (AG)	3	1.2
Pegi-Pegi (PP)	3	1.2
Traveloka (TR)	67	26.5
Tiket.com (TI)	20	7.9
Others (OT)	4	1.6
Combination of AG, PP, TR, TI, or OT	156	61.7
Volume of transaction		
2	108	42.7
2-5	82	32.4
more than 5	63	24.9
Purpose of transaction		
Hotel Reservation	30	11.9
Ticket (Airplane/Train)	57	22.5
Travel Package	1	0.4
Others	2	0.8
Combination of hotel, ticket, travel package or others	163	64.4

Source: SPSS Data Result, 2022.

Most respondents (64.4%) use travel applications to make joint transactions such as hotel reservations, book transportation tickets and buy travel packages. Meanwhile, single-purpose transactions exist for respondents to purchase tickets (22.5%) or book hotels (11.9%) only.

Results

The measurement of PIN as a dependent variable and statements describing PRA, ATD, CMB, and PBC are adopted from Lim et al. (2022). PIN has two items to be measured. PRA contains five dimensions: Convenience (CV), Time-Saving (TS), Financial Advantage (FA), Product Variety (PV), and Enjoyment (EJ). Each dimension measures three items; the exception is for Enjoyment (EJ), which only measures two items. There are five items for ATD, and three items for each, CMB and PBC, to be measured. According to research by Manthiou et al. (2014), two items measure BAW, while PTC is measured by three items based on Wang's study (2019). Details are pictured in Table 2, Validity and Reliability.

Validity refers to the degree to which a research instrument serves the purpose for which it was constructed or whether the indicators that measured the variable are valid (Hair et al., 2021). This study used 253 respondents, so the factor loading of 0.35 would be the threshold that determined the validity of the sample. In total, 34 statements indicators were tested. The factor loading for each statement is above 0.36, meaning these indicators were valid.

Reliability is a measure of consistency in measurement (Hair et al., 2021). The technique used to assess internal consistency is Coefficient Cronbach's Alpha. This study revealed that all constructs were reliable as the Cronbach's Alpha yield from the test exceeded the loading factor threshold value of 0.70 (Hair et al., 2021), as described in Table 2.

Descriptive statistics are used to summarize and describe the data obtained from respondents (Hair et al., 2021). The overall respondents have given excellent

Table 2. Validity and Reliability

Construct	Factor loading	Cronbach's-Alpha
Brand Awareness (BAW)		0.869
Agoda, Traveloka, Tiket.com and Pegipegi are well-known travel applications	0.841	
The attributes of Agoda, Traveloka, Tiket.com, or Pegipegi immediately appear ini my mind	0.925	
When I think of travel applications, Agoda, Traveloka, Tiket.com, or Pegipegi comes to my mind easily	0.902	
Perceived Relative Advantages (PRA)		
-Convenience (CV)		0.810
Buying travel products and services through apps makes me less dependent on opening hours	0.814	
Buying travel products and services through apps makes me get more simple payment procedure	0.894	
Buying travel products and services through apps is more convenient for I can execute it at any time and anywhere	0.844	
-Time-saving (TS)		0.844
By buying travel products and services through apps, I can complete my shopping quickly	0.864	
Buying travel products and services through apps is time-saving for me.	0.907	
Buying travel products and services through apps takes less time than travel agencies.	0.850	
-Financial advantage (FA)		0.861
By buying travel products and services through apps, I can save money	0.887	
Travel apps provide more discounts on travel products and services than travel agencies.	0.910	
Generally, products and services offered by travel apps are at lower prices.	0.859	
-Product Variety (PV)		0.744
More significant choices of travel products and services are available when using apps	0.826	
I can buy travel products and services that are unavailable offline through travel apps	0.800	
I can customize my trip by using travel apps	0.826	
-Enjoyment (EJ)		0.898
Buying travel products and services through apps gives more excitement than buying offline	0.953	
Buying travel products and services through apps gives more pleasure than buying offline.	0.953	
Perceived Technological Congruence (PTC)		0.868
Using the travel apps would fit into my travel shopping style	0.908	
Using the travel apps would be compatible with my travel needs	0.891	
I think using the travel apps would be a good fit for my lifestyle	0.888	
Attitudes (ATD)		0.932
Using travel apps is a good idea	0.879	
Using travel apps is a wise idea	0.960	
I like the idea of using travel apps	0.896	
Using apps for travel purchases is pleasant	0.916	
Using apps for travel purchases is appealing	0.896	

Construct	Factor loading	Cronbach's-Alpha
Communicability (CMB)		**0.930**
I have heard about my family and friends booking travel products and services through apps many times	0.916	
Many of my family and friends have purchased travel products and services through apps	0.961	
It is common for my family and friends to purchase travel products and services using apps	0.932	
Perceived Behavioral Control (PBC)		0.834
All necessary resources (e.g. computer, internet access, time, etc.) for purchasing travel products and services through apps are accessible to me	0.793	
I have the necessary financial means (e.g. credit card, PayPal) to purchase travel products and services through apps	0.811	
I am proficient in using apps for travel purchases	0.808	
I feel confident that I can use apps for travel purchases	0.873	
Purchase Intention (PIN)		0.855
If I want to purchase travel products and services post-pandemic, the probability of using travel apps would be high	0.940	
I expect to use travel apps for travel purchases soon (post-pandemic)	0.940	

Source: AMOS data result

Table 3. Descriptive Statistics

Construct	Mean	Std. Deviation
BAW	4.7286	0.46872
PRA	4.5594	0.44956
-CV	4.8142	0.35907
-TS	4.7852	0.40390
-FA	4.3030	0.72948
-PV	4.4242	0.62790
-EJ	4.4704	0.70998
PTC	4.4980	0.62192
ATD	4.5320	0.56383
CMB	4.6456	0.55277
PBC	4.6542	0.46925
PIN	4.6383	0.57617

Source: AMOS data result

Table 4. The Goodness of Fit Indicator Test

Type of Measurement	Measurement Analysis	Model Fit Decision	Result	Decision
Absolute fit measures	*Chi-square*	low Chi Square	739.235	
	p-value Chi-Square	≥ 0.05	0.000	Poor fit
	GFI	≥ 0.90	0.819	Marginal fit
	RMSEA	≤ 0.10	0.086	Goodness of fit
	NFI	≥ 0.90	0.867	Marginal fit
	IFI	≥ 0.90	0.909	Goodness of fit
	TLI	≥ 0.90	0.895	Marginal fit
	CFI	≥ 0.90	0.909	Goodness of fit
Parsimonius fit measure	CMIN/DF	Between 1 to 5	2.843	Goodness of fit

Source: AMOS data result

responses for the interaction variable of BAW, showing a mean value of 4.726 and a deviation standard value of 0.468. It is because the majority response for BAW is between the answer of agree (4) and strongly agree (5). The three indicator statements constructing the BAW showed satisfactory results because the mean values were above 4.50.

This study shows a mean value of 4.594 and a standard deviation of 0.44956 for PRA. Five sub-dimensions construct

the PRA, i.e., CV, TS, FA, PV, and EJ. Each of these brought a good outcome.

The data results presented a mean value of 4.8142 and a standard deviation of 0.35907 for CV, while TS has a mean value of 4.7852 and a standard deviation of 0.40390. Next, in FA, the mean value is 4.3030, while the standard deviation is 0.72948. PV's mean value is 4.4242, followed by its standard deviation of 0.62790. Finally, EJ exhibit 4.4704 as the mean value while its standard deviation is 0.70998 (see Table 3).

By using modification indices of the SEM model, 4 of 8 criterias fulfil the model fit test (goodness-of-fit), i.e., RMSEA, IFI, CFI, and CMIN/DF. Next, 3 of 8 criterias have resulted in the marginal-fit model, i.e., GFI, NFI, and TLI. However, one criterion was summarized as poor-fit, i.e., the p-value of Chisquare (see Table 4). Since most of the model fit is fulfilled, hypothesis testing can be performed.

As revealed in the assessment of hypothesis testing, there are nine hypotheses. Using AMOS 23 with alpha 5% and 10%, this research obtained the hypotheses result as presented in Table 5.

The hypotheses aim to test whether PRA and PTC are positively associated with ATD. An estimation coefficient of 0.730 means the increase of PRA will elevate the ATD. The other way around, the decrease of PRA will lower the ATD. In such conditions, PRA has a positive relation with ATD. With the t of 6.069 and p-value <0.05**, the hypothesis is accepted, meaning it is proven that PRA of users is positively associated with their ATD toward travel applications. The same thing also applied to PTC (e=0.210, t=2.611, p-value<0.05**), that PTC has a positive relationship with ATD.

Additionally, ATD (e=0.126, t=1.411, p-value<0.10*) and CMB (e=0.172, t=2.893, p-value<0.05**) and PBC (e=0.515, t=3.987, p-value<0.05**) are positively associated with PIN.

This study found that BAW has positive relationship with CMB (e=0.759, t=7.571, p-value<0.05**). However, the hypothesis of BAW to PIN (e=0.125, t=1.091) is not supported as the p-value is 0.137, showing the insignificance of the

Table 5. Assessment of Hypothesis Testing

	Est	**C.R.**	***p-value***	**Hypotheses**
PRA à ATD	0.730	6.069	0.000**	Supported
PTC à ATD	0.210	2.611	0.004**	Supported
BAW à CMB	0.759	7.571	0.000**	Supported
BAW à PIN	0.125	1.091	0.137**	Not Supported
CMB à PIN	0.172	2.893	0.002**	Supported
ATD à PIN	0.126	1.411	0.079*	Supported
PBC à PIN	0.515	3.987	0.000**	Supported
PRA à ATD à PIN	0.092	1.378	0.083*	Supported
PTC à ATD à PIN	0.026	1.246	0.156**	Not Supported
BAW à CMB à PIN	0.131	2.721	0.003**	Supported

Source: AMOS data result
*alpha 10%, **alpha 5%

connection between BAW and PIN. Thus, this hypothesis is rejected.

In analyzing the mediation, ATD was significantly associated with PRA to PIN (e=0.092, t=1.378, p-value<0.05**). On the contrary, it was found that ATD was not significantly associated with PTC to PIN (e=0.026, t=1.246, p-value<0.05**). Meanwhile, CMB was also found significantly associated with BAW to PIN (e=0.131, t=2.721, p-value<0.05**).

Discussion

Several theories were applied as perspective guidance to create this research model. In understanding determinant factors of customers' purchase intention on using travel apps, this study pointed to the PRA, BAW, and PBC as independent variables affecting PIN directly (for PBC) or indirectly through ATD and CMB (for PRA and BAW).

PRA represents relative advantages consumers perceive, and PTC means compatibility, the degree to which users perceive the travel applications as consistent or compatible with consumer values and travel needs (Rogers et al., 2019). This study confirmed the importance of relative advantages and compatibility, as the two components of DOI Theory, in forming ATD. PRA is significantly associated with ATD, and so is PTC. It is in line with prior studies, which also found the same results as this research, for PRA to ATD (Lim et al., 2022; Ali et al., 2021) and for PTC to ATD (Lim et al., 2022; W. Wang, 2019) as well.

TPB, one of the most widely used social-psychological models in the works of literature (Ulker-Demirel & Ciftci, 2020), specifically in the travel and tourism industry, stated that ATD and PBC are factors constructing human behaviors (Ajzen, 1991). In this case, ATD and PBC affect PIN behavior. Consistent with previous studies by Lin, Y.-C., Li, C.-L., Hsiao, Y.-W., & Chen (2019), Hsu & Lin (2016), Lim et al. (2022) and Christina & Yasa (2021), this research validated that ATD and PBC on the usage of travel apps are positively associated with PIN. Accordingly, this study result is consistent with the TPB model

In connecting technology, innovation and behavioral perspective, this study reviewed the mediating effect of ATD and found contrasting results. ATD was conformed to play an essential role in mediating the PRA and PIN. However, a different thing happened to PTC and PIN. In this case, ATD was not served to play a significant mediation role. These are novel evidence of predicting the PIN, especially for the Indonesian market.

Based on the above results, the provider companies can focus their strategy on PRA and how PRA can form preferable ATD towards PIN. As mentioned before, the five dimensions of PRA are CV, TS, FA, PV, and EJ. This research found that FA and EJ were the highlights among those five.

Multiple studies showed different results on the relationship between BAW to PIN. Studies revealed positive or significant connections, while others showed opposite results. A study on the airline industry found that BAW for online marketing channels has a greater impact on PIN than offline marketing channels (Mulyantina, 2019). Meanwhile, Azzari & Pelissari (2020) research on smartphone users found that BAW does not directly impact PIN. Hence, a brand is not enough to generate consumers' purchase intent. In the hotel industry, BAW must be supported by the brand's proven products and services (Sriwardiningsih & Zulkarnain, 2021). In other words, to bring intentions and actions of purchase, BAW cannot stand alone.

This research shows originality that BAW does not positively connect with PIN. However, it is also found that communication is key. BAW cannot directly generate PIN, but travel app users will probably have PIN when consumers communicate it. PIN comes into the users'

minds when other experienced users share the brand. As described in the tables above, CMB is positively associated with PIN. Furthermore, CMB plays a mediating role between BAW dan PIN. With such confirmation, this study complements existing travel application literature.

For practical implications, managers can use findings on PRA as focal points to determine promotion strategies to develop by platform providers to form customers' ATD towards travel apps. As highlights of PRA, financial advantage and enjoyments are dimensions in which greater chances to attract customers are available. Discounts, lower prices, and other saving-money strategies are attractive factors for customers. Moreover, travel platform providers must seriously consider creating strategies to improve the users' enjoyment of using travel apps to enhance customer engagement. Quizzes, testimony competitions, games, or rewards such as an additional discount for forwarding platform programs to other users might improve enjoyment. Learning from this study result regarding BAW, it is crucial to be implemented in the tourism industry that a brand of travel application should have identical superior products, services, and benefits that any consumers can communicate to other users as positive experiences other users should have. Travel platform companies should consider something that users can potentially share with other users as a chance not to dismiss. Strategies to create and enhance communication among users are critical in initiating the PIN in the brand platform.

For CMB mediates PIN regarding BAW, it means that in terms of promoting the travel application, suggestions from friends and families of users are essential factors for users as their considerations in bringing up the decision for PIN. Even though the brand itself does not make enough to bring the purchase intent, the accompanying opinions from relatives might be the power to boost the purchase intention. Thus, in promoting travel apps, travelers can become the promotion agents to generate new customers or retain existing customers by making testimonials and giving referrals or coupons that other users can use for future travel purchases. The advertorial tools relating to the proposed travel application can be done, for example, by using famous travelers who are active as YouTubers, Facebookers, Instagrammers, and Tiktokers, to promote the travel application brand or provider.

Conclusion

Communicability (CMB), attitude (ATD), and perceived behavioral control (PBC) determined the purchase intention (PIN), yet brand awareness (BAW) is an exception. As drivers, perceived relative advantages (PRA) and perceived technological congruence (PTC) are positively associated with ATD, and it goes the same way with BAW as the driver of CMB. Eventhough BAW is not positively related to PIN, CMB performs an important function in mediating BAW to PIN. ATD significantly mediates PRA, but in contrast the mediating role of ATD is insignificant for PTC and PIN.

These findings imply that the more a travel application is known positively among users, the more likely other users will purchase travel products and services, based on information from their family and peers. Positive attitude towards travel applications would increase the purchase intention. This attitude is formed when users perceive that they could get more advantages when using a travel application and that such an application would fit their traveling needs. The same result may consistently apply when users have control and confidence in using the travel application.

The impact of brand awareness to purchase intention does vary. This research shows that customers' awareness of any travel application brand may not support purchasing decisions. Nevertheless, the

mediating effects of communicability suggested the importance of communication among users would improve the image of the travel application that the purchase intention might be created. We recommend these matters be considered by managers and platforms when making strategic plans and creating innovation.

For further studies, we recommend expanding samples as this study only revealed a limited number of respondents from Indonesia. Thereby, it might not represent the global travel apps market.

The tendency of users to stick to certain travel applications can also be a study to work on.

This research did not split the travel application based on the products and services offered. In the future, researchers may test determinant success factors of particular travel applications that sell specific travel products such as transportation (train or bus only) or hotel or rentals only. The study's result is expected to help the specific agencies compete with other online travel agencies that offer one-stop shopping products and services.

References

Ajzen, I. (1991). Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes.The theory of planned behavior. In *Organizational Behavior and Human Decision Processes* (Vol. 50, Issue 2).

Ali, F., Terrah, A., Wu, C., Ali, L., & Wu, H. (2021). Antecedents and consequences of user engagement in smartphone travel apps. *Journal of Hospitality and Tourism Technology*, *12*(2). https://doi.org/10.1108/JHTT-09-2020-0221

Amaro, S., & Duarte, P. (2015). An integrative model of consumers' intentions to purchase travel online. *Tourism Management*, *46*. https://doi.org/10.1016/j.tourman.2014.06.006

Aulia, D., & Briliana, V. (2017). Brand Equity Dimension and Consumer Behavior in Social Media. *South East Asia Journal of Contemporary Business, Economics and Law*, *13*(2).

Azzari, V., & Pelissari, A. (2020). Does brand awareness influences purchase intention? The mediation role of brand equity dimensions. *Brazilian Business Review*, *17*(6). https://doi.org/10.15728/BBR.2020.17.6.4

Bandura, A. (2010). Self-efficacy -Bandura. *The Corsini Encyclopedia of Psychology*.

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2019). Technological disruptions in services: lessons from tourism and hospitality. *Journal of Service Management*, *30*(4). https://doi.org/10.1108/JOSM-12-2018-0398

Chen, L., Rashidin, M. S., Song, F., Wang, Y., Javed, S., & Wang, J. (2021). Determinants of Consumer's Purchase Intention on Fresh E-Commerce Platform: Perspective of UTAUT Model. *SAGE Open*, *11*(2). https://doi.org/10.1177/21582440211027875

Choudhury, V., & Karahanna, E. (2008). The relative advantage of electronic channels: A multidimensional view. *MIS Quarterly: Management Information Systems*, *32*(1). https://doi.org/10.2307/25148833

Christina, Y., & Yasa, N. N. K. (2021). Application of theory of planned behavior to study online booking behavior. *International Journal of Data and Network Science*, *5*(3). https://doi.org/10.5267/j.ijdns.2021.5.010

Coves-Martínez, Á. L., Sabiote-Ortiz, C. M., & Frías-Jamilena, D. M. (2022). Cultural intelligence as an antecedent of satisfaction with the travel app and with the tourism experience. *Computers in Human Behavior*, *127*. https://

doi.org/10.1016/j.chb.2021.107049

D.Aaker. (1991). Aaker's Brand Equity Model. *European Institute for Brand Management*.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, *13*(3), 319–339. https://doi.org/10.2307/249008

Deane, S. (2022). *Over 60 Online Travel Booking Statistics (2022)No Title*. Stratosjets Charters Inc.

Dorcic, J., Komsic, J., & Markovic, S. (2019). Mobile technologies and applications towards smart tourism – state of the art. In *Tourism Review* (Vol. 74, Issue 1). https://doi.org/10.1108/TR-07-2017-0121

Essiz, O., & Mandrik, C. (2022). Intergenerational influence on sustainable consumer attitudes and behaviors: Roles of family communication and peer influence in environmental consumer socialization. *Psychology and Marketing*, *39*(1). https://doi.org/10.1002/mar.21540

Expedia. (2022). *Traveler Value Index 2022 Outlook*. Expedia Inc.

Fang, J., Li, J., & Wang, R. (2017). *Mobile Travel Apps' Adoption*. https://doi.org/10.1145/3178212.3178213

Hair, J. F., Ortinau, D. J., & Harrison, D. L. (2021). *Essentials of Marketing Research* (Fifth Edit). McGraw-Hill Education.

He, M., Sha, Z., & Yang, Y. (2013). *An Empirical Study on Impacts of Brand Image of Travel Agencies on Customer Purchase Intentions*. https://doi.org/10.2991/icsem.2013.70

Hernández-Méndez, J., Muñoz-Leiva, F., & Sánchez-Fernández, J. (2015). The influence of e-word-of-mouth on travel decision-making: consumer profiles. *Current Issues in Tourism*, *18*(11). https://doi.org/10.1080/13683500.2013.802764

Hsu, C. L., & Lin, J. C. C. (2016). An empirical examination of consumer adoption of Internet of Things services: Network externalities and concern for information privacy perspectives. *Computers in Human Behavior*, *62*. https://doi.org/10.1016/j.chb.2016.04.023

Huang, R. T. (2018). What motivates people to continuously post selfies? The moderating role of perceived relative advantage. *Computers in Human Behavior*, *80*. https://doi.org/10.1016/j.chb.2017.11.007

Huang, Z., & Mou, J. (2021). Gender differences in user perception of usability and performance of online travel agency websites. *Technology in Society*, *66*. https://doi.org/10.1016/j.techsoc.2021.101671

Jang, S., Kitchen, P. J., & Kim, J. (2018). The effects of gamified customer benefits and characteristics on behavioral engagement and purchase: Evidence from mobile exercise application uses. *Journal of Business Research*, *92*, 250–259. https://doi.org/10.1016/j.jbusres.2018.07.056

Jiang, Y., Wang, X., & Yuen, K. F. (2021). Augmented reality shopping application usage: The influence of attitude, value, and characteristics of innovation. *Journal of Retailing and Consumer Services*, *63*. https://doi.org/10.1016/j.jretconser.2021.102720

K. Wallston. (2001). *Control Beliefs: Health Perspectives*. International Encyclopedia of the Social & Behavioral Sciences.

Keren, U. (2019). *Why Travel Apps Are Letting Tourists Down and What Destinations Can Do to Reverse This Trend*. Linkedin.

Kim, E. J., Tanford, S., & Book, L. A. (2021). The Effect of Priming and Customer Reviews on Sustainable Travel Behaviors. *Journal of Travel Research*, *60*(1). https://doi.org/10.1177/0047287519894069

Krishnaprabha, S., & Tarunika, R. (2020). An Analysis on building Brand Awareness through Digital Marketing Initiatives. *International Journal of Research in Engineering, Science and Management*, *3* (7).

Kuen Yi, Y., Martínez del Vas, G., & Muñoz, A. (2019). An integral mobile application for pre-travel, on-site and post-travel stages. *International Journal of Information Systems and Tourism (IJIST)*, *4* (1).

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information and Management*, *40*(3). https://doi.org/10.1016/S0378-7206(01)00143-4

Lemmetyinen, A., Dimitrovski, D., Nieminen, L., & Pohjola, T. (2016). Cruise destination brand awareness as a moderator in motivation-satisfaction relation. *Tourism Review*, *71*(4). https://doi.org/10.1108/TR-07-2016-0027

Lim, X. J., Cheah, J. H., Morrison, A. M., Ng, S. I., & Wang, S. (2022). Travel app shopping on smartphones: understanding the success factors influencing in-app travel purchase intentions. *Tourism Review*. https://doi.org/10.1108/TR-11-2021-0497

Lin, Y.-C., Li, C.-L., Hsiao, Y.-W., & Chen, Y.-C. (2019). Predicting How Trust on eWOM Influences Consumer Purchase Intentions toward Group Package Tours in Tourism Social Networks. *International Journal of E-Education, e-Business, e-Management and e-Learning*, *9 (3)*, 160–176.

Merriam-Webster. (n.d.). *Attitude*. In Merriam-Webster.Com Dictionary.

Morrisonn, A. M., Jing, S., O'Leary, J. T., & Cai, L. A. (2012). Predicting Usage of the Internet for Travel Bookings: An Exploratory Study. *Information Technology & Tourism*, *4*(1). https://doi.org/10.3727/109830501108750868

Mulyantina, P. (2019). The Influence of Online and Offline Strategic Marketing Communication to Purchase Intention of Singapore Airlines. *CoverAge: Journal of Strategic Communication*, *9*(2). https://doi.org/10.35814/coverage.v9i2.1036

Rafdinal, W. (2021). Is smart tourism technology important in predicting visiting tourism destination? Lessons from West Java, Indonesia. *Journal of Tourism Sustainability*, *1*(2). https://doi.org/10.35313/jtos.v1i2.20

Reynolds, N., & Ruiz de Maya, S. (2013). The impact of complexity and perceived difficulty on consumer revisit intentions. *Journal of Marketing Management*, *29*(5–6). https://doi.org/10.1080/0267257X.2013.774290

Rizaty, M. A. (2022). *Pengguna Aplikasi Traveling di Dunia Capai 93 Juta Orang pada 2021*. Databoks.

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2019). Diffusion of innovations. In *An Integrated Approach to Communication Theory and Research, Third Edition*. https://doi.org/10.4324/9780203710753-35

Sriwardiningsih, E., & Zulkarnain, A. (2021). Global Brand influences Brand Awareness, Intention, and impacts on Hotel Service Purchases. *Proceedings of the International Conference on Industrial Engineering and Operations Management*.

Statista. (2022a). *Leading reasons for making a domestic trip in Indonesia in 2020*. Statista Research Department.

Statista. (2022b). *Travel & Tourism*. Statista.

Tian, Z., Lu, M., & Cheng, Q. (2021). The relationships among mobile travel application attributes, customer engagement, and brand equity. *Social Behavior and Personality*, *49*(7). https://doi.org/10.2224/sbp.10353

Tornikoski, E., & Maalaoui, A. (2019). Critical reflections – The Theory of Planned Behaviour: An interview with Icek Ajzen with implications for entrepreneurship research. *International Small Business Journal: Researching Entrepreneurship*, *37*(5). https://doi.org/10.1177/0266242619829681

Ulker-Demirel, E., & Ciftci, G. (2020). A systematic literature review of the theory of planned behavior in tourism, leisure and hospitality management research. *Journal of Hospitality and Tourism Management*, *43*. https://doi.org/10.1016/j.jhtm.2020.04.003

Vahdat, A., Alizadeh, A., Quach, S., & Hamelin, N. (2021). Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention. *Australasian Marketing Journal*, *29*(2). https://doi.org/10.1016/j.ausmj.2020.01.002

Wang, W. (2019). The influence of perceived technological congruence of smartphone application and air travel experience on consumers' attitudes toward price change and adoption. *Journal of Hospitality and Tourism Technology*, *10*(2), 123. https://doi.org/10.1108/JHTT-01-2018-0004

Wang, W. T., & Li, H. M. (2012). Factors influencing mobile services adoption: A brand-equity perspective. *Internet Research*, *22*(2). https://doi.org/10.1108/10662241211214548