Journal of Interdisciplinary History and Human Societies

PRIME OPEN ACCESS

Volume 1, Issue 1

Research Article

Date of Submission: 16 July, 2025
Date of Acceptance: 20 August, 2025
Date of Publication: 26 August, 2025

The Effect of Virtual Reality to Travel Booking Experiences

Doan Trung Thanh* and Hawpe Gamage Lahiru Asanka

School of Business Administration, Dongbei University of Finance and Economics, Liaoning province, China

***Corresponding Author:** Doan Trung Thanh, School of Business Administration, Dongbei University of Finance and Economics, Liaoning province, China.

Citation: Thanh, D. T., Asanka, H. G. L. (2025). The Effect of Virtual Reality to Travel Booking Experiences. *J Interdiscip Hist Hum Soc, 1*(1), 01-17.

Abstract

Due to culture and language differences at travel destinations, understanding these locations can be challenging. Virtual reality (VR) gives experiences for tourists of having an immersive place where they want to explore or make planing to go there in the future.

Tourist receive detailed information and feel as real views about the places. Therefore, the use of VR can provide potential travelers new experiences, different from watching videos, pictures, or reading information about destination. From that enhances making choice to book tours. This study investigates the impact of VR in travel booking experience. This study used literature review to make model and questionnaire to collect data. The study focus on attitude to behavior intention of customer uses VR on travel booking. Data is collected from 436 valid customers via a survey questionnaire, and the hypotheses were tested using SPSS 21.

Keywords: Virtual Reality, Customer Experiences, Travel Booking

Introduction

Imagine you are at home, you wear virtual reality headset which can help you walk around destinations, explore them before booking tour. Seems like a fiction movie but it is a tendency towards of high technology in tourism industry. Especially, in this year 2020 Covid-19 virus outbreak in the world so people stay at home but they can travel 21everywhere on the Earth and even though they can travel far from our Earth such as to the Moon, Stars and so on. Explore the world from home through VR headset.

Research Background

From Theoretical Aspect, Need to Research

Modern tourists they are watching videos and images of the destination online [1]. Virtual reality technology uses in hotel websites or agency tour as allowing guests to discover places so guests explore the look and feel each part of destination. The websites of tour agencies are used to promote their products and services also attract more and more customers booking tour online. Virtual reality (VR) is the use of computer technology to create a simulated environment [2]. A virtual world is created that viewers can enter and walk through and where they can handle virtual objects. The virtual world allows us a stereoscopic view from front or side, depending on our viewpoint, just as in the real world [3]. By wearing VR headset, travelers have an opportunity prior experience of destination, cities, and tourist attractions around the world before visiting those places.

Through personal feeling of tourists about destination to make the best solution for travel booking. Feeling of traveller in VR tour to can get the purchasing decision quickly. The core of VR is what customer see, smell, hear, and touch are totally the same as what customer feel in reality [4].

Virtual Reality Technology Application in Travel Industry

VR has the potential to impact the tourism industry [1]. VR provides an opportunity to customer experience destinations beforehand [5]. Covid-19 virus spread out in the world, tourists wonder where we go, what we do, just stay at home.

I want to study this research: First, Virtual reality is one of tools to enhance consumers to make decision booking. Customer wear VR headset to see destination is created in computer but they will feel like they are in real field. Amadeus is one of companies allowing customers to look for flight, compare hotel prices and book rooms through a virtual reality headset. VR headset is a head-mounted device that provides virtual reality for the wearer. The type in marketing is "try before you book" to impact customer support because they create ways to help customers that do not exist today. Second, before deciding book a reservation, customers see large information may or may no trustworthy. Virtual reality is convenience to satisfy consumers before and after stay in destination. Decision-makers can remotely preview views destination and so on through virtual reality headsets. Third, Virtual reality help to save time, cost of customer and tour company also distance between two sides. Customer can book directly tours through VR headset.

Research Objectives

This research is to find out the affect of VR to travel booking experiences on customer experiences in the hospitality industry and the main objects of this study are First, to review customer experience and virtual reality in tourism. Second, analyze the factors affect of virtual reality on customer experience in travel booking. Third, to analyze the role of virtual reality enhances customer experiences on travel booking. Fourth, to explain if Virtual Reality Experiences can foster consumer buying behavior on the tour booking.

Research Method

Questionnaire survey

Questionnaire surveys usually delivered by telephone, survey provide broad coverage of populations, to explore the extent and nature of spatial and social variations in people's attributes, attitudes, and actions [6]. The questionnaire selected randomly.

To save money, time, and because of distancing social during covid-19 out break in the world, this survey is via Wechat, Facebook and Zalo (made in Vietnam) questions as they appear on a computer, phone or tab screen and enters the responses directly into an electronic database. I use data from a consumer survey. To invite 505 participates via online link which is distributed via Wechat, Facebook and Zalo. Responsors are almost Chinese and foreigner students who live and study in China, and people are from America, Ecuador, Philippines, Russia, Japan, Myanmar, Pakistan, Australia, Kazakhstan, Singapore, Mongolia, Canada, Korea, Thailand, Malaysia, Czech, Indonesia, Vietnam and teachers in Beijing International Studies University.

Research Contribution

This study indicates that VR has a positive effect on behaviour of customer on travel booking. A tour company is big tour company or even though small one but if they know who their competition is and how their products, services and they have good marketing strategies to keep them survival and success tour company. Therefore, tour companies have to adapt to ever-evolving consumer preferences.

Your contribution statement to VR have the power to become different consumer behaviour and booking tour. At the present, there are many customers favour buying experience tours. One of the contributions of this paper, is to show that attitude in a VR setting are significant forecast of customer to travel booking intention.

Literature Reviews

Influences of Technology in Customer Buying Experiences

Virtual reality is more well-known through gaming several decades ago such as the popular wireless phone game Pokemon Go. They are easy to spot and it seems like they are everywhere, people catching Pokemon creatures using their mobile phones, players catch, train and battle other Pokemon creatures in this game using augmented reality. Nowadays, VR is used in military, sport, mental health, medical training, fashion and education.

Customers need amount of information before they make decisions. Travel companies have their own websites so customer can book tour online. Moreover, they can use social media fan page of agencies to online reservation too. And find where they will stay, hotels were present on social media (Veríssimo, Medéia&Menezes, Natalia) such as Facebook, Twitter, Flick, Trip advisor, Blogger, Website, linked in and Youtube to enhance customer experiences in hospitality industry [7]. Virtual reality is a medium, a means by which humans can share ideas and experiences [8]. Social environment impacts customer's experience [9].

Influences of Technology in Tourism Experiences

Willingness to Pay values has a significantly, largest mean for experience products in the 360-degree view condition [10]. For example: some hotels Western, Ibis, Wyndham, and Radisson Blu, offer guests the ability to view their rooms in 360.

Virtual Reality Application in Buying Behavior

VR suggests tourism many useful applications (Daniel A. Guttentag, 2009). Perceived value has a significant predictor in the adoption of VR [1].

Travel booking is directly booked in travel agents own websites or through agencies or other third parties. Virtual reality headset uses to book tour is still in its infancy. Wearing VR headset and immersing virtual world is new genre unexplored for customer experiences. For example, in the United States and Canada where have Best Western Hotels and Resorts launched virtual reality tours for each of its 2,100 hotels and resorts they own. Some hotels have 3600 videos about rooms and other parts of hotel to promote in own their websites and social networking as Shangri-La Hotel, visitors can watch 3600 videos without specific equipment or glasses. Virtual reality headset was used in game in several past year.

Factors Affecting Travel Booking

Customers select a specific destination for their vacation take time and requires money. Therefore, they often think and plan beforehand when they take those decision. Customers believe on their friends' experience, approximately 40% they choose a place suggested by their friends, in a research conducted among 15 000 international travelers [11]. Figure 1 show model of study.

Perceived Usefulness

Perceived usefulness (PU) to make a customer consider that using an information system will raise their productivity or service. PU directly have an effect on both attitude and behavioral intention [12]. Customer perceives VR technology to travel booking to be useful for their experiences and raise up their performance. The following hypothesis is suggested $H1^{+}$. The perceived usefulness has a positive relationship with attitude to use VR technology.

Perceived Sociability

Sociability combined system competency, can foretell 43% of user's attitude towards social software and 51% of user's intentions to use social software [13]. The following hypothesis is suggested H2+. Perceived sociability has a positive relationship with attitude to use VR in travel booking.

Perceived Enjoyment

Customer will pay more attention about hedonic condition; perceived enjoyment has useful implications for VR product decision [14]. Perceived enjoyment that is important antecedents for the adoption of VR technology in travel booking [15]. The following hypothesis is suggested H3+. Perceived enjoyment has a positive relationship with attitude to use VR in travel booking.

Perceived Complexity

Perceived complexity concepts that is useful to articulate of VR technology, perceived complexity concepts are very useful to figure out what potentially guide design of VR travel booking [16]. The following hypothesis is suggested H4-. Perceived complexity has a negative relationship with attitude to use VR technology in travel booking.

Social Influence

VR community create an environment to gathering people, therefore people have relationship and interactivity among each other. Customers may develop strong connections with others such as friends, family, team members, and lovers to share their experiences. Human satisfy social needs through social networking such as Facebook, Istagram, Wechat, Tiktok, Twitter, You Tube and ect. The following hypothesis is suggested H5+. Social influence has a positive relationship with attitude to use VR.

User Experience

User experience is a customer who practised with technology such as computer, smart phone, customers interacting with products or services of technology. For example: Google Maps and Baidu DiTu (百度地图) for the fastest and cheapest ways to get around. The following hypothesis is suggested H6+. User experience has a positive relationship with attitude to use VR.

Attitude

Customers think about destinations, the satisfaction of customers about it for example "beautiful"," nice", "good", "amazing", "pleasurable"," scare" and etc.., is very dependant upon the individual customer and their experiences. VR technology will impress customers in their experience to affect behavioral intention. The following hypothesis is suggested $H7^{+}$. Attitude has a positive relationship with behavior intention to use VR in travel booking.

Behavior Intention

Customer uses VR technology in travel booking, they are guided by behavioral intention. VR condition is a useful tool to booking decision.

Comments on Literature

Customers had experiences on travel booking through websites, but virtual reality is smart technology, using virtual reality on travel booking is different and unique experiences for customers. Virtual reality will attract large number of visitors on tours and later on they will be travel agency's guest. VR is a new technology to help customers can interact with brands and make booking tours. Findings on how VR affects customers to change their behaviour on travel booking and to help tour companies better connect with their consumers.

Sample Survey

The model suggests that when customers use VR technology, a number of factors influence their booking decision.

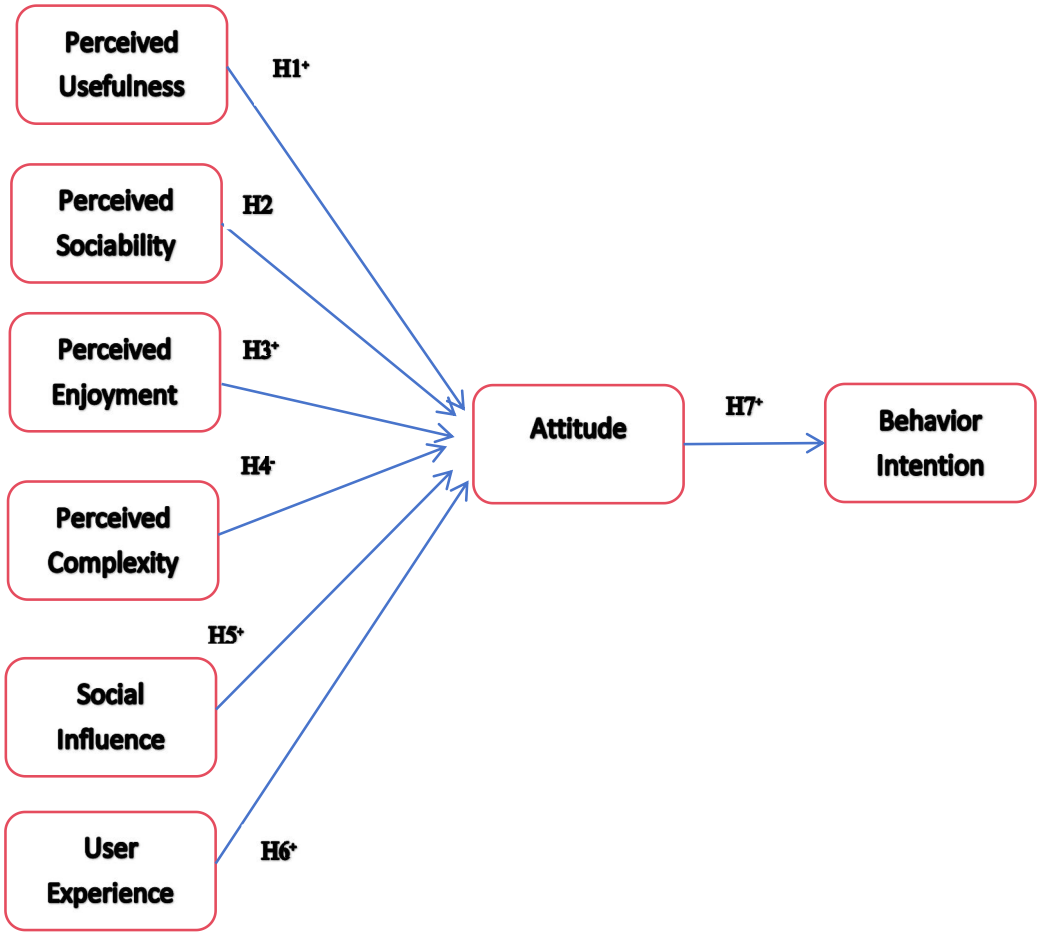

Figure 1: Research Model

Methodology

Questionnaire Design

The questionnaire was designed with one type of question: one-choice questions. They used a Likert-type scale on which 1 equaled strongly disagree, 2 equaled disagree, 3 equaled neutral, 4 equaled agree, and 5 equaled strongly agree for each attitudinal item [17]. The questionnaire has two version in English and Chinese. There are two parts of questionnaire, the first part has 31 questions about give ideas basic on choosing a choice for each question just stick from 1 to 5 (1- Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree). The second part has 5 questions which are demographic characteristics including different categories are gender, age, education level, profession and income.

The questionnaire is planned based on relevant literature show in this Table 1 which indicates the constructs, definitions of separated factors, and literature resources.

Variables	Measures	References
Perceived usefulness	A individual believe that using VR would improve experience	Fred Davis (1989)
Perceived sociability	Sociability as the extent a computer-supported collaborative learning environment is perceived with trust, a strong sense of community.	Karel Kreijins, Paul A. Kirschner, Wim Jochems, Hans van Buuren (2005).
Perceived enjoyment	A range of values which learning is perceived to be enjoyable	Huang (2014)
Perceived complexity	It is little by little defined from customer's experience by progressive refinements.	Guy A. Boy (2007)
Social influence	Customer make similar in form and look to other customers who have more experiences.	Saul Mcleod (2020)
User experience	The quality of customer's experience has when interacting with a VR design.	Dirk-Knemeyer Svoboda & Eric

Attitude	Customer feel about a specified issue	Harvey Lee (2012)
Behavior intention	Customer has put in a clear of plans to perform or not perform specified future behavior.	Warshaw, P.R & Davis,F.D (1985)

Table 1: Measurement Items

Quantitative Research

The survey started from November 27, 2020 to December 6, 2020. A total of 505 samples were received, after removing the invalid questionnaires which contained errors or were incomplete, it remained 436 valid samples to analyze.

Data Collection

Data was collected by use of questionnaires in group of students (Chinese + foreigners), residents and foreigners live in China and people outside of China.

Data Analysis

Descriptive Statistical Analysis

Characteristics of Individual Statistical Variables

According to the feedback results of the questionnaire, the basic information of the questionnaire samples is shown in Table 3. A total of 436 valid samples were collected (the response rate was 86.33%).

Demographic variable	Category	Number of persons	The percentage (%)
Gender	male	127	29.1%
	female	309	70.9%
Age	15-24 years old	293	67.2%
	25-34 years old	102	23.4%
	35-44 years old	29	6.7%
	45-59 years old	9	2.1%
	60 years old and above	3	0.7%
Education level	Secondary school and below	14	3.2%
	Junior college	24	5.5%
	Undergraduate	188	43.1%
	Graduate and above	210	48.2%
Profession	Employees of government institutions and state-owned enterprises	65	14.9%
	Employees of foreign and private enterprises	39	8.9%
	Self-employed/freelancer	14	3.2%

	Housewife	3	0.7%
	Students	306	70.2%
	Retired people and others	9	2.1%
Income	Below 1,000	124	28.4%
	1,001-3,000 RMB	182	41.7%
	3,001-6,000 RMB	51	11.7%
	6,001-8,000 RMB	28	6.4%
	8,001-10,000 RMB	27	6.2%
	10,001 RMB and above	24	5.5%

Note: N=436

Table 3: Basic Information of Questionnaire Samples

According to the above table, among the consumers participating in the survey, males accounted for 29.1% and females accounted for 70.9%. There are more female consumers than male consumers, and the gender distribution is not balanced. In terms of age, the users of VR technology are mainly concentrated under the age of 35. Among them, the proportion of users aged 15-24 reaches 67.2%, which proves that smart technology is more easily accepted by young people. In terms of education level, more than 90% of people have a bachelor degree or above. From a professional point of view, the proportion of the student population is as high as 70.2%. This may be because the questionnaire distribution team in this study is mainly a student team, and the people usually contacted are mainly student groups. Therefore, most of the questionnaires are filled out when the questionnaire is distributed online through Wechat, Facebook and Zalo. The sample is students, which causes sample bias to a certain extent. However, because the filling requirement of this questionnaire is that people who have used VR technology can fill it out, and the proportion of young people who have used VR technology will be relatively large, so the impact of sample bias is reduced. Whether their obvious differences in the use behavior of VR technology among different users is still to be further studied in the future. From the perspective of income level, people of all income levels use VR technology to varying degrees.

Normal Distribution Test

This study has done a normal distribution test for each observed variable. The details are shown in Table 4. Whether each variable obeys a normal distribution is mainly tested by calculating the average value, standard deviation, skewness value and kurtosis value of a single variable. It is generally believed that when the skewness and kurtosis values are close to 0 and the standard deviation is less than 1.96 and the degree of data dispersion is low, and the normal distribution test is obeyed. It can be seen from Table 4 that the skewness and kurtosis values of all observed variables in the questionnaire are below 2, and most of them are close to 0, and the standard deviations are also less than 1.96, which proves the degree of dispersion of the sample data not big, the normal distribution is good, suitable for regression analysis. In addition, the sample size of this study is 436>200, which also meets the basic requirements for regression analysis. Therefore, the relevant data of this study is suitable for testing and analysis using this method.

Variable	item	mean	Standard deviation	Skewness	Kurtosis
Usefulness	PU1	3.8	0.719	-0.42	0.633
	PU2	3.79	0.737	-0.412	0.313
	PU3	3.67	0.757	-0.412	0.286
	PU4	3.69	0.716	-0.143	-0.184
Sociability	PS1	3.74	0.655	-0.257	0.118
	PS2	3.75	0.727	-0.517	0.883
	PS3	3.63	0.751	-0.428	0.46
Enjoyment	PE1	3.77	0.697	-0.434	0.78
	PE2	3.66	0.688	-0.294	0.268
	PE3	3.69	0.704	-0.351	0.527
	PE4	3.81	0.677	-0.33	0.507
Complexity	COM1	3.592	0.8099	-0.612	0.417
	COM2	3.741	0.7423	-0.762	1.265
	COM3	2.908	1.0197	0.028	-0.68
	COM4	3.275	0.8879	-0.331	-0.351
Social influence	SI1	3.69	0.774	-0.989	1.581
	SI2	3.58	0.858	-0.716	0.56
	SI3	3.66	0.759	-0.602	0.929
	SI4	3.66	0.784	-0.708	0.689
	SI5	3.72	0.803	-0.813	1.206
User experience	UE1	3.68	0.856	-0.611	0.604
	UE2	3.56	0.937	-0.429	-0.198
	UE3	3.67	0.861	-0.581	0.219
	UE4	3.9	0.901	-0.696	0.373
Attitude	ATT1	3.79	0.76	-0.379	0.14
	ATT2	3.8	0.713	-0.294	0.031
	ATT3	3.6	0.744	-0.106	-0.277
	ATT4	3.69	0.707	-0.256	0.408
Use intention	BI1	3.79	0.707	-0.546	1.146
	BI2	3.8	0.733	-0.69	1.185
	BI3	3.81	0.72	-0.768	1.643

Table 4: Normal Distribution Test Results

Mean and correlation test

Table 5 shows the mean value, standard deviation of each research variable and the correlation between them. According to the correlation of the research variables in Table 5, the correlation coefficients between all variables are below 0.7 which is a low-to-medium degree correlation, indicating that there is no muticollinearity between the variables, and subsequent empirical tests can be carried out.

Variable	1	2	3	4	5	6	7	8
1 Usefulness	—							
2 Social	0.563**	—						
3 Enjoyment	0.473**	0.624**	—					
4 Complexity	0.082	0.101**	157**	—				
5 Social influence	0.286**	0.270**	0.315**	0.101*	—			
6 User experience	0.324**	0.286**	0.351**	0.022	0.236**	—		
7 Attitude	0.526**	0.561**	0.605**	-0.022	0.317**	0.374**	—	
8 Intention to use	0.455**	0.476**	0.614**	0.016	0.343**	0.367**	0.610**	—
Mean	3.7357	3.7064	3.7322	3.3790	3.6628	3.7013	3.7173	3.8005
Standard deviation	0.5622	0.5784	0.5799	0.6104	0.5409	0.6828	0.5785	0.6167

Note: **means p<0.01, that is a significant correlation at the 0.01 level (two-sided); N=436.

Table 5: The Matrix of the Mean, Standard Deviation and Correlation Coefficient of Each Variable

Exploratory Factor Analysis

This study conducted exploratory factor analysis on the scale to test the internal structure of the research data, and reported the relevant indicators as follows.

Bartlett Sphere Test and KMO Test

In this study, an exploratory factor analysis of the scale was carried out with the help of SPSS 21.0 statistical sofware. Generally, Bartlett Test of Sphericity and KMO (Kasier-Meyer-Olkin) test are used to determine whether the scale is suitable for factor analysis.

The principle of Bartlett sphere test is that when the test result is significant, the corresponding factor analysis can be performed. The standard of KMO test is that when the KMO value is less than 0.5, it is not suitable for factor analysis; it is not suitable for 0.5-0.6; barely suitable for 0.6-0.7; suitable for 0.7-0.8; suitable for 0.8-0.9; when it is greater than 0.9, it is very suitable. Therefore, this study first used the Bartlett sphere test and KMO test to determine whether the scale of this study is suitable for factor analysis.

The results show that the chi-square value of the Bartlett sphere test is 5398.291, the degrees of freedom are 465, and the p value is < 0.0001, the KMO value is 0.896. this result indicates that the correlation coefficient matrix is unlikely to be an indentity matrix, and there is a correlation between the variables, which is suitable for factor analysis. The test

results are shown in Table 6.

Factor analysis	Chi-square value	Degree of freedom	P value	KMO value
Corresponding indicators	5398.291	465	P value <0.0001	0.896

Table 6: Barlett Sphericity Test and KMO Value

Factor Structure Extraction

In this study, the principal component analysis method was selected to extract the factors. The maximum variance method is used to extract factors with a characteristic value greater than 1 for corresponding calculations. The factor loading value reflects the relative importance of the variable on the common factor. It is generally required to delete factors with factor loads less than 0.5. The test results are shown in Table 7. A total of eight factors were extracted. Among them, the usefulness factor explained the variance ratio of 59.024%, the social factor was 66.115%, the enjoyment factor was 70.412%, the complexity factor was 50.217% and the social the impact factor is 46.291%, the user experience factor is 59.458%, the attitude factor is 62.769%, the intention to use factor is 73.327%, and the cumulative explained variance of the 8 factors is 60.952%. In addition, the result of factor analysis shows that the factor loading value of each item is greater than 0.5 and the result is good.

Measurement item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
PU1 Using the virtual reality(VR) improves my performance in the travel service	0.770							
PU2 Using the virtual reality(VR) increases my productivity in the travel service	0.821							
PU3 Using the virtual reality(VR) enables me to accomplish tasks more quickly in the travel service	0.771							
PU4 I find the virtual reality(VR) to be useful in the travel service	0.707							
PS1 I would find the virtual reality(VR) pleasant to interact with in the travel service		0.808						
PS2 I think the virtual reality(VR) is nice in the travel service		0.814						
PS3 I find the virtual reality(VR) would be a pleasant conversational partner in the travel service		0.817						
PE1 I found using virtual reality(VR) in the travel service interesting			0.829					
PE2 I found using virtual reality(VR) in the travel service enjoyable			0.844					
PE3 I found using virtual reality(VR) in the travel service exciting/pleasant			0.885					
PE4 I found using virtual reality(VR) in the travel service fun			0.6					

COM1 The knowledge required to use virtual reality(VR) in the travel service is new for me	0.762				
COM2 I need to learn how to use virtual reality(VR) in the travel service	0.766				
COM3 I tend to resist adopting virtual reality(VR) in the travel service	0.627				
COM4 I need to change my behaviour in order to adopt virtual reality(VR) in the travel service	0.670				
SI1 Friend's suggestion and recommendation will affect my decision to use virtual reality(VR) in the travel service		0.707			
SI2 Family members/relatives have influence on my decision to use virtual reality(VR) in the travel service		0.682			
SI3 I will use virtual reality(VR) in the travel service if my colleagues use it		0.702			
SI4 Mass media (e.g. TV, newspaper, articles, radio) will influence me to use virtual reality(VR) in the travel service		0.643			
SI5 I will use virtual reality(VR) in the travel service if the service is widely used by people in my community		0.666			
UE1 I had used computers fairly extensively before my exposure to the CPOE system virtual reality(VR)			0.837		
UE2 I had used many software programs extensively before my exposure to virtualreality(VR)			0.75		
UE3 I had used e-mail extensively before my exposure to the virtual reality(VR)			0.794		
UE4 I had ordered online (e.g., from websites) fairly extensively before my exposure to the virtual reality(VR)			0.658		
ATT1 Using the virtual reality(VR) is a good idea in the travel service				0.753	
ATT2 Using the virtual reality(VR) is a wise idea in the travel service				0.828	
ATT3 I like the idea of using the virtual reality(VR) in the travel service				0.805	
ATT4 Using the virtual reality(VR) would be pleasant in the travel service				0.781	
BI1 I expect to continue using virtual reality(VR) in the travel service in the future					0.845
BI2 I can see myself using virtual reality(VR) in the travel service in the future					0.855
BI3 It is likely that I will use virtual reality(VR) in the travel service in the future					0.869

Explained variance ratio (%)	59.024	66.115	70.412	50.217	46.291	59.458	62.769	73.327
Cumulative explained variance example (%)	60.952							

Note: The extraction method is principal component analysis method.

Table 7: Exploratory Factor Analysis Results

Reliability Analysis

In order to avoid sampling errors, measurement errors and deviations in the measurement process as much as possible, it is necessary to check the reliability of the scale. In this study, the Cronbach's coefficient (Cronbach's α) is used as the main criterion for reliability judgment, and the internal consistency between variables under the same dimension and the overall consistency of the scale are measured to test the reliability of the questionnaire.

If the α coefficient does not exceed 0.6, it is generally considered that the internal consensus reliability is insufficient; when it reaches 0.7-0.8, the scale has considerable reliability, and when it reaches 0.8-0.9, it indicates that the scale has very good reliability.

In this study, the reliability of the 8 variables in the scale was analyzed. The results show that the Cronbach's α coefficient of the statistical results of each variable is higher than 0.6, indicating that the reliability of the scale is very satisfactory and the data has high reliability. The test results are shown in Table 8.

Latent variable	Item	Coefficient after deleting the term	Cronbach' s α
Usefulness	PU1	0.713	0.768
	PU2	0.675	
	PU3	0.710	
	PU4	0.747	
Sociability	PS1	0.668	0.742
	PS2	0.653	
	PS3	0.650	
Enjoyment	PE1	0.827	0.860
	PE2	0.819	
	PE3	0.791	
	PE4	0.845	
Complexity	COM1	0.566	0.654
	COM2	0.564	
	COM3	0.633	
	COM4	0.589	
	SI1	00.646	

	SI2	0.662	
Social influence	SI3	0.650	0.708
	SI4	0.674	
	SI5	0.668	
	UE1	0.665	
	UE2	0.709	
User experience			0.768
	UE3	0.695	
	UE4	0.775	
	ATT1	0.776	
	ATT2	0.725	
Attitude			0.801
	ATT3	0.744	
	ATT4	0.758	
	BI1	0.768	
Use intention	BI2	0.752	0.818
	BI3	0.728	

Table 8: Reliability Analysis Results

Confirmatory factor analysis

Before the formal model testing, confirmatory factor analysis of the data is required. Confirmatory factor analysis is a research method used to determine whether the correspondence between measurement factors and measurement items (scale items) is consistent with the researcher's prediction. In this study, the Lisrel 8.70 statistical software was used to perform confirmatory factor analysis on the scale, and the analysis results were reported as follows.

Content Validity

In terms of content validity, the scale used in this study is based on previous studies by scholars and scholars. In the process of questionnaire design, the author focused on consulting and adopting the guidance of relevant experts and scholars, and repeated the content of the questionnaire in combination with localized contexts. Revise and refine, and finally determine the final questionnaire used in this study. In summary, it can be considered that scale of this study has high content validity.

Convergent Validity

This study tested the aggregate validity of the scale by testing variable combination reliability (CR), average variance extracted (AVE), standard factor loading and significance.

If the CR value of each factor is greater than 0.7 and the AVE value is greater than 0.5, it indicates that it has good convergent validity. At the same time, it is generally required that the factor loading coefficient values corresponding to each measurement item is greater than 0.7. The research results show that the CR value of each variable is greater than 0.7; except for complexity and social influence, the AVE values of the remaining variables are all greater than 0.5; except for the complexity of the two items that do not reach 0.7, the standard factor loading values of the remaining items both are greater than 0.7, indicating that overall, the data of this measurement scale has good aggregation validity. The specific analysis results are reported in Table 9.

Latent variable factor	Item	Standard factor loading	CR	AVE
Usefulness	PU1	0.74	0.82	0.54
	PU2	0.78		
	PU3	0.71		
	PU4	0.71		
Sociability	PS1	0.79	0.80	0.57
	PS2	0.77		
	PS3	0.71		
Enjoyment	PE1	0.82	0.90	0.70
	PE2	0.84		
	PE3	0.91		
	PE4	0.78		
Complexity	COM1	0.79	0.72	0.41
	COM2	0.80		
	COM3	0.40		
	COM4	0.46		
Social influence	SI1	0.62	0.75	0.38
	SI2	0.56		
	SI3	0.65		
	SI4	0.59		
	SI5	0.65		
User experience	UE1	0.82	0.83	0.55
	UE2	0.73		
	UE3	0.77		
	UE4	0.63		
Attitude	ATT1	0.70	0.85	0.59
	ATT2	0.77		
	ATT3	0.79		
	ATT4	0.80		
Use intention	BI1	0.85	0.87	0.69
	BI2	0.82		
	BI3	0.83		

Note: **means significant at the level of 0.01, ***means significant at the level of 0.001; N=436

Table 9: Convergence Validity

Discrimination Validity

The discriminative validity of the scale is tested by judging whether the square root of the average extracted variance (AVE) of each factor is greater than the correlation coefficient of the factor and other factors and the size of the correlation coefficient. If the AVE square root value of each factor is greater than the maximum value of the correlation coefficient between the factor and other factors, it has good discrimination validity. The results of the study show that the square root values of the 8 factors are all greater than the maximum value of the correlation coefficient between this factor and other factors, which proves that the scale data has good discrimination validity. The specific analysis results are reported in Table 10.

Variable	1	2	3	4	5	6	7	8
1 Usefulness	0.73							
2 Social	0.563**	0.75						
3 enjoyment	0.473**	0.624**	0.84					
4 Complexity	0.082	0.101**	157**	0.64				
5 Social influence	0.286**	0.270**	0.315**	0.101*	0.62			
6 User experience	0.324**	0.286**	0.351**	0.022	0.236**	0.74		
7 Attitude	0.526**	0.561**	0.605**	-0.022	0.317**	0.374**	0.77	
8 Intention to use	0.455**	0.476**	0.614**	0.016	0.343**	0.367**	0.610**	0.83

Note: **means $p<0.01$ that is significant correlation at the 0.01 level (two-sided); the diagonal is the square root of the factor average variance extracted AVE; N=436

Table 10: Discrimination Validity

Common Method Bias

Common method deviation (CMV) refers to the deviation of data concentration due to some factors outside the data concentration due to some factors outside the measurement. In this study, Lisrel 8.70 statistical software was used to test the common method deviation of the data. Generally speaking, the fitness index of the model determines whether the research model is acceptable. In this study, 9 indicators of χ2, df, χ2/df, RMSEA, RMR, CFI, IFI, NFI, and NNFI were selected as the indicators of model fit evaluation. Where χ2/df is the ratio of chi-square degrees of freedom, which can reflect the degree of fit between the covariance matrix of the model and the observed data. When $1<\chi2/df<3$, it means that the model fits well, when $3<\chi2/$ when $df<5$, it means that the overall model is acceptable. RMSEA is the root mean square of the approximate error. If RMSEA is less than 0.05, it means that the model is close to fit. If $0.05<RMSEA<0.08$ it means that the model fits reasonably. If $0.08<RMSEA<0.10$ it means that the model fits well. RMR is the root mean square residual. When $RMR<0.1$ the model fits well. CFI, IFI, NFI, and NNFI index models are well-fitted standards are all fitted values greater than 0.9.

This study summarizes the measurement results of model fitting indicators, as shown in Table 11. In the eight-factor model, $\chi2/df=3.55<5$, $RMSEA=0.077<0.08$, $RMR=0.097<0.1$, $CFI=0.95>0.90$, $IFI=0.95>0.90$, $NFI=0.93>0.90$, $NNFI=0.94>0.90$, above the numerical value shows that the eight-factor model has a good degree of fit and is suitable for model testing.

Model	χ^2	df	χ^2/ df	RMSEA	RMR	CFI	IFI	NFI	NNFI
One-factor model	3760.74	434	8.67	0.13	0.14	0.86	0.86	0.85	0.85
Two-factor model	3506.36	433	8.10	0.13	0.13	0.87	0.87	0.86	0.86
Three-factor model	3372.62	431	7.83	0.13	0.13	0.88	0.88	0.86	0.87
Four-factor model	2945.73	428	6.88	0.12	0.14	0.90	0.90	0.88	0.89
Five-factor model	2572.86	424	6.07	0.11	0.13	0.91	0.91	0.89	0.90
Six-factor model	2087.41	419	4.98	0.096	0.10	0.92	0.92	0.90	0.91
Seven-factor model	1812.74	413	4.39	0.088	0.11	0.93	0.93	0.92	0.92
Eight-factor model	1442.55	406	3.55	0.077	0.097	0.95	0.95	0.93	0.94

Table 11: Model Fit Test

Hypothesis Testing

This study uses the idea and method of hierarchical regression to test the research hypothesis, and summarize the analysis results as follows.

The Influence of Independent Variables on Intermediate Variables

Usefulness positively affects attitudes (β=0.214, p<0.001), assuming H1a holds; sociality positively affects attitudes (β=0.193, p<0.001), assuming H2a holds; enjoyment positively affects attitudes (β=0.331, p<0.001), assuming H3a holds; complexity negatively affects attitude (β=-0.115, p<0.01), hypothesis H4a holds; social influence positively affects attitude (β=0.076, p<0.05), hypothesis H5a holds; User experience positively affects attitude (β=0.106, p<0.01), suppose H6a holds.

The Influence of Independent Variables on Dependent Variables

Usefulness positively affects usage intention (β=0.152, p<0.01), assuming H1b holds; sociality has no significant influence on use intention (β=0.063, p=0.206), assuming H2b does not hold; enjoyment positively affects usage intention (β=0.419, p<0.001), hypothesis H3b holds; complexity negatively affects intention to use (β=-0.082, p<0.05), hypothesis H4b holds; social influence positively affects intention to use (β=0.120, p<0.01), assuming that H5b is established; user experience positively affects usage intention (β=0.112, p<0.01), assuming that H6b is established.

The Influence of Intermediary Variables on Dependent Variables

Attitude positively affects intention to use (β=0.590, p<0.001), assuming H7 holds. Based on the above data analysis results, summarize the hypothesis test results of this study in table 12.

Hypothetical content	Test result
H1a : Usefulness positively affects attitude	Established
H1b : Usefulness positively affects usage intention	Established
H2a : Sociality positively affects attitudes	Established
H2b : Sociality positively affects usage intention	Don't establish
H3a : Enjoyment positively affects attitude	Established
H3b : Enjoyment positively affects usage intention	Established
H4a : Complexity negatively affects attitude	Establish
H4b : Complexity negatively affects usage intention	Established
H5a : Social influence positively influence attitude	Established
H5b : Social influence positively affects intention to use	Established
H6a : User experience positively affects attitudes	Established
H6b : User experience positively affects intention to use	Established
H7 : Attitude positively affects intention to use	Established

Table 12: Research Hypothesis Test Result

Conclusion and Discussion

Conclusion

The results display the affects of perceived usefulness, perceived sociability, perceived enjoyment, perceived complexity, social influence and user experience which are significant role in foretelling customer will use VR for travel booking.

The finding of this study suggests to tour companies, travel agencies understand the factors affect VR technology on behavior intention of customers. VR tour will have wide application prospect to enhance customers make travel booking to visit real destination. Virtual tour does bring parts of the world to travelers, to people who are physically unable to travel certain landmarks [18,30].

Discussion

The Covid-19 pandemic has greatly impacted the global travel industry. Virtual reality may never replace traditional travel, VR tour does bring parts of the world to people who are physically unable to visit certain landmarks. Most of all, it could help bring people to places that are otherwise inaccessible. VR provides experience destination from home.

Limitations and further Study

Responsors were almost students and under 35 years old, therefore, young people willing to learn VR application in travel booking but behavior of different customers about age to use VR it should study for future research. Moreover, the study uses a survey questionnaire online so the validity and suitability of respondents maybe problematic.

References

1. Pankaj Vishwankarma, Srabanti Mukherjee, Biplab Datta (2020). Travelers' intention to adopt virtual reality: A consumer value perspective. Journal of Destination Marketing & Management 17- 100456.
2. Joe Bardi. Joe Bardi is Marxent's tech-obsessed former Communications Director.
3. Nobuyoshi Terashima. Telesensation, Intelligent Communication systems, Pages 127-148.
4. Yu, X. (2011). Research and practice on application of virtual reality technology in virtual estate exhibition. Procedia Engineering, 15, 1245-1250.

5. Kim, M. J., Lee, C. K., & Jung, T. (2020). Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model. Journal of travel research, 59(1), 69-89.
6. Preston, V. (2009). Questionnaire survey. International encyclopedia of human geography, 46–52.
7. Verissimo, M., & Menezes, N. (2015). Social media as a tool to enhance customer experience in hospitality industry. Portuguese Journal of Marketing/Revista Portuguesa de Marketing, (34).
8. Craig, A. B., Sherman, W. R., & Will, J. D. (2009). Developing virtual reality applications: Foundations of effective design. Morgan Kaufmann.
9. Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. Journal of retailing, 85(1), 31-41.
10. Li, T., & Meshkova, Z. (2013). Examining the impact of rich media on consumer willingness to pay in online stores. Electronic Commerce Research and Applications, 12(6), 449-461.
11. Jordan Grimmer. (2016). Experts vs. Friends: The Definitive Guide to Who Influences Us and Why,
12. Bradley, J. (2009). The technology acceptance model and other user acceptance theories. In Handbook of research on contemporary theoretical models in information systems (pp. 277-294). IGI Global Scientific Publishing.
13. Gao, Q., Dai, Y., Fan, Z., & Kang, R. (2010). Understanding factors affecting perceived sociability of social software. Computers in Human Behavior, 26(6), 1846-1861.
14. Kumar Kakar, A. (2017). How do perceived enjoyment and perceived usefulness of a software product interact over time to impact technology acceptance. Interacting with Computers, 29(4), 467-480.
15. Astrid Dickinger, Mitra Arami & David Meyer (2007). The role of perceived enjoyment and social norm in the adoption of technology with network externalities. Pages 4-11.
16. Boy, G. A. (2007, July). Perceived complexity and cognitive stability in human-centered design. In International Conference on Engineering Psychology and Cognitive Ergonomics (pp. 10-21). Berlin, Heidelberg: Springer Berlin Heidelberg.
17. Maddox, R. N. (1985). Measuring satisfiaction with tourism. Journal of Travel Research, 23(3), 2-5.
18. Najafipour, A. A., Heidari, M., & Foroozanfar, M. H. (2014). Describing the virtual reality and virtual tourist community (applications and implications for tourism industry). Kuwait Chapter of the Arabian Journal of Business and Management Review, 3(12A), 12.
19. Carlos Flavián, Sergio Ibáñez-Sánchez, Carlos Orús (2018). The impact of virtual, augmented and mixed reality technologies on the customer experience. Journal Business of Research 100(2019)547-560.
20. Guttentag, D. A. (2010). Virtual reality: Applications and implications for tourism. Tourism management, 31(5), 637-651.
21. Dirk-Knemeyer & Eric Svoboda.
22. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS quarterly, 319-340.
23. Pleyers, G., & Poncin, I. (2020). Non-immersive virtual reality technologies in real estate: How customer experience drives attitudes toward properties and the service provider. Journal of Retailing and Consumer Services, 57, 102175.
24. Harvey Lee (2012). Scocial Research Glossary, Quality Research International.
25. Huang, Y. (2014). Empirical analysis on factors impacting mobile learning acceptance in higher engineering education.
26. Karel Kreijins, Paul A. Kirschner, Wim Jochems, Hans van Buuren (2005). Measuring perceived sociability of computer-support collaborative learning environments.
27. Kim, M. J., Lee, C. K., & Jung, T. (2020). Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model. Journal of travel research, 59(1), 69-89.
28. Saul Mcleod (2020). Social Influence.
29. Warshaw, P. R., & Davis, F. D. (1985). Disentangling behavioral intention and behavioral expectation. Journal of experimental social psychology, 21(3), 213-228.
30. Xi Y. Leung, Jiaying Lyu, Billy Bai (2019). A fad or the future? Examining the effectiveness of virtual reality advertising in the hotel industry.