FACTORS AFFECTING THE INTENTION TO USE MOBILE APPLICATION ONLINE TRAVEL AGENCY

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ABSTRACT

E-commerce has become a new shopping trend in the last few years. A type of e-commerce selling and buying objects in travel services is known as an online travel agency (OTA). OTA's presence is intended to make it easier for customers and travel suppliers to do transactions regarding travel services. It is widely predicted that the OTA ecosystem will continue to grow, seeing the increasingly massive internet use trend and the increasing use of smartphones. Even so, this does not mean that OTA companies are not experiencing challenges. It is proven that some companies cannot survive and eventually out of business. It happened because the company is unable to meet the needs and desires of its buyers. This research aims to analyze the factors that influence the intention to use the OTA mobile application using PLS-SEM. The research model was built based on a combination of TAM, UTAUT, ISS model, and perceived risk. The research results on 261 samples showed that the intention of using the OTA mobile application was influenced positively and significantly by perceived usefulness and hedonic motivation. This study's other constructs include social influence, information quality, system quality, service quality, perceived risk, and habit. However, they do not significantly positively affect the intention to use the OTA mobile application.

Keywords: *Intention to Use, Online Travel Agency, Mobile Application, SEM-PLS, Online Tourism*

1. INTRODUCTION

The trade sector is one of the backbones of Indonesia's economy. It is recorded that throughout 2018, the trade sector contributes approximately Rp. 1.377 trillion or 13.2% of Indonesia's economic growth [1]. The trade sector is currently the second-highest contributor to Indonesia's economic growth. The rapid technology growth that struck globally played a role in the trade sector. The emergence of e-commerce marked it.

E-commerce is a terminology used to represent the activity of buying, selling, transporting, or trading goods or services using the internet network or other networks (i.e., intranet) [2]. E-commerce classification based on transaction type is divided into three types, business-to-customer (B2C), business-to-business (B2B), and customer-to-consumer (C2C).

In Indonesia, e-commerce contributes to the Gross Domestic Product (GDP) reached one hundred twenty-five trillion Rupiah throughout 2017. The Hinrich Foundation estimates that by 2030, e-commerce's contribution to Indonesia's GDP will reach Rp. 2.305 trillion [3]. Other than that, until 2018, e-commerce users in Indonesia are approximately a 154.1million people. It is projected that by the year 2023, e-commerce users in Indonesia will reach out to 212.2 million people [4]. Both are not delusional estimations seeing the increasing trend of internet and smartphone usage.

Specific e-commerce that focuses on travel services transactions is called an online travel agency (OTA). OTA acts as a medium for promotion and online sales using the internet [5]. They use websites or the mobile applications as the platform to promote and conduct online sales.

Throughout the observation against the travel services, the services offered are varied, and all OTA companies have their own competitive advantage. However, there are three services that almost all OTA platforms offer: hotel reservation, airline reservation, and train reservation.

A survey conducted by DailySocial in 2018, which aims to measure Indonesian consumers'

consumption patterns towards OTA services, stated that 71.44% of respondents have at least once done a hotel reservation or airline reservation using OTA platforms. It shows that more than 50% of respondents rely on OTA to buy travel services. Another finding in this survey is that 83.59% of respondents use the smartphone to access OTA features. The top two OTA companies in according to the respondents, are Traveloka and Tiket.com [6].

OTA ecosystem in Indonesia in the coming years is predicted to grow positively. A research company, Phocuswright, predicted that in 2020 Indonesia would experience the fastest growth in the online travel market [7]. Since 2015, the OTA ecosystem in Indonesia is experiencing 20% growth each year [8]. According to Google e-Conomy SEA 2019, Indonesia's digital economy income reached US$ 40 billion, and OTA contributes 10.2% of it [9]. Head of marketing from one of the biggest OTA companies in Indonesia stated that their company has found that once a person uses OTA to buy travel services for the first time, it is more likely that person will use OTA again future [10].

Although the OTA ecosystem is widely predicted to continue increasing year by year, it does not mean that OTA business owners are not experiencing challenges. Some e-commerce in Indonesia (i.e., Multiply, Tokobagus, Sedapur, Qlapa, and Rakuten) have failed to compete in the market. According to Sedapur's CEO, the company strategy that only focuses on merchants rather than customer's needs is one factor that causes Sedapur to fail to compete [11]. In the OTA market, AiryRooms Indonesia was out of business in 2020. The cause is the decline in sales in the last few months before it went bankrupt and coupled with the impact of the COVID-19 pandemic [12]. Thomas Cook, the oldest travel agency in the world, also declared bankruptcy [13]. It is proven that it is challenging for OTA company owners to gain customers' interest in using their OTA platform in intense competition. It requires sufficient knowledge of consumers' needs and wants and a fabulous business strategy to keep the company alive.

According to a survey conducted by cekaja.com, the top five OTA companies in Indonesia in 2018 are Traveloka, Tiket.com, Booking.com, Pegipegi Agoda [14]. However, this survey is not fully backed by each mobile application ratings in App Store or Google Play. In-App Store, within these five applications, Pegipegi mobile application has the highest rating being 4.9/5 and the lowest being Tiket.com mobile application with 4.5/5. In Google Play, Traveloka mobile application has the highest rating. However, instead of being followed by Tiket.com, it is followed by both Pegipegi and Booking.com, which have the same 4.8/5 rating.

Based on the predictions that the OTA ecosystem in Indonesia will continuously grow while also facing fierce competition in the market at the same time, and the contradiction from some surveys stated that Traveloka and Tiket.com are the two most popular OTA in Indonesia meanwhile the ratings in App Store and Google Play do not fully support it. Thus, this study's focus is to examine which factors influenced the intention to use OTA mobile applications. The focus of this study is under the research area of management information systems.

This study focuses on mobile applications because based on the Indonesian Internet Service Provider Association (APJII), most internet penetration in Indonesia is done using smartphones [15]. According to Statista, smartphone utilization to fulfill travel needs by society will increase around 16.45% in 2020 [16]. This study only focuses on Indonesian people living as people in Java Island who have the most contribution in national internet penetration (56.4%) in the second quarter of 2019-2020 .and have at least once used the mobile application OTA.

2. LITERATURE REVIEW

2.1 Travel agent

Travel agents emerge as an intermediary between travel suppliers and potential customers. Travel agents are defined as the party who do work for other parties. Travel agents not only distribute offers from travel suppliers but also control the means and methods of distributing offers [17].

Travel agents have the legal authority to sell services on behalf of travel suppliers. At the beginning of its emergence, travel agents gain profit from travel suppliers in commission. As time goes by, travel suppliers start to cut the commission shared. It is why some travel agencies then charge their customers with service fees. Travel agencies who charge their customers with service fees are responsible for serving customers as in a waiter serve customers in a restaurant [18].

Generally, travel agencies are divided into two types which are called retailers and wholesalers. Retailer travel agencies sell services directly to potential customers on behalf of travel suppliers. They gain profits by commission per transactions agreed before with the travel suppliers or mark up the original price that travel suppliers gave them. Meanwhile, wholesaler travel agencies sell tour package to potential customers by using or

combining travel services. Wholesaler travel agencies might also rely on retail travel agencies to sell their tour package [19].

Figure 1: The Role of Travel Agents

2.1.1 Online Travel Agent

The Internet continues to influence the growth of the tourism market. Information and consumer behavior drastically change since online information and online booking emerge [20]. The Internet has increased the availability of information on prices and products, enabling customers to identify the best deal or increase their bargaining position with vendors [21]. Some researchers argue that the Internet and e-commerce change the business model in the tourism sector. One example is an experience-based business, namely online travel agents (OTA) [22].

The role played by OTA is more or less the same as conventional travel agents. However, OTA has some advantages: travel tips, reviews from other users, and rate tracking. Three things encourage further changes in the online tourism sector, namely, OTA striving for superior customer service. OTA makes the search easier for consumers, and OTA actively utilizes social media to reach consumers [2]. The role of OTA, which is important for travel suppliers, is being persuasive. OTA recommendations may influence consumers' decision-making process. OTA recommendations may affect consumers' satisfaction and travel suppliers' success [23].

Most OTA companies currently use an 'agency model' business model. Hotels or airlines whose products want to be displayed on the OTA platform must register themselves in particular OTA. Later on, hotels or airlines that have registered with certain OTAs can fill in the offer details and set their prices. Registration is usually free of charge, but OTA will get a commission for every transaction involving hotels or airlines through the OTA platform [24].

2.2 Technology Acceptance Model (TAM)

TAM first emerge in 1986. It is stated that enhancing IT increases the adoption rate, which can be seen through the intention to use [25]. TAM has been a key model to define whether technology is accepted or rejected by people [26]. TAM seeks to help researchers and practitioners to discern why a particular technology or system is acceptable or unacceptable and take steps according to the

explanation in addition to providing predictions [27] [28]. To utilize TAM in certain fields or industries, it is required to add relevant variables related [29].

TAM has 4 variables to measure technology acceptance: perceived usefulness, perceived ease of use, attitude towards use, and behavioral intention to use [25].
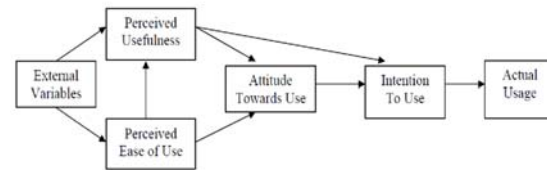

Figure 2: TAM

2.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT is first introduced in 2003. UTAUT was developed as an alternative to existing technology acceptance models to integrate fragmented theory and research on individual IT acceptance into an integrated theoretical model. UTAUT is developed based on the field of information systems, psychology, and sociology [30].

UTAUT is claimed to be able to see how the determinants of intention and behavior are related over time. It is why most of the constructs are moderated. There are four constructs in UTAUT, namely performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). PE and EE are considered an attribute from information systems, FC has considered an attribute that represents organizational factor, and SI is considered an attribute representing the behavioral factors [31]. UTAUT is developing fast because of its utilization in studies, and many modifications researchers do [32].
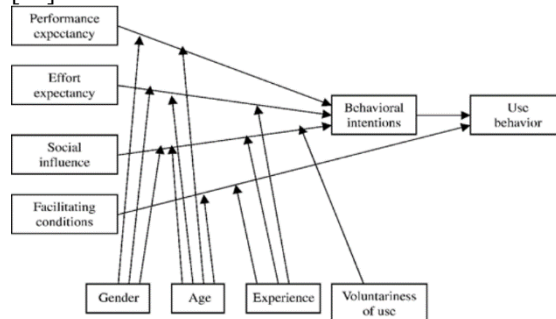

Figure 3: UTAUT

2.3.1 UTAUT 2

Many extensions researchers do with the original model of UTAUT. Overall, these extensions can be divided into three categories: new context, scope

extension, and exogen predictors. Based on this extension, UTAUT 2 is developed [33]. Three additional variables in the second UTAUT model are price value, hedonic motivation, and habit.
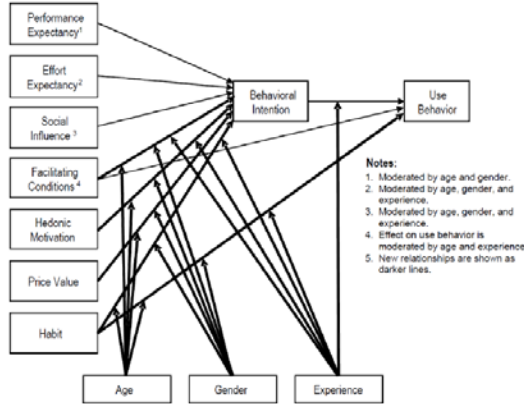

Figure 4: UTAUT 2

2.4 DeLone and McLean Information Systems Success Model

It is first introduced in 1992 to measure the success and effectiveness of an information system. This model has six constructs that influence a system's success, namely system quality, information quality, use, user satisfaction, individual impact, and organizational impact. It is assumed that if a system is influencing an individual positively, it will positively impact the organization, and it can be defined that a system is a success [34].
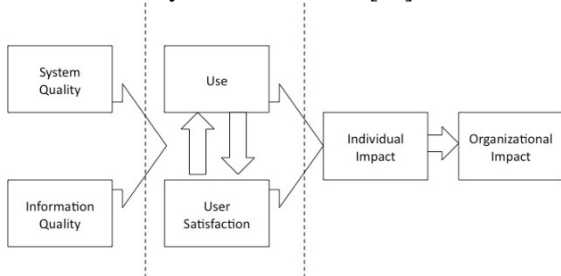

Figure 5: ISS Model

2.4.1 Updated Delone and Mclean Information Systems Success Model

Based on the previous model, the updated Information Systems Success (ISS) model was introduced in 2003. Both individual impact and organizational impact are removed from the model. In change, net benefit will be the endpoint of the model. The net benefit is considered to be the most important measure of an information systems success, especially e-commerce. One construct is also added to the updated model, namely service

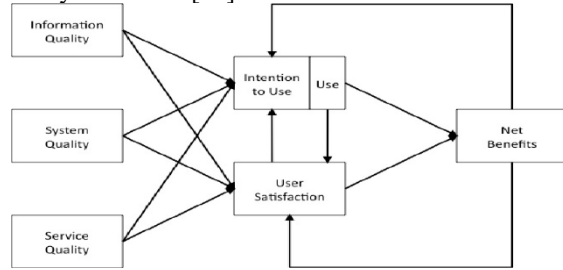quality. Service quality's role is considered essential for system users [35].

Figure 6: Updated ISS Model

2.5 Previous Studies

There are several previous studies regarding online tourism. Following studies then become the foundation of research model of this study.

Table 1 Previous Studies

Reference	Summary
[36]	This study examines the factors influencing behavior intention of using OTA for hotel reservation. The model used in this study is adopted from the first TAM version. The result shows that there is a significant positive relation of ease of use towards usefulness and usefulness towards behavior intention. Based on Pearson Correlation Analysis, all variables have high correlation
[37]	This study examines the factors influencing the intention to use online methods for reservations in rural tourism. The model used in this study is adopted from the first UTAUT model. Performance expectancy and effort expectancy are two variables that have significant positive influence towards intention to use.
[38]	This study examines factors of intention to use and user satisfaction on using online hotel reservation. The model used in this study is a combination of both UTAUT model and the ISS model by Delone and McLean. The result of this study indicates that all constructs taken from both model, influence both user satisfaction and intention to use significantly positive.

[39]	This study uses the main construct from ISS model namely information quality, service quality, and system quality to predict each influence on booking intention on a web travel. The result indicates that service quality and system quality are the main driving factors of intention to book on a web travel. On the other side, information quality has a negative influence on intention to book.
[40]	This study implies that it is important to include the variable perceived risk when researching a topic regarding mobile application and internet.

3. RESEARCH METHODOLOGY

3.1 Sampling and Research Setup

In this study, the population used is based on the number of internet users in Java Island, Indonesia. It is approximately 110.946.735 people using the Internet on Java Island [15]. The exact number of OTA users in Indonesia is not precisely known.

This study used the formula suggested by Hair, Black, Babin, and Anderson to determine the minimum sample. The formula requires to times the total variable in the research model by 20 [41]. Thus, the minimum sample required for this study is 200 samples. Questionnaires will be distributed online using Microsoft Forms.

3.2 Research Model and Hypotheses

In this study, a research model is generated based on TAM, UTAUT, ISS model, and perceived risk variable. Previous studies result is also becoming a consideration to generate the research model.

There have been several types of research regarding online tourism that utilize the ISS model [42], [38], and [39]. This study focuses on the factors of intention to use, so the variables of net benefits and user satisfaction from the ISS model will not be included in the research model. Also, from this model, there are two variables that are similar, namely intention to use and use. To avoid complexity and ambiguity, it can amalgamate both variables [43] [44].

Based on TAM, perceived ease of use, perceived usefulness, and intention to use will be included in the research model. Based on UTAUT and UTAUT 2, social influence, hedonic motivation, and habit will be included in the research model. It is

unnecessary to include all the constructs from these two acceptance models since some of the constructs are similar [45]. Price value will not be included because of the findings that similar previous work regarding online tourism found that price value is not significant to intention to use in Indonesian society [46]. Moderating variables will not be included since it does not moderate any variables on the previous research on e-commerce transactions [47].

While researching and object related to mobile device and Internet, perceived risk is suggested to be considered [48], [49], and [40]. The perceived risk may also reduce users' trust toward a particular technology and reduce users' intention to use it [50]. Perceived risk covers financial risk, service risk, delivery risk, and privacy risk [48].

Thus, based on the previous works examined in this study, figure 7 shows the research model of this study.

Figure 7: Research Model

Information quality is defined as the information contained on a website or application as an output of a system [35] [43]. Content better is personalized, relevant, easy to be understood, and secure [35] [51]. System quality is the characteristic expected from a system. It covers ease of operation, system flexibility, system reliability, ease to learn, intuition, sophistication, and time response [35] [52]. Service quality is a measure of service given by a company. It covers responsivity, service reliability, technical competency, and staff empathy [35] [53].

Perceived ease of use refers to "the extent to which one believes that using a particular system will be effort-free" [25]. It covers the ease of learning a

particular system/technology, measuring mental effort while using a system/technology, simplicity, and ease of following instructions provided [54]. Meanwhile, perceived usefulness refers to "the extent to which a person believes that using a particular system will improve his job performance or responsibility" [25]. It covers the ease of book, booking process quickness, and booking process efficiency [54].

Social influence is defined as "the extent to which a person feels that an important person believes he or she must use the new system". It covers the influence by important people, influence by others who might affect a person's behavior, and influence by opinion from others who are considered valuable [55]. Social influence is similar to subjective norm in TAM [30]. Hedonic motivation is defined as "pleasure gained from using technology". It covers enjoyment, interest, and curiosity [56]. Habit is defined as "the extent to which people tend to perform behaviors automatically because of learning, intentionally or unintentionally" [33]. It covers past behavior, reflex behavior, and personal experience of using technology accumulation [56].

Based on the research model, this study consists of 11 hypotheses:

Table 2: Hypotheses

Hypothesis	Description
H1	Perceived ease of use has a positive significant influence towards perceived usefulness
H2	Social influence has a positive significant influence towards intention to use
H3	Perceived ease of use has a positive significant influence towards intention to use
H4	Perceived usefulness has a positive significant influence towards intention to use
H5	Information quality has a positive significant influence towards intention to use
H6	System quality has a positive significant influence towards intention to use
H7	Service quality has a positive significant influence towards intention to use
H8	Perceived risk has a positive significant influence towards intention to use
H9	Hedonic motivation has a positive significant influence towards intention to use
H10	Habit has a positive significant influence towards intention to use
H11	Perceived ease of use has a positive significant indirect effect towards intention to use with perceived usefulness as mediation.

3.3 Variable Measurement

Each variable is described through several indicators. The following table shows every indicator for each variable:

Table 3: Variable Measurement

Variable	Code	Indicator	Reference
Information Quality	IQ1	Information accuracy level	[51]
	IQ2	Ease of understanding information	
	IQ3	Information reliability	
	IQ4	Information needs fulfillment	
System Quality	SQ1	Ease of use	[52]
	SQ2	System reliability	
	SQ3	Application time response	
	SQ4	Flexibility	
Service Quality	SEQ1	Help center availability	[53]
	SEQ2	Help center time response	
	SEQ3	Help center knowledge	
	SEQ4	Help center empathy	
Perceived Risk	PR1	Perceived financial risk	[48]
	PR2	Perceived service risk	
	PR3	Perceived delivery risk	
	PR4	Perceived privacy risk	
Perceived Ease of Use	PEU1	Easy to learn	[54]
	PEU2	Mental effort	
	PEU3	Simplicity	
	PEU4	Ease to follow instructions	
Perceived Usefulness	PU1	Ease to book	[54]
	PU2	Booking process quickness	
	PU3	Booking process efficiency	
Social Influence	SI1	Influence by important people	[55]
	SI2	Influence by others affecting person's behavior	
	SI3	Influence by the opinion of others who are considered valuable	
Habit	HB1	Past behavior	[56]
	HB2	Reflex behavior	
	HB3	Personal experience accumulation	
Hedonic Motivation	HM1	Enjoyment	[56]
	HM2	Interest	
	HM3	Curiosity	

Intention to Use	ITU1	Current usage	[57]
	ITU2	Future usage plans	
	ITU3	Intention for continuous usage	

3.4 Analytical Methods

In this study, the data analysis technique used is the Structural Equation Model (SEM) with the Partial Least Square (PLS) approach. SEM aims to estimate the causal effect between variables by finding the parameter values that best account for the observed data by providing a substantively attractive model [58]. In the information systems field, the PLS approach is the most used approach. It is because the PLS approach considered to be a universal approach and most developed [59].

The data collected will be tested for validity test. There are two validity tests done for this study, namely convergent validity, and discriminant validity. The components involved are average variance extracted (AVE) and loading factor to execute convergent validity test. The value of the AVE of each variable must be above 0.5. The standardized loading factor of each indicator must be above 0.5. Comparing each loading factor to another is the next step to execute the discriminant validity test. An indicator is declared invalid if the variable's cross-loading value is smaller than towards other variables [60].

Next is to execute the reliability test by observing the value of Cronbach's alpha and composite reliability. The minimum value of Cronbach's Alpha and Composite Reliability is 0.6. Variables with a value between 0.6-0.8 are considered reliable [61].

The last is to test each hypothesis from this study. To declare a hypothesis is supported/accepted, the value of the p-value must be fewer than 0.05 [62].

4. RESULTS AND DISCUSSION

4.1 Respondents Demographics

A total of 380 respondents participated in this study, but not all respondents' data is processed. Ninety-six respondents never used the top five OTA in Indonesia, and 23 respondents are currently living outside Java Island. The total respondents' data processed are 261 data.

Based on 261 data, here are respondents' profile gathered in this study:

Table 4: Respondents Based on Gender

Gender	Percentage
Women	54%
Men	46%

Table 5: Respondents Based on Age Groups

Age Group	Percentage
12-16 years old	3%
17-25 years old	59%
26-35 years old	8%
36-45 years old	10%
46-55 years old	17%
56-65 years old	3%

Table 6: Respondents Based on Experience of Using OTA Mobile Application

Experience of Usage	Percentage
Less than 3 years	31%
3-5 years	43%
More than 5 years	26%

Table 7: Respondents Based on Purpose on Using OTA Mobile Application

Purpose of Using	Percentage
Work	16%
Pleasure travel	63%
Hometown visit	17%
Others	4%

Table 8: Respondents Based on the Frequency of Using OTA Mobile Application

Frequency of Using	Percentage
Rare (1-2 times a year)	46%
Quite often (3-6 times a year)	36%
Often (More than 6 times a year)	18%

Table 9: Respondents Based on the Most Frequent Service Purchased on OTA Mobile Application

Most Frequently Purchased Services	Percentage
Airline Tickets	48%
Train Tickets	36%
Hotel Reservation	15%
Others	1%
Never Buy Any Services	<1%

Table 10: Respondents Based on the Most Frequent OTA Mobile Application Brand Used

Most Frequently Used Brand Platform	Percentage
Traveloka	71%
Tiket.com	19%
Pegipegi	5%
Booking.com	4%
Agoda	1%

Table 11: Respondents Based on Interest on Travelling Activity

Interested in Travelling	Percentage
Yes	77%
No	23%

To avoid unequal distribution among provinces in Java Island, the distribution of questionnaire is done by following the minimum amount required for each province. The minimum amount required is obtained from ratio of each province's internet users.

Table 12: Respondents Based on Province

Province	Minimum Amount	Total Respondent	Percentage
Banten	18	18	7%
DKI Jakarta	16	39	15%
West Java	64	65	25%
Central Java	48	55	21%
DI Yogyakarta	6	11	4%
East Java	48	73	28%

4.2 Measurement Model

The data obtained were then process using SMART-PLS software. Once entered and calculated, the software will show the result validity and reliability test. Following are the results for both validity and reliability test:

Table 13: Result of the First Validity Convergence Test

Code	Loading Factor	AVE	Result
Information Quality			
IQ1	0.829	0.553	Valid
IQ2	0.793		Valid
IQ3	0.767		Valid
IQ4	0.552		Valid
System Quality			
SQ1	0.790	0.594	Valid
SQ2	0.712		Valid
SQ3	0.753		Valid
SQ4	0.823		Valid
Service Quality			
SEQ1	0.546	0.500	Valid
SEQ2	0.673		Valid
SEQ3	0.946		Valid
SEQ4	0.597		Valid
Perceived Risk			
PR1	0.620	0.491	Valid
PR2	0.870		Valid
PR3	0.896		Valid
PR4	0.136		Invalid
Perceived Ease of Use			
PEU1	0.820	0.688	Valid
PEU2	0.755		Valid
PEU3	0.865		Valid
PEU4	0.873		Valid
Perceived Usefulness			
PU1	0.905	0.797	Valid
PU2	0.899		Valid
PU3	0.874		Valid

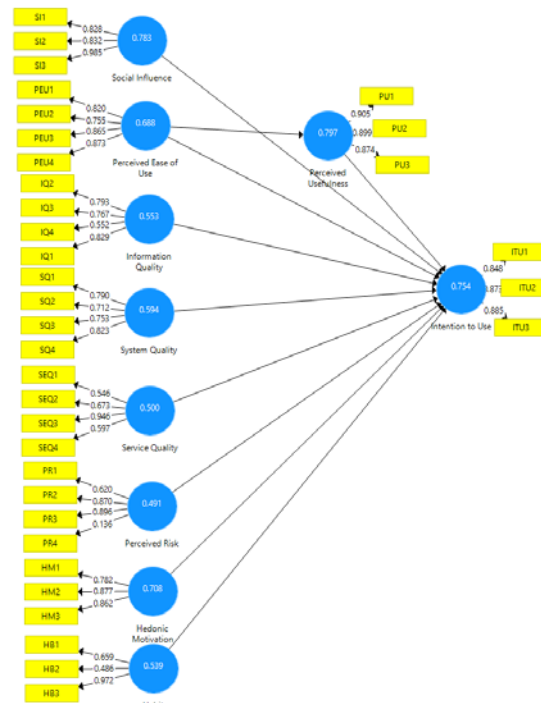| Code	Loading Factor	AVE	Result
Social Influence			
SI1	0.828	0.783	Valid
SI2	0.832		Valid
SI3	0.985		Valid
Habit			
HB1	0.659	0.539	Valid
HB2	0.486		Invalid
HB3	0.972		Valid
Hedonic Motivation			
HM1	0.782	0.708	Valid
HM2	0.877		Valid
HM3	0.862		Valid
Intention to Use			
ITU1	0.848	0.754	Valid
ITU2	0.873		Valid
ITU3	0.885		Valid

Figure 8: Result of the First Validity Convergence Test SMART-PLS Output

Since there are two indicators that are invalid, both indicators are removed from this study. Those indicators are PR4 and HB2. After the removal, the data is reprocessed and following are the results:

Table 14: Result of the Second Validity Convergence Test

Code	Loading Factor	AVE	Result
Information Quality			
IQ1	0.829		Valid
IQ2	0.793	0.553	Valid
IQ3	0.767		Valid
IQ4	0.552		Valid
System Quality			
SQ1	0.790		Valid
SQ2	0.712	0.594	Valid
SQ3	0.753		Valid

SQ4	0.823		Valid
Service Quality			
SEQ1	0.546		Valid
SEQ2	0.673	0.501	Valid
SEQ3	0.946		Valid
SEQ4	0.597		Valid
Perceived Risk			
PR1	0.679		Valid
PR2	0.882	0.681	Valid
PR3	0.897		Valid
Perceived Ease of Use			
PEU1	0.820		Valid
PEU2	0.755	0.688	Valid
PEU3	0.865		Valid
PEU4	0.873		Valid
Perceived Usefulness			
PU1	0.905		Valid
PU2	0.899	0.797	Valid
PU3	0.874		Valid
Social Influence			
SI1	0.828		Valid
SI2	0.832	0.783	Valid
SI3	0.985		Valid
Habit			
HB1	0.675	0.698	Valid
HB3	0.969		Valid
Hedonic Motivation			
HM1	0.782		Valid
HM2	0.877	0.708	Valid
HM3	0.862		Valid
Intention to Use			
ITU1	0.848		Valid
ITU2	0.873	0.754	Valid
ITU3	0.885		Valid

Figure 9: Result of the Second Validity Convergence Test SMART-PLS Output

Table 15: Result of the Validity Discriminant Test

	IQ	SQ	SEQ	PR	PEU	PU	SI	HB	HM	ITU
IQ1	0.829	0.479	0.313	0.273	0.420	0.352	0.172	0.203	0.202	0.333
IQ2	0.793	0.603	0.261	0.265	0.523	0.440	0.099	0.083	0.100	0.433
IQ3	0.767	0.416	0.256	0.229	0.300	0.234	0.118	0.272	0.268	0.326
IQ4	0.552	0.236	0.125	0.161	0.152	0.110	0.088	0.325	0.268	0.091
SQ1	0.550	0.790	0.289	0.293	0.593	0.460	0.094	0.124	0.201	0.467
SQ2	0.443	0.712	0.336	0.228	0.398	0.294	0.149	0.084	0.189	0.281
SQ3	0.433	0.753	0.296	0.184	0.393	0.412	0.174	0.224	0.192	0.333
SQ4	0.483	0.823	0.279	0.307	0.501	0.482	0.026	0.080	0.093	0.430
SEQ1	0.173	0.165	0.546	0.052	0.082	0.060	0.156	0.063	0.269	0.051
SEQ2	0.190	0.176	0.673	0.039	0.139	0.094	0.209	0.041	0.192	0.065
SEQ3	0.325	0.396	0.946	0.198	0.386	0.366	0.030	-0.093	0.085	0.342
SEQ4	0.222	0.172	0.597	0.175	0.131	0.144	0.153	0.181	0.302	0.083
PR1	0.207	0.161	0.068	0.679	0.219	0.153	0.096	0.278	0.228	0.105
PR2	0.297	0.300	0.187	0.882	0.404	0.322	0.173	0.183	0.147	0.283
PR3	0.279	0.319	0.185	0.897	0.384	0.343	0.112	0.127	0.150	0.339
PEU1	0.445	0.521	0.291	0.333	0.820	0.563	0.105	0.112	0.138	0.487
PEU2	0.364	0.379	0.235	0.347	0.755	0.437	0.280	0.329	0.233	0.386
PEU3	0.431	0.539	0.329	0.417	0.865	0.600	0.161	0.075	0.160	0.448

PEU4	0.476	0.615	0.301	0.326	0.873	0.596	0.173	0.155	0.175	0.458
PU1	0.433	0.539	0.262	0.331	0.654	0.905	0.136	0.199	0.160	0.581
PU2	0.336	0.481	0.303	0.268	0.577	0.899	0.115	0.027	0.084	0.578
PU3	0.375	0.437	0.323	0.362	0.549	0.874	0.063	0.140	0.170	0.490
SI1	0.123	0.069	0.041	0.155	0.085	0.071	0.828	0.357	0.337	0.026
SI2	0.129	0.036	0.036	0.084	0.132	0.029	0.833	0.420	0.334	0.017
SI3	0.160	0.151	0.117	0.154	0.235	0.137	0.985	0.417	0.369	0.100
HB1	0.146	0.067	-0.043	0.166	0.066	0.055	0.306	0.675	0.318	0.078
HB3	0.239	0.172	-0.015	0.182	0.205	0.147	0.415	0.969	0.443	0.235
HM1	0.198	0.103	0.059	0.130	0.095	0.024	0.358	0.478	0.782	0.170
HM2	0.243	0.194	0.132	0.187	0.152	0.095	0.284	0.417	0.877	0.252
HM3	0.180	0.213	0.217	0.150	0.230	0.212	0.340	0.326	0.862	0.334
ITU1	0.355	0.429	0.254	0.314	0.440	0.542	-0.025	0.157	0.210	0.847
ITU2	0.400	0.403	0.247	0.224	0.483	0.530	0.152	0.209	0.325	0.873
ITU3	0.413	0.482	0.264	0.319	0.479	0.563	0.086	0.202	0.291	0.885

Table 16: Result of the Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Information Quality	0.751	0.829
System Quality	0.776	0.854
Service Quality	0.773	0.793
Perceived Risk	0.786	0.863
Perceived Ease of Use	0.848	0.898
Perceived Usefulness	0.873	0.922
Social Influence	0.892	0.915
Habit	0.642	0.817
Hedonic Motivation	0.805	0.879
Intention to Use	0.837	0.902

Based on the result of validity test (convergence and discriminant) and reliability test generated, all 261 data can be processed further.

4.3 Structural Model

To determine the relationship between each variable, bootstrapping is done. The result of bootstrapping showed each hypothesis p-value which indicate whether a hypothesis is supported or rejected.

Table 17: Bootstrapping Results

| Hypothesis	Relationship	Original Sample	T-Statistics	P-Value	Result
H1	PEU -> PU	0.667	15.084	0.000	Supported
H2	SI -> ITU	-0.127	1.943	0.053	Rejected
H3	PEU -> ITU	0.100	1.028	0.304	Rejected
H4	PU -> ITU	0.410	0.409	5.038	Supported
H5	IQ -> ITU	0.094	1.529	0.127	Rejected
H6	SQ -> ITU	0.100	1.262	0.207	Rejected
H7	SEQ -> ITU	0.024	0.383	0.702	Rejected
H8	PR -> ITU	0.043	0.694	0.488	Rejected
H9	HM -> ITU	0.198	3.568	0.000	Supported
H10	HB -> ITU	0.060	1.011	0.312	Rejected
H11	PEU -> PU -> ITU	0.667	15.084	0.000	Supported
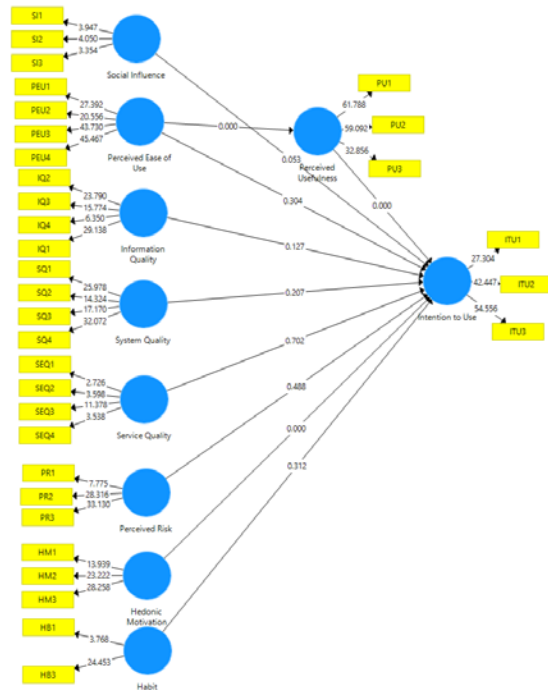
Figure 10: SMART-PLS Bootstrapping Output

Based on the bootstrapping results, H1, H4, H9, and H11 are supported. Meanwhile, H2, H3, H5, H6, H7, H8, and H10 are rejected.

4.4 Discussions

Table 18 Findings

Relationships	Findings
Perceived Ease of Use -> Perceived Usefulness	Significantly Positive
Social Influence -> Intention to Use	Insignificantly Negative
Perceived Ease of Use -> Intention to Use	Insignificantly Positive
Perceived Usefulness -> Intention to Use	Significantly Positive
Information Quality -> Intention to Use	Insignificantly Positive
System Quality -> Intention to Use	Insignificantly Positive
Service Quality -> Intention to Use	Insignificantly Positive
Perceived Risk -> Intention to Use	Insignificantly Positive
Hedonic Motivation -> Intention to Use	Significantly Positive
Habit -> Intention to Use	Insignificantly Positive

Perceived Ease of Use -> Perceived Usefulness -> Intention to Use	Significantly Positive

H1 is supported. This result supported some previous work on a similar object [54] [36]. It is stated that this hypothesis is influenced by age. 18-25 years old may emphasize perceived ease of use and perceived usefulness compared to the other age groups [54]. In this study, the majority of respondents come from quite the same age group. Thus, this may be the reason H1 is supported.

H2 is rejected. This result does not support some previous research [38] [46]. In both research, respondents only come from the Z generation and millennials. Meanwhile, in this study, there are no certain restrictions regarding age. However, this result is also aligned with some previous research [63] [37]. H2 is rejected due to the generalization of the use of the Internet as a source of information about tourism products and services, thus reducing the impact of social roles. Generalization of internet use can occur due to changes in technology adoption patterns [37].

H3 is rejected. This result supported the previous research [64]. According to [54], perceived ease of use has a smaller influence on intention to use than perceived usefulness because only some groups of people (students and office workers) paid attention to this factor. According to [65], the insignificant relationship between perceived ease of use towards intention to use may be due to the respondents' fluency in using the Internet and the respondents' experience regarding previous transactions. More experienced respondents will be more likely to ignore the ease of use of certain applications since they are already experts in operating specific applications. This statement seems to be aligned with the respondents' profile, whereas 52% of respondents use OTA mobile application more than three times a year, and 74% of respondents have been using OTA mobile application more than three years. Thus, it is safe to assume that more than 50% of respondents are experienced enough to be considered experts at navigating the application.

H4 is supported. This resulted supported the previous [54] [36] [64] [65]. Due to the majority of age group (17-25 years old) of this study, it is considered the group that pays attention to the perceived usefulness factor. Previous research also found that the more fluent someone in using the Internet, the more perceived usefulness played an important role in influencing intention to use [54].

H5 is rejected. This result does not support some previous research [39] [66]. However, there is

previous research that is aligned with this result [67]. Information quality might not have a significant influence on intention to use because someone is very dependent on certain system on doing something. In other words, there is no bargaining power of the user because there are only a few alternatives or no alternative at all [67] [68]. Information quality will not influence intention to use significantly or positively if a person has a bad experience resulting from information received [39]. Among the three constructs of the ISS model (information quality, system quality, and service quality), information quality has the lowest influence on intention to use regarding online transaction research [66].

H6 is rejected. This result is not aligned with some previous studies [39] [66]. According to [69] on [39], people who are born in 1965-1980 (X Generation) are people who might feel system quality is more important than information quality. Meanwhile, in this study, people born between 1965-1980 are not the majority of respondents. However, this result supported one previous study [67] [70]. System quality might influence intention to use if there is system novelty. If a person feels there is no novelty in a particular system, then the intention to use it will be decreased [67]. System quality is also influenced by the purpose of using a particular system. If using a system is mainly to do market research (comparing prices), then system quality is not a significant factor [70].

H7 is rejected. This result is not aligned with some previous studies [39], [66], [67], [70], and [71]. Service quality covers IT Support and Customer Care. The ability to solve problems and the help center's availability are the two factors most determined by customers [72]. In this study, 69% of respondents have experienced using OTA mobile applications for more than 3 years and 54% use OTA mobile application for more than 2 times in a year span. Thus, it is assumed that more than 50% respondents are already familiar enough with OTA mobile application that they do not need the role of customer care or IT support to do their objectives. Other possibilities that may have cause service quality do not have significant influence on intention to use is due to the possibility that respondents had a bad experience when dealing with customer services thus they gave bad rating on service quality indicators. Service quality might also play an important role if the purpose of using a system is mainly to purchase or do transactions [70].

H8 is rejected. This result is not aligned with some previous research [40] [73]. In this study, the hypothesis proposed is that perceived risk has a positive effect on the intention to use. The condition that the sentence used in the questionnaire is negative. The results expected from this study are the same as in previous studies, but the significance in this study was not found. According to [73], the strongest indicator of perceived risk is privacy, security, financial performance, social risks, and time risks. The more negative a person's perceived risk regarding those 5 areas, the less intention for that person to use particular system. Indicators that might moderate to reduce perceived risk by a person accept risk and self-confidence [40]. However, this result is aligned to previous research that also found that perceived risk does not significantly influence intention to use. It is stated that individuals who are often and used to do transactions online, perceived risk does not strong influence on intention to use or decision-making.

H9 is supported. This result is aligned some previous research [46] [74]. It is due to respondents felt pleasure and entertainment when buying services online. Hedonic motivation will have negative influence or insignificant influence on applications that is built not to fulfill enjoyment, like the learning management systems (LMS) [46]. Some of online tourism application is built with entertainment element in it. Gamification is the most common entertainment element found in various OTA mobile applications [74].

H10 is rejected. This result is not aligned with some previous research [46] [71]. However, this result is also supported by one previous research [75], which found out that habit is not significantly influencing intention to use due to gadget specification that individuals used caused inability for individuals to save many applications inside it. Thus, they will access the websites as an alternative. In this study, 46% of respondents use OTA mobile applications less than twice a year. This low frequency may be due to the OTA mobile application only downloaded when it is going to be used and deleted soon, or respondents choose other alternatives like the website to purchase services.

H11 is accepted. This result is aligned with the previous research, which also stated that perceived ease of use has an indirect effect on the intention to use with perceived usefulness as an intervening variable [76]. Since individuals feel easy to operate a system, then the individuals' goal of using the system in the first place will be easier to achieve. Thus, the usefulness of the system will be more perceived.

Based on the hypotheses testing by observing the p-value of each hypothesis, the following is an

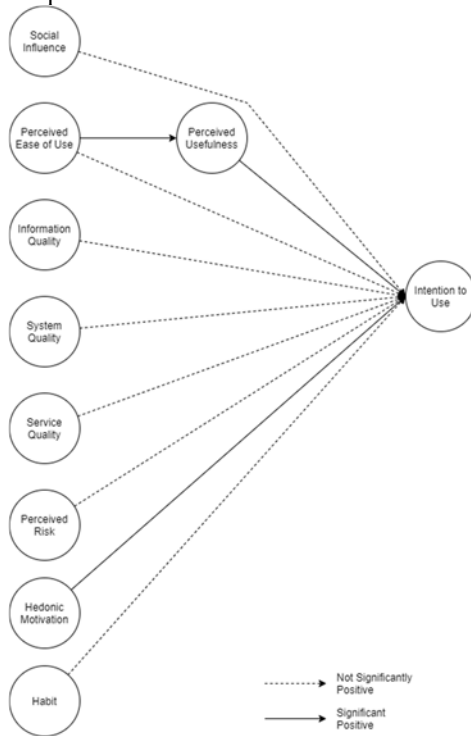illustration of the result and a comparison table against previous research:

Figure 11: Hypotheses Testing Result

Table 19 Comparison Against Previous Results

Source	Hypotheses	Previous Results	This Study Results
[36]	PEU -> PU	Significantly Positive	Significantly Positive
	PU -> ITU	Significantly Positive	Significantly Positive
	PEU -> PU -> ITU	Significantly Positive	Significantly Positive
[37]	SI -> ITU	Insignificantly Positive	Insignificantly Negative
[46]	HM -> ITU	Significantly Positive	Significantly Positive
	HB -> ITU	Significantly Positive	Insignificantly Positive
[39]	IQ -> ITU	Significantly Negative	Insignificantly Positive
	SQ -> ITU	Significantly Positive	Insignificantly Positive
	SEQ -> ITU	Significantly Positive	Insignificantly Positive

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

The key to the success of an e-commerce company is knowing what its customers want. When a customer has met his needs, it is more likely that the customer continues to use its services. Based on existing phenomena, research is related to the factors that influence the intention to use the OTA mobile application. The OTA mobile application was chosen to be the object of this research because it is the main connecting medium between companies and customers and internet user trends that lead to smartphone use.

This study aims to examine which factors influenced the intention to use OTA mobile applications. The research model used in this study is generated based on UTAUT, TAM, ISS model, with the addition of perceived risk.

Based on the result of this study, it is noted that:

1. Perceived usefulness is a more important factor when compared to perceived ease of use to increase the intention to use of an application.
2. Hedonic motivation has a significant positive effect on intention to use. This indicates that customers like the entertainment element available in the OTA mobile application.
3. Social influence, perceived ease of use, perceived risk, information quality, system quality, service quality, and habit do not have a direct significant positive effect on intention to use.

Based on the results of this study, in the future, OTA companies should consider perceived usefulness by its potential users on the development of their mobile application. Perceived usefulness covers efficiency, quickness, and easiness. This could be carried out by creating a simple application interface yet personalized. For example, if the majority of users use the mobile application to book a plane ticket, then the book plane ticket menu should be the first and more focus display that the users see. Recommendations for the route should also be personalized based on travel history.

Second factor that should be consider for future development is hedonic motivation. To increase pleasure and interest from the user, gamification can be applied. Gamification is the application of design elements and principles contained in game into a non-game context. Application of design elements and principles the game in question is a set of activities and processes for solve problems by using or applying characteristics game elements. Gamification has been widely implemented in various types of mobile applications, including OTA mobile applications. In development, each application must have a gamification concept more

attractive and engaging so that users will be more frequent using the app.

5.2 Suggestions

For future research regarding a similar object, it is recommended to:

1. Add some additional data to expand respondent profiling such as education, smartphone type, occupation, and so on.
2. Add other relevant variables to use mobile application OTA to enrich analysis results such as trust and user satisfaction.

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