ENHANCING ONLINE CUSTOMER ENGAGEMENT IN ONLINE ROOM RESERVATION: A STRUCTURAL MODELING APPROACH

Pisit Pipatphokakul

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ABSTRACT

Title of Dissertation	ENHANCING ONLINE CUSTOMER ENGAGEMENT IN ONLINE ROOM RESERVATION: A STRUCTURAL MODELING APPROACH
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This research purposes are 1) to identify the factors of online customer services, online customer experience, online room reservation website, and online customer engagement; 2) to investigate the variables of online customer engagement; and 3) to develop a structural equation model of enhancing online customer engagement. This research is a quantitative method by developing a structural equation model of enhancing online customer engagement. The samples of this study consisted of 451 respondents who have purchased online room reservation via the website by convenient sampling method. The research instrument is a questionnaire. The data are analyzed by descriptive statistics and confirmatory factor analysis with AMOS. The result is the structural model of the confirmatory factor analysis of enhancing online customer engagement in online room reservation with empirical data Chi-Square/Df = .954, CFI = 1.000, RMSEA = .000, RMR = .006, and TLI = 1.000. The findings of this research indicate that, in accordance with online customer engagement theory. Managerial and practical implications for enhancing online customer engagement are also discussed.

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ABBREVIATION

Abbreviation	Meaning
OCS	Online Customer Service
OCX	Online Customer Experience
ORR	Online Room Reservation Website
OCE	Online Customer Engagement

CHAPTER 1

INTRODUCTION

In this research, the researcher has grouped the content into seven main groups. The details are including a background of the study, research question, objectives of the research, the scope of the study, research implication, the definition of terms, and chapter summary.

1.1 Background of The Study

1.1.1 Rational

According to the growth of hotel business and tourism industry, tourism leads about ten percentage of global GDP (World Travel & Tourism Council, 2017). In 2016 and 2017, U.S. hotel gross bookings by online travel agencies (OTA) linked with hotel websites or applications, it found that OTA's gross bookings are higher than hotel websites or application (The Wall Street Journal, 2018). Also, the sales growth from online travel source, the digital travel sales worldwide is 564.87 billion U.S. dollars which is growing of online travel sale internationally 15.4% and growing of hotel online sales amounts international 10.3% (STATISTA, 2018). The statistic shows a continual increase of the international 2011-2016 incomes of online travel bookings. In 2016, the income caused by online travel bookings was 513 billion U.S. dollars (STATISTA, 2016). Circulation of adults in the United States by their favorite of room reservation in 2017 displays the result which is 88 percent of the respondents preferred to use an online channel for booking hotels (STATISTA, 2018). Seventeen percentage GDP of Thailand comes from tourism (THB 2.5 trillion). In Thailand 2016, the hotel occupancy rate, length of stay, and foreign arrivals rise from 2015 (Ministry of Tourism and Sports of Thailand, 2017). Similarly, the tourist behavior, mobile has changed the way people book travel. Booking hotel can be hit in a few minutes then, can rest at the booked hotel immediately. The world of online

communication can change behavior of tourist (Mills & Law, 2004). It can be found that most of tourists have had mobile phones or computer for searching for information, ordering goods and services. It can be noted that the room reservation behavior is generally through the online system, which is the same characteristics around the world. Moreover, the generations of customers are interesting to study. Kasasa (2019) defines four generations of including Generation Z (born 1995-2015), Generation Y (born 1980-1994), Generation X (born 1965-1979), and Baby boomer (born 1944-1964).

From now on, Generation Y, will changed the main customer sector for hotels worldwide (Mettler, 2015). Generation Y is easy to operate with smartphone and notebook than other generation. It is important to support Generation Y's requirements and relationships by building a good customer service and experience. Yet, the other generations also needed the requirement too. The significant work is helping of each generation to make them pleased. Moreover, websites could change for making delightful to each of customers and stimulate online booking and engagement (Bilgihan & Bujisic, 2015). According to the literature review, there can classify the generation and customer online booking behavior. Baby boomers, born between 1946 and 1964 (The United States Census Bureau), quite not be related to the Internet as Generation X or Generation Y (Heejun Kim, Xiang, & Fesenmaier, 2015; Nusair, Bilgihan, & Okumus, 2013). Definitely, Confente and Vigolo (2018a) express alterations of internet use of online room reservation among the generations that the Internet is the most frequently used source of information for all generations. However, the younger generations, mainly Generation Y, are very responsive to online content and messages, marketers have to recognize reliable social media influencers for, to activate their operation via popular stars/influencers for extreme imagining and viewers (Confente & Vigolo, 2018b).

Tourists can reach to many kinds of information, tourism service providers, online travel agent, and etc. Online reaching and booking for traveling, room reservation, flight booking, and other activities are common practice. In contrast, a manual room reservation by call and/or walk-in counter service makes more wastes to a business such as staffing cost, shop and counter providing, operation cost, and etc. So, all concerned tourism businesses adapt themselves to execute online technology

and application as the most important strategy. Customer engagement with websites that offer services moves the solution of hotel reserving. Hotels that have not yet been updated via online channels are not aligned with the customer's behavior, which leads to the loss of certain customers. Therefore, online room reservation is an undeniable issue add a reference.

1.1.2 Problem Identification

In this era, the change is occurring in any kind of communication and business. The key factor that leads to this change is online. Online platform infiltrates in any commerce either product or service. There has been considerable rise and move in online shopping behavior changes as customers have ongoing with internet-enabled multi-devices. Also, many customers who are motivated to use online platforms for the first time due to COVID-19. Additionally, customer engagement is a context-dependent, psychological state characterized by fluctuating intensity levels. Online customer engagement and website usage are fluctuations. However, online customer engagement has the most influential effect on customer loyalty, and customer satisfaction which leads to business growth. Online customer service, due to the promises, delivering services in the promised time, and fulfilling the promises completed a positive impact on online customer service. Online customer experience concerned attraction and activity, customer's emotional, ease of use, prompt, convenience while online room reservation website can satisfy and be loyal to the hotel for purchasing and engaging customer.

1.1.3 Research Gap

Online customer service (OCS) is an important element of the achievement of the digital world (Yang, Jun, & Peterson, 2004). Online room reservation can make business growth for the tourism business with regarding OCS. OCS is one of the vital factors of the achievement of online industries. In addition, goods and services are relatively the same in any competitive market, the customer service can make a difference. Therefore, it is important to deliver OCS to customers, and to impress customers. The basic approach for delivering OCS is an understanding of the identity and requirement of customer. Organizations could position themselves in the industry

by offering a high level of customer service in order to continue their success while increasing clientele and profitability. OCS can make benefits to organizations because an OCS is an integral role of an organization to set itself apart from the competitors and increases their overall profits (Juran & Godfrey, 2001). Therefore, it is important to deliver online customer service to impress customers. The example OCS channels for servicing customers: website, chatbot, webchat, email, application, video-conference, Youtube, OCS agents, chatbot, and etc.

For delivering online customer service, the other construct that is greatly concerned is Online customer experience (OCX) (Wani & Malik, 2013). OCX actually shows on the online selling business (Rose, Clark, Samouel, & Hair, 2012). In addition, information technologies transform the tourism business to lift the upper classes of a service business (Buhalis, 2003). There are long expressed an interest in the customer experience. A special experience is the main way to engage customers (Pine & Gilmore, 1998). Also, customers would often judge service based on what they experienced during their visits (Eggert & Ulaga, 2002). There are benefits to the organization when delivering OCX to the customers. Kuhlmeier and Knight (2005) revealed online customer experience relates to customer insights of the purpose of online purchasing. Consequently, OCX is significant to retain satisfied customers in the service delivery.

The source of access to tourists is by using a mobile phone or computer. Creating a powerful platform of online channels is necessary because the platform is the backbone of the tourist journey to interact with their bookings. Website and application on both personal computers and mobile phones are the most channels that customers use. The platform makes customer interact organization as well as designed. Online booking (ORR) is an innovative booking to reserve room for a planned date and time (Tesone, 2005). In this era, customers preferred approach to room reservation is the online approach. Online booking (Thakran & Verma, 2013) is a key channel of room reservation channels. Hotel information such as features, and facilities in a utilitarian attribute since price comparing without hotel contacting while looking at online information channels (Runfola, Rosati, & Guercini, 2013). E-booking and E-commerce are accepted to widen customers. An active E-commerce channel has become an important substance for service industries. The website

platform makes customer interact organization as well as designed. Technologies array from websites interaction, ordering systems to mobile platforms, and applications interaction by real-time.

Nonetheless, online customer engagement (OCE) is progressively supreme in today's extremely disruptive business (Alexander & Jaakkola, 2015) customer engagement is considered as a tactical authoritative in attractive business performance, including profit (Verhoef et al., 2009), growth of income (V. Kumar et al., 2010), and the level of competitiveness (Ahmad, Omar, & Amin, 2012). The meaning of customer engagement is a connection between the level of organization relations. There consider a corporate strategy to listen to voice of customers, and interface of organization (Hollebeek, Glynn, & Brodie, 2014). OCE can influence to the usefulness of advertising (Calder, Malthouse, & Schaedel, 2009). On behalf of customers, OCE is also important for organizations in financial and customer areas (revenue, word of mouth, publicizing information (e.g., reviewing).

According to the literature review, there are some literature regarding online booking in tourism and hospitality areas; e.g. Airline (Llach, Marimon, del Mar Alonso-Almeida, & Bernardo, 2013), Hotel (Wang, Law, Guillet, Hung, & Fong, 2015; Zhao, Wang, Guo, & Law, 2015). Some kinds of constructs which concerned online room reservation, are studied, most topics are: e.g. customer satisfaction (Sparks & Browning, 2011; Ullah, Rukh, Zhou, Khan, & Ahmed, 2019), customer experience (Bilgihan, Kandampully, & Zhang, 2016; Hwang, Park, & Woo, 2018), hotel revenue (Andrés-Martínez, Gómez-Borja, & Mondéjar-Jiménez, 2014; Hunold, Kesler, Laitenberger, & Schlütter, 2018), hotel website (e.g.Bilgihan & Bujisic, 2015; Rianthong et al., 2016), purchase intention (e.g. Lien et al., 2015), online review (e.g. Cezar & Ögüt 2016; Gavilan et al., 2018, travel agent (e.g. Bogdanovych et al., 2006; Kucukusta et al., 2015, Anderson, 2011) and etc.

Table 1.1 Research Gaps

Research Area	Dimensions	Authors
Customer Satisfaction	Customer Satisfaction	Ullah et al. (2019)
Customer Behavior/ Customer Factors/ Customer Intention	Customer Behavior/Intention	Cezar and Ögüt (2016); Eriksson and Fagerstrøm (2018); Wu and Law (2018); J. N. K. Liu and Zhang (2014); I. C. C. Chan, Lam, Chow, Fong, and Law (2017); Confente and Vigolo (2018b); Li, Peng, Jiang, and Law (2017); K. Park, Ha, and Park (2017)
Customer Experience	Customer Experience	Hwang et al. (2018); Rianthong, Dumrongsiri, and Kohda (2016)
Value & Trust	Customer Value	S. Y. Kim, Kim, and Park (2017)
Online Review/ Rating & Review	Rating & Review	X. Zhao et al. (2015), Casaló, Flavián, Guinalíu, and Ekinci (2015); Cezar and Ögüt (2016); Gavilan, Avello, and Martinez-Navarro (2018); Wu and Law (2018)
Price	Price	Andrés-Martínez et al. (2014); Hunold et al. (2018)
Word of Mouth	Word of Mouth	Manes and Tchetchik (2018); Mohan, Qi, Chi, and Wen (2015)
Process/System/ Application	System	Rus and Negruşa (2014); Saito, Takahashi, Koide, and Ichifuji (2019)
Website	Website	Bilgihan and Bujisic (2015);

Research Area	Dimensions	Authors
Design	Design	Rianthong et al. (2016) Baek and Michael Ok (2017)
Value/Price/Trust/ Brand/Purchase Intention	Customer Intention/ Customer Value/Price/Brand	Lien, Wen, Huang, and Wu (2015)
Customer Service / Customer Experience / Website / Customer Engagement	Customer Service / Customer Experience / Website / Customer Engagement	This Research

Based on Table 1.1 above, there are many kinds of constructs which concerned online room reservation, for example: customer satisfaction (Sparks & Browning, 2011), customer value (Bilgihan & Bujisic, 2015), customer experience (Bilgihan et al., 2016), price (Öğüt & Onur Taş, 2012), website (Bilgihan & Bujisic, 2015), and etc. The finding is 1) Most research studies about some constructs on online room reservation, for example, OCS (e.g. J. Wang et al. (2017); Buhalis and Law, (2008)), OCX (e.g. Hwang et al. (2018); Rianthong, Dumrongsiri, and Kohda (2016)), ORR (e.g. Bilgihan and Bujisic (2015); Rianthong et al. (2016)), and OCE (e.g. Vivek, Beatty, & Morgan, (2012); Thakur (2018)), but the researcher study on four concerned constructs on online room reservation and relationship of them, and 2) There are some studies the study about the relationship among constructs of online room reservation for example, Lien et al. (2015) study the effects of brand image, price, trust and value on purchase intentions. In conclusion, this studying will study the relationship among constructs of online room reservations.

For the area of online booking service, the researcher selects a room reservation area for studying because the trend of room reservation is the highest booking. Also, there are many kinds of constructs which concerned online room reservation are studied. Most topics are customer satisfaction (e.g. Sparks & Browning, 2011; Ullah et al., 2019), customer experience (e.g. Bilgihan, Kandampully, & Zhang, 2016; Hwang et al., 2018), hotel revenue (e.g. Andrés-Martínez, et al., 2014; Hunold et al., 2018), hotel website (e.g.Bilgihan & Bujisic,

2015; Rianthong et al., 2016), purchase intention (e.g. Lien et al., 2015), online review (e.g. Cezar & Ögüt 2016; Gavilan et al., 2018, and etc. For these constructs, the researcher selects constructs for this study comprises online customer service, online customer experience, online room reservation, and online customer engagement. The researcher selects online customer service because customer service influences customer satisfaction and repurchase intention (Kassim & Asiah Abdullah, 2010) which is valued to the service provides. Also, because online customer experience is a new trend for operating businesses to serve customers, the researcher selects. Selecting an online room reservation website is the reason for serving the trend of customers in e-commerce and online platform. Additionally, the researcher selects online customer engagement because online customer engagement is the key construct to lead business growth, and profit. Thus, this research selects these four constructs to study for this research.

1.1.4 Research Significant

Key constructs and measurement scales of factors contributing in the online room reservation realm are discovered and fulfilled the research gaps. The effects of online customer service, online customer experience, and online room reservation website platform are explored in practically enriching online customer engagement. Discovered dimensions implied to online room reservation service providers for improving hotel's online customer service, online customer experience, online room reservation website, as well as online customer engagement. A structural model implementation to hotels as guidelines in enhancing online room reservation business performance and gain competitive advantages. Also, the implication of the online hotel shopping literature is including in two parts. First, there will bring new insights regarding constructs and dimensions of online room reservations, and second, the theoretical framework of online room reservations will be shown. Implementing what valued and engaged customers, as the framework can help service providers to better achieve their businesses.

1.2 Research Questions

The research questions of this thesis are:

1) What are the factors of online customer services, online customer experience, online room reservation website and online customer engagement?

2) What are the variables of online customer engagement?

3) What is a structural equation model of enhancing online customer engagement?

1.3 Objectives of Research

Based on a literature review, the research objectives are defined:

1) To identify the factors of online customer services, online customer experience, online room reservation website, and online customer engagement

2) To investigate the variables of online customer engagement

3) To develop a structural equation model of enhancing online customer engagement

1.4 Scope of Study

1.4.1 Population & Sample

The population and sample of this research are a representative of customers who experienced online room reservation website with OTA or hotel website for accommodation (for example: booking via the hotel website, online travel agency, hostel, lodgings, homestay, and etc.).

1.4.2 Scope of Content

This research focuses on the principle and theory of online customer engagement (OCE), online customer service (OCS), online customer experience (OCX), and online room reservation website (ORR).

Data will be collected from customers who purchased online room reservation via online shopping channels by online websites from room reservation service providers.

1.5 Research Implication

The outcome of this research is both theoretical and managerial. In theoretical outcome, first, this research suggests the key constructs and measurement scales of factors contributing to the online room reservation realm are discovered and fulfilled the research gaps. Second, the effects of online customer service, online customer experience, and online room reservation website are explored in practically enriching online customer engagement. Third, discovered dimensions implied to online room reservation service providers for improving hotel's online customer service, online customer experience, online room reservation website, as well as online customer engagement. Fourth, results suggested a structural model implementation to hotels as guidelines in enhancing online room reservation business performance and gain competitive advantages.

1.5.1 Practical Implication

The practical implication of this research is including:

1) Discovered dimensions implied to online room reservation service providers for improving online customer service, online customer experience, online room reservation website, as well as online customer engagement

2) A structural model for enhancing online customer engagement on online room reservation business.

1.5.2 Academic Implication

The academic implication of this thesis includes first, develops a theoretical model exploring the relationship between online customer engagement, online customer service, online customer experience, and online room reservation website. Second, acknowledges substantial covers the online customer engagement in tourism literature in various aspects. Third, exploring the theoretical implication in online customer engagement in online room reservation. Fourth, the association between online customer engagement, online customer service, online customer experience, and online room reservation website.

1.6 Definition of Terms

Online Customer Engagement (OCE): A long-term online interactions and relations between service provider and customer (Vivek, Beatty, & Morgan, 2012). Also, it leads to customers' frequent connections.

Online Customer Service (OCS): The interfacing operation of an online room reservation service provider to customer (Schumann, Wünderlich, & Wangenheim, 2012).

Online Customer Experience (OCX): A unique characteristic of online experienced by customer on online platform. There are three major characters of OCX including emotional, utilitarian, and social interaction (Hyunsik Kim & Choi, 2013).

Online room reservation website (ORR): An online service that providing by service providers for customer reserving room for a planned date and time (Tesone, 2005). There can be websites of hotels, online travel agency, hostel, lodgings, homestay, and etc.).

1.7 Chapter Summary

Online shopping is a significant trend to change the business pattern. Especially, online room reservation is the highest value of e-Commerce in the tourism business. Regarding literature review, the research of the hospitality business can be found that there are some literatures that research online bookings. So, this thesis will research the relationship between constructs on online room reservations which the solution of this thesis will be the model of the relationship between constructs on online customer engagement. The outcome is a new insight regarding constructs and dimensions in online customer engagement, and a structural model of enhancing online customer engagement in online room reservation.

CHAPTER 2

LITERATURE REVIEW

In the study of this research, the researcher reviews several concepts, due to online customer engagement concerns online customer service for servicing and helping customers on the transactions. Also, online customer experience is an approach to design and deliver an experience to customer on online transactions via online room reservation websites. For this chapter, theories and research are assembled into seven main groups. First, the overview of online customer engagement is explored to recognize. Then, the concepts of online customer service, online customer experience, and online room reservation website. Later, the research framework is to be concreated. Additionally, studying room reservation service providers are verified as well as relevant literature research. The last part explains the chapter summary.

2.1 Online Customer Engagement (OCE)

2.1.1 Definition of Customer Engagement

Customer Engagement is mentioned and applied to community wellbeing, engagement is used on public, societal, and free engagement. In the commercial field, it is an attached relationship condition, and in tactical action, as a structural movement to organizations. Customer engagement is connected to the level of an operative relationship with organizations. It uses as the tactic, speculation, hearing voice of customer, sensitive joining, and interface of the organization. The definitions and researchers who expressed about customer engagement are shown as following:

Table 2.1 Definition of Customer Engagement

Authors	Definitions
J. L.-H. Bowden (2009)	An emotional procedure that patterns essential schemes by which customer trust is measured for new customers as well as the schemes by which trust that be continual for repurchasing by a brand.
J. Bowden (2009)	An emotional scheme by which genuineness patterns for new customers of a brand of service. Also, loyalty program supports repurchases of a brand.
Brodie, Hollebeek, Juric, and Ilic (2011)	A psychological condition that happens by value of collaborating, co-creation of experiences of customer with a focus person/thing in focusing service relations.
L. Hollebeek (2011)	The class of customer motivation, brand-engaged and mood categorized by classes of reasoning, sensitive, and interactive action in brand connections.
Jaakkola and Alexander (2014)	The aggregation of the several patterns of customer activities beyond connections that effect corporate.
Morgan and Hunt (1994)	A worthy means to enhance understanding of the differences progresses from concept in which the basis is founded commitment and trust of customer.
Pansari and Kumar (2017)	The procedure of overall benefit of customer to the organization (such as buying, reference, comment, recommend, brand-related and etc.).
van Doorn et al. (2010)	Behavior of customers with a corporate or brand including purchasing, resulting from word-of-mouth activity, endorsements, supporting, blogging, and reviewing.
Vivek et al. (2012)	The influence of an person’s connection and involvement with corporate and actions happened by both corporate and customer.

According to the definition of literature review on table 2.1, definition of customer engagement, this research would define the meaning of customer engagement is “the customer feeling, thinking and performing in a positive approach to the organization for the long-term”. The organization would benefit from long-term growth. A customer relationship is based to purchasing, proving long-term loyalty, and sustained support. Nevertheless, customer engagement has progressed to the growths in the business for supporting customer requirements and benefits. For example, the customer requirement is to be related to the organization through several online applications and social media platforms, relating to the services and customers’ assessments of the organization.

A great deal of customers even provides an opinion to the organization as their support to the organization. That means customers have progressed simply leading connections with the organization to increasing a relationship with the organization and its other customers. A customer who satisfied with the organization and has a sensitive affection with the organization, as a result, the customer would be engaged with the organization in the direct influence and emotion. Thus, the organization implementing customer engagement, there has to monitor a state of emotion of customer. If customer feel at a lower level of emotions, the organization has to recover the customer’s feeling. Customer engagement can measure by the customer transaction data (Kumar, 2013), except customer knowledge. The organization can engage customers with good service delivery, customer understanding, the things that make corporate is not a first priority. The organization can offers solutions for example discounts, promotions, and service improvements to encourage customers for conducting relations. For positive-customers with low satisfaction, the corporate have to focus this group for delivering service ats a high level.

To continue a positive relation with the customer, the organization has to have an insight sensitive relation with customers by properly acknowledging them, delivering personalized services, presenting activities for them, servicing experienced at touchpoints, ensuing personal with them, and keep continuing. The approaches for engaging customer have to support customers for developing sensitive relations with the organization. If the organization confirms that customers engage the organization,

there could utilize the approaches to maintain customer engagement. For example, organizations can utilize the wheel of fortune strategies (Kumar, 2008) to raise the purchasing of an engaged customer. For example, an organization could deliver service to the customers that they required. For the indirect influence (customer referrals, influence, and feedback), organizations could offer motivations to the customers by contributing (Kumar, 2013) to propose monetary benefits to its customers. Also ensuring the infrastructure to be seamless for customers for relating to them across various social media the website, and others.

2.1.2 Concept of Online Customer Engagement

For the new era, the social media network, OCE is an important concept in online and social commercial situations (Hollebeek et al., 2014) and deliver useful insights to customers with online activities. OCE enabled interactive engagement patterns for forming where customers exchanging resources and cocreation worth (F. Breidbach, Brodie, & Hollebeek, 2014). There are customer activities that concerned brand, next buying, subsequent incentives that makes benefits to the organization (Groeger, Moroko, & Hollebeek, 2016, van Doorn et al., 2010). Customer participation and involvement in organizations offline are elementary relations. Social media societies have changed since the twentieth century, and the online community has occurred accordingly. Customer behaviors in online platforms such as providing recommendations in blogs, writing reviews to the website, and repurchasing the same OTA, are examples of online customer engagements. Customer behaviors in online platforms may represent what customers think and influence in their relationships with the organizations. The rising of customer engagement rate is in online reviews (Rossmann, Ranjan, & Sugathan, 2016). Customers who engaged organizations are probable to attend their websites commonly for instant buying requirements. There also expressively financed with the organization and replied to appeals for sharing reviews about the buying (Thakur, 2018).

OCE is linked information technology, such as the prevalent adoption of smartphones, tablets, laptops, and a great deal of other internet-based and/or mobile technologies. A fundamental encounter about how to engage customer, starting from acquiring to be retaining, related to thinking, actions or value removal (Lemon &

Verhoef, 2016). OCE is highlighted the specificity of marketing (Calder et al., 2009) and the studying method of brand actions (Schivinski, Christodoulides, & Dabrowski, 2016). OCE concerned all online patterns that are not correlated to product/corporate image actions (e.g. Youtube, Facebook, Instragram, Websites, and, etc.). Also, the benefit of OCE is customer-brand contacting increasing (Hollebeek et al., 2014). Hollebeek et al. (2014) addressed OCE has to study about mental operation (customers-brand thought), warm feeling (customers-brand activity) and activity (customers-effort activity). However, OCE has other approaches which including participation, emotive conditions, experience and brand encouragement. Participation, (Hollebeek et al., 2014) explained it is as an dimension of engagement and brand concerned (Zaichkowsky, 1985).

In social media, OCE has moved a reviewing of business approaches planned for new business formations in which the characters of the organizations and customers basically transformation (Lange-Faria & Elliot, 2012). Trust influences customer attitudes toward online buying and lowers perceived risk in online shopping (Liu, Li, & Hu, 2013). Convenience, service choice, well-being of shopping, and fun (Forsythe, Liu, Shannon, & Gardner, 2006) are supposed assistances to customers. Benefits are desirable consequences that customers expect to receive from their actions. Chamie and Ikeda (2015) revealed customers engage in risky behavior when benefits outweigh the cost of their behavior. Kaplan and Haenlein (2010) stated that social media are allow all Internet users to interconnect, take action and tell information, thought, opinions, experiences, information, and relations. OCE is serious to communicate via social media, it disturb the definitive achievement of social media (Chan & Guillet, 2011). Blogs, virtual technology, and social media sites are the patterns enabling the online communications. Pantelidis (2010) reported on online communications on social media that a better understanding of customers' requirements, comments and opinions can also be recorded.

2.1.1 Measurement Scales of Online Customer Engagement

In measurement scaled of online customer engagement, there are researcher reported the dimensions of OCE including Thakur (2016), Bilgihan and Bujisic (2015), Potdar, Joshi, Harish, Baskerville, and Wongthongtham (2018), Chan Cheung,

Xiabing, and Cheung (2014), (Cheung, Chiu, & Lee, 2011), and (Kumar et al., 2010). According to the literature review for dimension of OCE, the researchers revealed the dimension of OCE as Table 2.2.

Table 2.2 Dimensions of Online Customer Engagement

Authors	Dimensions
Calder et al. (2009); Thakur (2016)	social-facilitation; self-connect; intrinsic enjoyment; time-filler; utilitarian experience; monetary; evaluation experiences
Vivek et al. (2014)	conscious; attention; enthused participation; social connection
Bowden (2009); Calder et al. (2009); Hollebeek (2011); Mollen and Wilson (2010)	cognitive; emotional; behavioral
Thakur (2018)	social-facilitation; self-connect intrinsic; enjoyment; time filler; utilitarian; monetary evaluation; satisfaction; trust; online review
Harrigan, Evers, Miles, and Daly (2017)	brand equity; behavioral intention of loyalty; customer involvement
Sparks et al. (2013)	purchase intention; attitude toward the hotel; quality beliefs; trust beliefs; utility of reviews beliefs
Potdar et., al. (2018)	Participation; trust; commitment
Hollebeek and Chen (2014)	word-of-mouth
Syrdal and Bok (2017); Syrdal and Briggs (2018)	sharing

According to Table 2.3 Dimensions of online customer engagement (OCE), there are various dimensions of OCE such as repurchase, trust, sharing, word-of-

mouth, brand equity, behavioral intention of loyalty, and etc. The dimension of online customer engagement that is used for this study, the researcher concludes that organizations can use engagement as a concept of online platforms to increase corporate's competitive advantage to develop customer trustworthiness (Baldus, Voorhees, & Calantone, 2015). Mollen and Wilson (2010) explained OCE is related to favorable thoughts and actions to the organization. For example, increasing good word-of-mouth (WOM) (Baldus et al., 2015), intent to repurchase (Calder et al., 2009), and customers loyalty (Chan Cheung et al., 2014). There are customers' interactive indicators to brand, next purchasing, the motivation that increases benefit to the organization (Groeger et al., 2016). For this research, the researcher will use OCE dimensions as table following.

Table 2.3 Dimension of Online Customer Engagement That is Used for This Study

Dimension	**Researcher**
Repurchase	Sparks et al. (2013); Thakur (2018)
Word-of-mouth	D. Hollebeek and Chen (2014)
Sharing	Syrdal and Bok (2017); Syrdal and Briggs (2018)

The description of each dimension shown as below:

1) Repurchase

In order to repurchase, social networks are where users with similar interests share data, benefits. The engage patterns can be express by the press on showed signals of like and comment. There are express the customer feeling, for example, personal comforts, favorites, relationships and associations (Beach et al., 2010). Anderson and Srinivasan (2003) revealed the benefit of the transaction (e.g., quality of interaction, web effectiveness, satisfaction, and price reduction) impacts repurchase (Anderson & Srinivasan, 2003). Forman (2008) reported that the reviewer expose of identity-descriptive information to increase or substitute service information when ordering and evaluating. The online network user's rate reviews comprising identity-descriptive data more absolutely.

2) Word-of-mouth

Online patterns, word-of-mouth from customer is powerfully precious by online actions with reviewing, blogging, and complaining (Kumar et al., 2010). The actions deliver a platform for customers to inspire others. Customers can provide comments to other members while engaged with a brand community. The research shows that customers who are ready to engage with the online network will express a superior tendency to spread the constructive word about it (C. Cheung, Lee, & Jin, 2011). Also, customers could be influenced by other members, leading them to cooperate more and spread positive word-of-mouth (Hollebeek & Chen, 2014; Hollebeek et al., 2014; Hollebeek, Conduit, & Brodie, 2016).

3) Sharing

Sharing is one of customer performance that inspires others with advantage and/or benefit, like the motivations (Alexandrov, Lilly, & Babakus, 2013). Also, implications of the performance are to evaluate the effectiveness of a brand's or organization's performance with the number of sharing. However, measuring of the number of shares is not acceptable representations for determining the range of engagement (Syrdal & Briggs, 2018). The idea that gathering a great social media follower base interprets into expressive consequences have been used into question from earlier research (Kristofferson, White, & Peloza, 2014).

In conclusion, according to the literature review in Online customer engagement (OCE), this research could identify the dimensions are as shown in the following.

1) Repurchase (Cho, 2014); (Shevlin, 2007); (Hennig-Thurau et al., 2010); (Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010); (Mollen & Wilson, 2010).

2) Word-of-mouth (Hollebeek & Chen, 2014)

3) Sharing (Syrdal & Bok, 2017; Syrdal & Briggs, 2018)

2.2 Online Customer Service (OCS)

2.2.1 Concept of Customer Service

Customer service is exceptional in the frontages of commercials. The major thing that drives customers' ordering and efficiency of organization increasing is customer service. Abelson, and Levi (1985) reported that customers sense about service, not based on the area, or price when buying products and services (Abelson et al., 1985). Customer service is the heart of customer purchases and increases effectiveness of companies. Customers can buy a product or service as a consequence of their experience from the service, and also not depended on the situation, place, or expense (Abelson et al., 1985). There also deliver service by calls, website, application, or even through robotics. In the competition of technology, customer service also is competitive approach to organizations for understanding customers and making relationships to them. Businesses can deliver personalized service to each customer that contacted. Also, service innovation, organizations have to streamline customer service techniques to reduce costs and make satisfaction to their customers. Online service is taking over customer issues, and customers felt as though organizations saw them as a number and not as an integral part of their organization. These made some customers care less about organizations and are no longer loyal to them as a result of the lack of customer service. They decided to provide customers with surveys in the store as well as online so that customers would have an opportunity to inform the organizations on how they are performing and what they needed to do in order to achieve a greater rate of success for their customers. It allowed more dynamic abilities to be able to react to the questions and concerns of customers, but organizations are still slow to be proactive to their demands. By the turn of the 21st century, organizations are able to adapt to the needs of customers and utilize dynamic technology to help expedite customer service and do it at a more personal level. Customers are able to get better service as technology has expanded to personalize their experience. Organizations are able to track the desires of customers and react quickly to their concerns while offering support with greater knowledge and at a more personal level. Today, organizations continue to find new avenues to provide better customer service for their clientele. This is a reason that most

companies of virtually any size have in place some form of customer service strategy. Computers now offer dynamic services in that customers can make purchases online or through the stores (Juran & Godfrey, 2001). Organizations can offer coupons and marketing techniques online or through the mail to continue to attract and retain their customers. By staying engaged with customers, organizations today will have a greater degree of success as they expand their organizations on a national and global level. Customer service is an integral role of an organization to set itself apart from the competition and increase their overall profits (Juran & Godfrey, 2001). Customers will often judge service based on what they experienced during their visit (Eggert & Ulaga, 2002).

Creating value is an essential asset for any company so they will have an opportunity to be recognized within their industry. This is very crucial within today's continuously changing industries, as value is an integral part of enticing customers in wanting to do business with the organization. Maintain competitiveness within their industry, organizations will recognize the perceived value in which customers trust is essential in the desired service. Organizations understand value theories and with the addition of technology and globalization, organizations are engaging within very competitive playing fields. Goods and services are relatively the same in competitive markets and, therefore, the difference is customer service. In order for an organization to remain unique and attract and retain customers, they must set themselves apart by developing customer service strategies. Organizations are now embarking upon training efforts in order to acquire the highest standard possible for their customer service strategies.

In general, customer service is operational service delivery to customers, for example supporting information, answering questions, solving problems, and etc. through various channels. Activities of customer service are in service readiness, accessibility, and communication. Quality of service is a substantial influence oncustomer satisfaction and repurchase intention (Kassim & Asiah Abdullah, 2010). After-sale, service is the feature that makes customer satisfaction (Reibstein, 2002).

Customer service means the interfacing operation of an online room reservation service provider to the customer. This session is a key activity for hotel reservation service provider because it represents the organization brand and image to

customer perception. If the result of service operation is positive it would be advantageous to organization benefit and growth. The heart of service operation in retail business is participation of tourism, job satisfaction, and service performance (Suhartanto, 2018). Significant factors for customer service is staff training, culture of interesting of staff and customers and adequate staff, giving the authority, enthusiasm, communication and cooperation (Voon, de jager, Chitra, Kueh, & Melvin Jussem, 2013).

Organizations may apply customer service concept that called service excellence program for settling and implementing. Service excellence program is the activities for authorizing managers and announcing to customer should be done (Roy, Balaji, Sadeque, Nguyen, & Melewar, 2017). Furthermore, customer service has to be operated by staff by recording and assessing data on the experience of customer, also, the design must be carried out from a holistic manner that is linked to the organization culture and business services. Using and referencing service blueprint for service operation is an important topic for deliver service as standardization. Facilities and environments make unique experience that provides high increase to delight the memories and the capacity to deliver proactive service (Wang, Wallace, Shen, & Choi, 2015). Taheri, Hasanipanah, Golzar, and Majid (2017) reported that to have clear cool emotions directly affect the customer relationship value. Bharwani and Mathews (2016) presented that to develop and maintain its competitiveness in the services sector, which is in the channel and format that has more. That means service innovation could be designed and implement to customers which must be suited individual tastes and requirements of customers. Moreover, customer service makes impact to feeling of customer, corporate brand, and word-of-mouth (Gremler & Gwinner, 2008).

Delivering service with emotional mode is an active way for protecting competitors (Berry, Berry, Poortinga, Segall, & Dasen, 2002). The accessibility of customer service representative staff could influence customer interaction. The quality of the interaction and competence of customer representative staff are important because there are influencing customer feeling and being organization represented itself (Bäckström & Johansson, 2006). In addition, much research have developed to

report the interaction between service provider and customer and with self-service transactions (Matthew, Mary, Amy, & Stephen, 2005).

2.2.2 Online Customer Service (OCS) for Room Reservation

In digital era, customer service expresses more complexity. There are various channels for delivering the service with online for example: Email, Webchat, Chatbot, Live Chat, LINE, LINE@, Facebook Messenger, Twitter, Instagram, Video Call and, etc. The future of customer service is expected to become even more dynamic (Vogt, 2011). Customers want to feel valued and respected and therefore they are demanding quality service that is personal. They are demanding to achieve this level of customer service at any time that is convenient with them (McGuinn, 2009). It is expected to see more customers become computer knowledge and thus expect to have more customer service needs achieved through the Internet in a great deal of different dynamic measures such as e-mail or instant messaging. Organizations would continue to be forced to be creative and listen to the demands of their customers, so they would discover an edge that would attract customers and help retain them for the rest of their lives. Products and services are becoming more complex and therefore it is becoming even more rigorous to support these services. Organizations would be able to sustain their services at a more detailed level while making their solutions readily available and accessible to customers maintained by data support services (McGuinn, 2009). These dynamics would help customers support their own questions and concerns via the customer service tools. As organizations adjust, they have to look for forefront provision for customers thus they would have a chance to retain customers and make more profits.

Developments in technology can change the patterns of customer service from offline to online. The online customer service can deliver 24-hour service to customers in their available time. Customers are familiar to access online services and devices. Online service solutions emerge to service customer according to requirement for example: e-booing/e-purchasing for hotel, flight, car, meal, etc. For room reservation business, online customer service tools for implementing in organizations are several. The customer service tools for room reservation business are including E-Mail, Frequently Asked Questions (FAQ), Youtube, Live Chat, LINE,

LINE@, Facebook Messenger, Twitter, Instagram, Video Call, and online customer service staff. E-mail use for information exchanges. Online customer service staff can manage and handle the traffic of customer email. Live Chat, LINE, LINE@, Facebook Messenger, Twitter, Instagram, Video Call, and etc.

Online agents of customer services can customize service and answer questions of customer as a human element. It makes benefits to organizations such as cost reduction, human error, systematic tracking, and etc. Artificial intelligence (AI) is a part of online customer service that provides a responsibility for online service operations. AI can learn how to interact with customers with improvement continually. It can recognize the activities of customer interfacing and the service offering that it did. Also, can provide recommended information for predicting the questions asked from customers. Some systems allow the interface of the customer and corporate too.

OTA progressively use online channels to customize the service to the customer. The benefit of the customer when use online channels are is cheaper and more convenient and saving cost than off-line. Internet and ICT support the connection between OTA and customer in the room reservation process and the transaction can help customers to get experience in various types of traveling. So, OTA is enabled to expand its online service to improve customer satisfaction and repurchase (Buhalis and Law, 2008).

2.2.3 Measurement Scales of Online Customer Service

In order to the literature review, the researcher found the measurement scale that various researchers identified are as follows: Wang, Zhao, and Zhao (2017) research on how to evaluate online customer service with classifying advantage and disadvantage. The measures are classified by quality, advantage, price, and disadvantage. The advantage and disadvantages of customers will be selected by each service. The customer advantage (e.g. Service with on-site visiting) and customer disadvantage (e.g. Registering and placing orders via a mobile phone application). Wang et al. (2017) reported that the six dimensions of online customer service are including 1) reliability, 2) responsiveness, 3) competence, 4) ease of use, 5) security, and 6) product portfolio. In addition, Yang et al. (2004) report that key dimensions of

online customer service concluded a content analysis of major events and grouped by six dimensions by an online survey. The outcomes of the justification procedure specify that six-factor online customer service measurement scale has appropriate reliability and validity. The six dimensions identified are reliability, responsiveness, competence, ease of use, security, and product set. Zeithaml, Parasuraman, and Malhotra (2002) have exposed the seven online customer service dimensions including efficiency, reliability, fulfillment, confidentiality, reaction, recompence, and interaction. Also, Santos (2003) revealed, the dimensions of online customer service are reliability, efficiency, support, communication, security, and incentive. Joseph et al. (1999) said that the dimensions of online banking service are convenience/accuracy, feedback/complaint management, efficiency, queue management, accessibility, and customization. Madu and Madu (2002) have proposed the 15 dimensions of online customer service based on their literature review including action, features, structure, aesthetics, reliability, capacity, serviceability, safety, trust, responsiveness, product difference and tailor-made, rules, reputation, guarantee, and sympathy.

According to the literature review for the dimension of OCS, the researchers revealed the dimension of OCS as table following.

Table 2.4 Dimensions of Online Customer Services from Literature Review (OCS)

Authors	**Dimensions**
J. Wang et al. (2017)	reliability; responsiveness; competence; ease of use; security; product portfolio
Zeithaml et al. (2002)	efficiency; reliability; fulfillment; confidentiality; reaction; recompence; interaction.
Santos (2003)	reliability; efficiency; support; communication; security; incentive
Joseph, McClure, and Joseph (1999)	convenience/accuracy; feedback/ complaint management; efficiency; queue management; accessibility; customization

Authors	Dimensions
Madu and Madu (2002)	action; features; structure; aesthetics; reliability; capacity; serviceability; safety; trust; responsiveness; product difference and tailor-made; rules; reputation; guarantee; sympathy
Yang et al. (2004)	ease of use; accuracy; security; content; timeliness; aesthetics
Liang, Choi, and Joppe (2018); Liang, Choi, & Joppe (2017)	transaction experience; accommodation experience
Abels, Domas White, and Hahn (1997); (S. Lee & Kim, 2018)	hedonic value; utilitarian value
Zervas, Proserpio, and Byers (2017)	trust; platform (system); benefit; cost (price)
Lalicic and Weismayer (2018)	hospitality hosting behavior; service quality; perceived risk reduction; social authentic appeal; economic appeal
Guttentag and Smith (2017)	cleanliness; security; authenticity; uniqueness; price

According to the literature review of dimensions of OCS as Table 2.4, there are various dimensions that concerned OCS because of the context of research. However, the researcher considers and selects the dimensions that concerned OCS in this research context as Table 2.5. The reason for this consideration is there are many researchers explain reliability, responsiveness, and performance as dimensions of online customer service. Also, communication is a basic skill for a service business that the customer service representative has to deliver to customers. Dimensions of online customer service (OCS), the researcher shows the dimension of OCS which using for this research. There are four dimensions that include reliability, responsiveness, performance, communication.

As a result, Online customer service (OCS) for this research, the researcher will use OCS dimensions as table following.

Table 2.5 Dimensions of Online Customer Service (OCS)

Dimension	Researcher
(1) reliability	J. Wang et al. (2017), Zeithaml et al. (2002), Santos (2003), Madu and Madu (2002)
(2) responsiveness	J. Wang et al. (2017), Zeithaml et al. (2002), Madu and Madu (2002)
(3) performance	J. Wang et al. (2017), Zeithaml et al. (2002), Santos (2003), Joseph, McClure, and Joseph (1999), Madu and Madu (2002), Lalicic and Weismayer (2018)
(4) communication	Santos (2003)

The description of each dimension is shown below:

1) Reliability

The definition of reliability is defined by several researchers defined reliability as a performance and steadiness dimension (Long & McMellon, 2004). Wolfinbarger and Gilly (2003) defined reliability as what customers take what they supposed they bought because of the right appearance and details of goods; the right goods are distributed within the assured time. Yang and Jun (2002) said that it relates to failure in notifying the customer by promised time through e-mail or call, hesitation, and worries regarding the delivery of correct products, and concern of incorrect charges. Reliability is a strong predictor for overall quality and customer satisfaction (H. H. Bauer, Falk, & Hammerschmidt, 2006).

2) Responsiveness

Responsiveness apprehensions customers' worries on an applied level, how the website will interrelate with them (Long & McMellon, 2004) and evaluates the potential of an online seller to provide suitable customer information and solution, mechanisms for treatment returns, and giving online assurances (M. Kim, Kim, & Lennon, 2006). Responsiveness really affects the total efficiency of service and satisfaction of customers (Gwo-Guang Lee & Hsiu-Fen Lin, 2005),

destructively affects the propensity to change and provide undesirable word-of-mouth and significantly affects customer complaining (Swaid & Wigand, 2009).

3) Performance

Service Performance is a result of service delivery that customers perceived. Service execution as an antecedent of gratification and outcomes of projecting and professing service execution on dis-ratification and outcomes of projections on service execution (Hsu, Yen, Chiu, & Chang, 2006). Service execution Professing service execution is defined as customers' perception of service execution achieves customer requirements. Dis-ratification can be defined as customers' personal decisions ensuing from relating their requirements and their projections of service execution experienced (McKinney, Yoon, & Zahedi, 2002). The high personal's requirements are ensuing with a good relationship between perceived service execution and dis-ratification (C.-M. Chiu, Hsu, Sun, Lin, & Sun, 2005). Also, Kartika (2018) explains service performance involves three parts: role, extra role to the customer, and extra-role to the organization which parts of the role rely on the core tasks included in the job description such as getting useful information about the service.

4) Communication

The online communication channels can be shown in multiple patterns, including websites, emails, blogs, chatbots, social media, and etc. Interactive communications are a significant evidence foundation amongst tourists (Litvin, Goldsmith, & Pan, 2008). The style of communication accepted by persons who characterize an organization is recognized to be a significant representative of online communication. In online customer communication with organization, The communication or information sympathetic of service appraisal effect customer solution is energetic to make online customer relationship with online customer reviews and hotel benefits in the future (Ye, Law, & Gu, 2009). Also, Murphy and Chen (2016) appraised online bases used in room reservations and described online statement networks could be linked to an advertising plan and search engine optimization. Besides, presenting of information of the services and reviewing sites are good information to communicate customer. Though, communication channels

consist of OTAs, and reviews' channels are affected on social platforms (Noone, Enz, & Glassmire, 2017).

2.3 Online Customer Experience (OCX)

2.3.1 Definition of Online Customer Experience (OCX)

Attention to the online customer experience, expressed in the online retail situation (Hoffman & Novak, 2009). In addition, data and communication transform tourism and make chances for service leverage and interaction (Buhalis, 2003). There are articulated a benefit of customer experience and approved on its standing in making results of gratification, intention to revisit, and trust (Shobeiri, Mazaheri, & Laroche, 2014). The definition of experience shown in Table 2.6.

Table 2.6 Definition of Experience

Authors	Definition
Otto and Ritchie (1996)	The personal psychological state felt by contributors during a service interaction.
Vittersø, Vorkinn, Inge Vistad, and Vaagland (2000)	The outcome of a procedure of integrating the creation into a structure of mental plans or schemes.
Smith and Rupp (2003)	Any sense or knowledge achievement ensuing from a person's contributors in actions.
Bigné and Andreu (2004)	Actions that engage persons in a individual method
den Breejen (2007)	A multifaceted idea with many scopes, influenced by situational and personal variables, and composed of many characteristics.
Knobloch, Robertson, and Aitken (2017)	Customers' interpretation of the meanings of products, actions, and travel journey's end is independent.
Verhoef et al. (2009)	The customer's reasoning, emotional, emotional, community, and physical replies to the identity, product, and service.
Pine and Gilmore (1998)	Personal character, existing only in the mind of an

Authors	Definition
	individual who has been engage on a sensitive, corporeal, intelligent, or even spiritual level.
Carlson (1997)	A continuous movement of opinions and thinkings that happen during moments of awareness.

According to Table 2.6 Definition of experience, there are various definitions that researchers defined from their context which the researcher summarizes the online experience as an energetic component of the total product/service presence bought. In the digital era, online customer experience can deliver extraordinary patterns to express customers. The co-creation between service providers, and customers will fulfill tourist experiences. In online marketing, there is created on social media, online channel, and personalization. Social media, context-based, and mobile devices (SoCoMo marketing) are the new idea that rise worth for customers and organizations. Customer offering and cocreation services are the new marketing pattern that makes energetical to customers (Buhalis, 2003). The dominant customer experience to business outcome is to change online customer experiences that outcome from customer connections in online service meets. In order to literature and definition review, for this research, the definition of online customer experience (OCX) will be defined that "the customer's cognitive and emotional replies to the identity, product, and service".

2.3.2 Concept of Online Customer Experience

The concept of OCX can be explained to be cognitive and affective conditions. Both cognitive and affective conditions can recognize as an inside position in groups of online purchasing action (Eroglu, Machleit, & Davis, 2001). OCX is inclusive of internet experience (Nysveen & Pedersen, 2004), online experience (Christodoulides, De Chernatony, Furrer, Shiu, & Abimbola, 2006), website brand experience (Ha & Perks, 2005), online purchase experience (Jin & Park, 2006) and online shopping experience (Khalifa & Liu, 2007). Nysveen and Pedersen (2004) explain the internet experience is comprising of experience of Internet using and customer connections. Novak, Hoffman, and Yung (2000) explore that online

experience comes from the definite customer–corporate perspective which the model is placed on the cognitive sight of website experience. On the other hand, Christodoulides et al. (2006) reported that online experience can be defined by the efficiency of website functionality (e.g. easy to use, direction-finding or speediness). A faintness is concentrating and overlooking the emotional feature of OCX. Hair, Rose, and Clark (2009) defined OCX as to shape the offline concept of customer experience, it has to include foundations of emotive dispensation too.

In literature review of OCX, there are technology intermediated (Tussyadiah & Fesenmaier, 2009) and a massive choice of information technologies are applied throughout many steps of customer experience (Huang & Hsu, 2010). The growth of technology has linked the Internet, mobile guides, smartphones, and online clips to support customer experiences. Also, Destination marketing organizations (DMOs) display structures such as interactive programs, text and pictures, video clips, podcasts, blogs, and simulated programs on the website. There are offering with tourism information for experience enhancement. The interactive program features signify the destinations and attend as intermediaries of customer experiences (Tussyadiah & Fesenmaier, 2009). Tussyadiah and Fesenmaier (2009) report that the interactive programs and Youtube-video clips are the key things in intermediating tourism experiences. Also, podcast tours on customer experiences make a helpful social situation for interfacing, it impacts customer experiences (Kang & Gretzel, 2012). The technology can enhance customer experience that it is an idea to understand for a business succession of customer experiences (Neuhofer & Buhalis, 2012).

Uriely (2005) revealed the discrepancy of customer experiences reduced by mass media and technology over the mediatization. Customer experiences are convenient to reach and interact. There is not necessary to move to a real place. Additionally, ICTs is an impact on customer experience. Tussyadiah and Fesenmaier (2007) reported that customer experience is moving typically. However, Gretzel and Jamal (2009) reported that a total loop of customer experiences develops accessible as new technologies and activities. In customer experience creation, the starting point is understanding of the shifting pattern of the experience (i.e., technology enhancement that impact customer experience), desiration for improvement (Gretzel & Jamal,

2009). The idea of customers' growing use of technology in tourism is a dominant idea. The sample experience for a tourist who is getting on a journey of room reservation. The tourist will search and study the information. Then, they will make their booking for accommodation by reviewing the room reservation and reviewing websites or/and applications. On the trip, they also share their locations and review their experiences on social media for example, Twitter, Instagram, Facebook, booked websites, etc. The online content from the room reservation experience can divide into three stages: pre-booking, during-booking, and post-booking. The activities that occur before booking (for example, planning, searching, asking, studying review), during (for example, comparing, booking, price checking, hotel checking, booking, waiting, confirming, paying) and after the booking (for example, traveling, cancelling, reviewing, refunding, sharing). In the online booking process, customers use online platform search to get information, and substitutions. Searching online reviews, travelers have an obvious understanding of what to require, rise a confidential level for decreasing the risk. After the booking, travelers socialize, interconnect, review experiences, support others, and tell the journeys and memories of tourism on social media (Wu & Pearce, 2016). As a result, the concerned items of online customer experience are including:

1) Connectivity & Technology

Online interaction increases customers' behaviors significantly. Customers can connect and disconnect themselves everywhere. Modern tourists discover the uniqueness through continuing digital connection at the home sphere (Pearce & Gretzel, 2012). The disconnection whereas tourism gives the way to the modern tourists' sphere wherever they work to continued contact with friends and family (White & White, 2007). Continual linkage improves the feeling of responsibility for tourists to hold a similar status of attendance, kindness, and confidence with their networks and families (Germann Molz & Paris, 2015). According to increasing usage of technology, work operations which achieve in the pre-booking and post-booking phases are contenting during the booking stage. If the post-trip is unsatisfied, tourists will share and review to the public. The post-trip is also essential because experiences can be shared with text, picture, and live on social media (Wang et al., 2015). Extraordinary touring experiences rise the prospect and

content so, tourists can share on social media (Minazzi & Mauri, 2015). Tourists who have good service and praise on traveling, so, they will review the pleasant and memorable experience on social. On an online platform, tourists can connect and share their experiences by co-creation with service providers. Co-creation is the target (Neuhofer, 2014) and connectivity is the mechanism which runs the target onward. The internet lets customers attain database, content, information, experiences, communication, and co-creation of experiences (Minazzi & Mauri, 2015; Neuhofer & Buhalis, 2014).

2) Image

The significant foundation of the image is websites and social media. To inspect the website platform's effect on the image development method. DMO's website provides customers with contact information about destinations. On the website, providing supposed images with beneficial and consistent information (M. H. Cho & Sung, 2012) is the first impression of the destination. Also, offering emotive posts alike images are well-matched on the website (Miguel, Frías Jamilena, María, & García, 2015). Baloglu and McCleary (1999) demonstrated image presented two dimensions including cognitive and affective images. There are cognitive parts concerned about thoughts or knowledge of the journey's end. The affective sides are concerned about feelings. Customers will consider before touring a destination based on information from cognitive and affective images in different sources (Frias, Rodriguez, & Castañeda, 2008). Customer involvement is affects the images (Miguel et al., 2015). The images of destination are divided into two subjects including cognitive and affective images (Baloglu & McCleary, 1999). In tourism context, cognitive images are related to the perception of destinations that have resources to make customers ease and wellbeing (Beerli & Martin, 2004). Also, affective images are linked to the emotive side. An undesirable image can remove customers during the destination selection process (Goodall, 1991), whereas a desirable image can help increasing the rate of selecting (Tan & Wu, 2016). As a result, effective and cognitive images definitely affect intentions to visit customers (Hany Kim & Stepchenkova, 2015), and total image (Choi, Lee, & Kim, 2011).

3) Human-Online Devices and Applications Interaction

Customer can get experience during using technology devices (such as smartphone, personal computer, and etc.) with applications. Understanding of human-computer interaction, or a framework of smartphones and applications (Hassenzahl, 2003). The human-computer interface attended in customer experience (Forlizzi & Battarbee, 2004). The interactions of customer with communication, and experience rely on culture, social, and tasks (Olsson & Salo, 2012). Customer experience has utilitarian and emotive features (Rhea, 1992). Thus, customer experience has to attack various dimensions than conventional usability approaches.

A method that fractious organization to customer is human-mobile interaction. There has to make customer easy understanding and be trusted in the organization. The definition of the application of the technological platform. The tourism industry is an option to increase customer value (Buhalis & Amaranggana, 2013). The Internet has inferences in customer activity, specifically in tourism. It has transformed the tactical and operative managing of tourism businesses. It also provisions all business roles (such as marketing, accounting, purchasing, human resources, management, and etc.) and all divisions of the tourism business (such as airlines, hospitality, traveling, online travel agencies, and destinations (Buhalis & Law, 2008). Usability is a significant part of customer experience. Virtuous usability is essential for good customer experience (Roto, Popescu, Koivisto, & Vartiainen, 2006). Nielsen (1993) explained usability is a characteristic that signifies how simple interfacing. Online use is a multifaceted perception and numerous approaches that propose to evaluate it. Usability is state-dependent on the features of the situation (such as customer, activities and atmosphere). Measuring usability is divided into two categories: targeting execution, and subjective customer favorite or satisfaction measures. Targeting execution measures is accomplished by customers who use the system. Subjective customer favorite or satisfaction measures are the number of customers who like the system experience. Davis (1993) revealed perceived usefulness and ease of use are two significant items that affect customer opinions (Davis, 1993) with ease of use meaningfully impacting usefulness perceived (Lee, Kozar, & Larsen, 2003). Smartphone technologies are the substance for the appearance of a modern generation of new inventive customers (Gretzel & Jamal, 2009). The advantages of smartphone technologies and applications is the new trend

of tourism business. The smartphones is devices performed in intermediating the customer experience in the tourism business (Wang & Xiang, 2012). Forlizzi and Battarbee (2004) explained that customer experience can call it as a co-experience. It can arrange customers and others. Therefore, the experience relates to emotions can deliver valuable intuitions in designing for applications experience in the situation of smartphone applications.

2.3.3 Measurement Scales of Online Customer Experience

According to the measurement scale of online customer experience, there are research described for online customer service measuring as details. There are researchers who reported constructs of OCX including Wolfinbarger and Gilly (2003), Bilgihan et al. (2016), Hyunsik, Kim, and Choi (2013), Klaus (2013), Kim, Ritchie, and McCormick (2012). Besides, literature review for a dimension of OCX, the researchers revealed the dimension of OCX as the table below:

Table 2.7 Dimensions of Online Customer Experience (OCX) from Literature Review

Authors	Dimensions
Wolfinbarger and Gilly (2003)	web site design; reliability; security; customer service
Bilgihan, Kandampully & Zhang (2015)	easiness to locate the website/app; ease of use; perceived usefulness; hedonic feature (entertainment, enjoyment); utilitarian feature (usefulness); perceived enjoyment; personalization; social interaction; multi-device compatibility
Hyunsik Kim and Choi (2013)	hedonic feature; utilitarian feature; social interaction
Klaus (2013)	website capability; product presence; communication; interactivity; social presence

Authors	Dimensions
Novak et al. (2000)	happy; pleased/annoyed; satisfied; contented/melancholic
Vargo and Lusch (2006)	hedonic feature; utilitarian feature

According to Table 2.7 Dimensions of online customer experience (OCX), there are various dimensions of OCX such as emotional feature, utilitarian feature, social interaction, multi-device compatibility, and etc. In order to online room reservation experience, the major types of driving are utilitarian and hedonic (Babin, Griffin, & Darden, 1994). Utilitarian motivation is practical, target-focus behavior (Childers, Carr, Peck, & Carson, 2001) that place the customer towards gaining financial, normal, or external benefits (Martínez-López, Esteban-Millat, Cabal, & Gengler, 2015), also it imitates the activity-related rate of a spending experience (Overby & Lee, 2006). Hedonic motivation is enjoyment, among flow, and playfulness (Mathwick & Rigdon, 2004). The inherent rate of e-commerce and customer moods of anticipation where the preferred goals are the main subject (Salehi & Haque, 2013). Also, in the era of social media, social interaction is one of the dimensions that concerned with online customer experience. As a result, for this research, the researcher will use OCX dimensions as table 2.8:

Table 2.8 Dimensions of Online Customer Experience that is Used for This Study

Dimension	Researcher
Emotional feature	Bilgihan, Kandampully, & Zhang (2015), Kim et al. (2013), Vargo and Lusch (2006), Novak et al. (2000)
Utilitarian feature	Bilgihan, Kandampully, & Zhang (2015), Kim et al. (2013), Vargo and Lusch (2006), Klaus (2013)
Social interaction	Bilgihan, Kandampully, & Zhang (2015); Klaus (2013), Kim et al. (2013)

The descriptions of each dimension are shown as follows:

1) Emotional Feature

The importance of emotional features has been linked to important goals of customer experience, for example, the flow experience and the associated stickiness that encourages return visits (Nevo, Wade, & Cook, 2007). The online customer experience comprises of roles that are contrary and convincing customers revisit the website. Ding and Lin (2012) describe the product category controls the effect of stimulation on desire. Therefore, the interaction between customers and the company can be emotionally motivating and amusing, a source of favor and pleasure.

2) Utilitarian Feature

The utilitarian feature replicates the activity of a spending experience (Overby & Lee, 2006). The incentives of the utilitarian features stared online purchases as a regular purchasing experience. The main target of the customers who recognize utilitarian purchase motivation is purchasing the service or giving urgency to entire activities (Babin, Griffin, & Darden, 1994). The type of utilitarian customer is online shopping founded normal requirement which is connected target and efficiency, normal, and careful online shopping experience (Overby & Lee, 2006). Online customers require to have more information on online shopping (Shim, Eastlick, Lotz, & Warrington, 2001). Moreover, customer expects data about customer service, time valid, suitability, safety and on-time distribution (Upadhyay & Kaur, 2013).

3) Social Interaction

Social modern websites and online networks have offered the chance to get contact with customers viewing platforms and concepts (Oinas-Kukkonen, 2013). Online social connections are gradually related to online shopping. The integrated online shopping experience can support to grow corporate marketing approaches. Online shopping experience remains to grow as customers gradually based on social contacts, view leaders, comment appliances, and new technology tools. The purchase and repurchase decisions on smartphone and technology devices for simplifying shopping transactions (C. M. Cheung, Liu, & Lee, 2015).

2.4 Online Room Reservation Website (ORR)

2.4.1 Introduction to Online Room Reservation Website

The growth of technology disrupts commercial race, it does not only impact commercial and manufacturing but also transform the tourism business too (Buhalis & Law, 2008) and shifting the customer experience typically (Tussyadiah & Fesenmaier, 2007, Neuhofer & Buhalis, 2012). Binkhorst and Den Dekker (2009) revealed technologies are the key component in co-creation of customer experiences. Organization and DMOs can engage with customers over websites, smartphones, devices, and/or etc. Sundbo and Darmer (2008) reported that technologies in customer experience and innovation grow to new types of customer experiences.

Online technology and platform have developed a significant source of a channel in the hotel business (Lehto, Kim, & Morrison, 2006). The platform is a structured application on the online system to make access to customers. The website platform is a core structure that links the needs of customers, and a online room reservation service provider. To make a success for both parties, the important thing in making an online room reservation website is designed. Conventional hotels use booking pattern by agents, online booking. There are offering accessibilities and valued services to customers such as providing pictures, information about facility and place, price reduction, and no reservation charges (Sparks & Browning, 2011). Reflecting the opportuneness, cost reduction, and time-saving, customers book hotels by the Internet and explore more data concerning brand image, price, and customer service. A large number of well-known hotels adapt and start to set up the online booking systems. A unique design, that can meet the needs of the customer, is the key point to support the customer's requirements.

2.4.2 Online Room Reservation Website (ORR)

Online room reservation is booking to order a room in advance for a planned time (Tesone, 2005). As room reservation is not the moment of staying in the hotel, a reservation is a reviewed booking operation. The booking is tracked by approval. Customers can spend on the cost of room services earlier or when apart from the hotel. In this era, customers preferred approach to room reservation is the online

approach. There are various room reservation channels (Thakran & Verma, 2013) but the Internet channel is significant. Customers can get data on hotel services and accommodations in a utilitarian. Customers can check prices from an online platform, not concerned hotel's staff or agent. Customer travel journeys can design although viewing a screen (Runfola et al., 2013). E-booking and E-commerce are to be accepted to widen customers. An active online channel is an important substance for service commerce (M. Kim et al., 2006). The examples that concerned online room reservation websites are including:

1) Social Media

Customer interaction is social media that include actions, performs, and manners on societies of the customer. The online platform parts data, facts, and feelings via discussion channels. Discussion channels are internet-based platform and applications which produce and conduct content of texts, images, video clips, and sounds (Safko & Brake, 2009). Social media affects customer behavior and supports it more influential (Strauss & Frost, 2012). Social media is a way to engage with customers for gathering customer profiles and experiences with cocreation and exceptional worth taken (Neuhofer & Buhalis, 2014).

Tussyadiah (2012) found the social webs and placed services in location-based Social network (LBSN) marketing that prizes supported by providers of applications conduct to real actions and trustworthiness. Customers use online technology platforms in every travel experience to study, discover, cooperate, and book the experience (Oliveira & Panyik, 2015). Social media is the major springs for potential customers to reach information. Fotis, Buhalis, and Rossides (2011) found relating customer information depends on clarifications, experiences, and emotional state (Fotis et al., 2011). The spring of a valued database can get more information on tailored tourism advertising communications (Hopken, Fuchs, Zanker, & Beer, 2010).

Also, social media emphasis cognitive features of the statue (Kladou & Mavragani, 2015), consuming pictures and video clips (Munar & Jacobsen, 2014),. It inspires the feelings of customers (Xiong, Hashim, & Murphy, 2015). Mariani, Di Felice, and Mura (2016) showed that graphic information is a good effect on customer engagement, such as Facebook of DMOs. Molinillo, Liebana-Cabanillas, and Anaya-Sanchez (2017) defined Facebook, Youtube, and Instagram platform as following: -

Facebook is the authorized website that involves customer participation. Customer involvement is a good effect to the insight of mental and sentimental image. The total image and purpose of Facebook to travel have lesser profits than the Instagram and website. YouTube – is a platform that involves the minimum quantity of customer involvement. Youtube affects the cognitive and affective image. The professed image found the lowest values and intent to visit. There subsidize the minimum to interesting customers. - Instagram (IG) – IG separated from other patterns because of picture production. IG produces the image lacking user involvement. It recommends the effect on the cognitive and affective dimensions of total images. The supposed picture is a key effect to the intent to travel. Together with the supposed picture and the intent to travel attained higher rates than other patterns. IG is a good pattern for generating customer image and interest. Therefore, social media defines as socio-technical structures (Zhao, Liu, Tang, & Zhu, 2013) that allow the conversation of information (Kaplan & Haenlein, 2010) and view (Parent, Plangger, & Bal, 2011). The measure of social media patterns is a cautious performance (Erkan & Evans, 2016). It can arise purposely (e.g. share and commend) or involuntarily (e.g. updates for private attention). Also, the people who engage with social media may be the customers in the near future.

2) Website

The website is the key channel of the organization to directly contact customers on online room reservations. The Internet builds the chances of the new pattern hotel business. Customer who reserves a room with online room reservation services, there is 20% used a hotel website only (Lee, Law, & Murphy, 2011). Hotels try to rise in bookings over OTA, for example, Agoda, Expedia, Traveloka, booking.com, Trivago and etc. Also, customers plan to book rooms to stay over other websites, such as Airbnb. The reason for hotel website booking decreasing is the outcome of many hotel brands presenting solutions with minor differentiation amongst themselves. The effective way to communicate and influence decisions is by improving positioning, and increasing sales (Diaz & Koutra, 2013). The organization has contributed resources for developing the website (Law, Qi, & Buhalis, 2010) for example money, staff, hardware, software, and etc. Many online room reservation

channels develop their websites including hotel websites and OTA (online travel agents) websites. Nevertheless, both kinds of channels find the issue of the low advantage from website generating expenditure. The competition of price among key OTA websites and will be violent. Kim et al. (2006) studied that the most significant feature effecting booking is not the only price. The good perspective of the website relates various items which are including website design and application, direction advice and easy to use, information on the site (Ladhari, 2010), safety and innovation. Heejun, Kim, and Fesenmaier (2008) revealed data, utilization, incentive, trustworthy, finance, and involvement are important dimensions that influence website expression. Diaz and Koutra (2013) stated that important alterations in the level of website persuasive dimensions are existing of budget, middle size, and premium hotel chains. The suggestions of customer impact the improvement of delighting that concern the website (Lee, Rodgers, & Kim, 2009). Chiou and Cheng (2003) suggest that complaints about the image of the company or service impact the thought toward the image and website. M. Lee et al. (2009) explained that good recommendation is shown on the website. There is an improvement of the evaluation result, comparing to the total presence of comments. Also, the website booking channels rely on purchasing and repurchasing. Information and platform of OTA and organization website are important factors for managing. Clearly displayed website and Customer privacy protection (Tsai, Egelman, Cranor, & Acquisti, 2011). Good position on web search can make a good benefit to the company. So, the search engine becomes an important part of hotel marketing management (Ho, Lu, Ho, & Peng, 2011). accepted advanced price on hotel rates (Polites, Williams, Karahanna, & Seligman, 2012). In conclusion, the researchers found the knowledge of positive website development as details, more service information, information superiority (Wen, 2012), customer privacy (Tsai et al., 2011), and easy reservation (Jarvelainen, 2003).

In the modern channel, the Internet express in diverse patterns demanding more explanation. An online booking website should present service information to customers (e.g. photos, virtual travels, service information, customer recommendations) on the websites. Decision phases relied on the presence and website design fundamentals including pictures, virtual travels, illustration, information, and video clips of the product (Chiu, Wang, Fang, & Huang, 2014). In

online room reservation, the appearances, and promises of online booking is strong-minded. Also, website designs and ease of searching support enjoying of booking (Floh & Madlberger, 2013). As a result, there are two groups of booking of websites. The first group is enjoying websites. It is the pleasure of the online experience itself (e.g. pleasing the virtual experience of the room, viewing at the photos of the facilities offered). Utilization is the second group. It is servicing for information on shopping functions and items (e.g. price/location comparing) (O'Brien, 2010). So, the difference between the two groups is the design based on enjoyment and usefulness aspects (Poyry, Parvinen, Salo, & Blakaj, 2012). Also, Ha and Stoel (2009) ordered the features of e-commerce websites as explicitly usefulness or enjoyment.

2.4.3 Measurement Scales of Online Room Reservation Website

Tanti and Buhalis (2017) reported that there are four factors of concerning technology and customer including 1) hardware and software, 2) needs and contexts, 3) openness to usage, and 4) supply and provision of connectivity. Also, Tanti & Buhalis (2017) clarified the positive and/or negative consequences are: 1) availability, 2) communication, 3) information obtainability, 4) time consumption, and 5) supporting experiences. Bilgihan and Bujisic (2015) specified that web design features are significant for the website. Park, Gretzel, and Sirakaya-Turk (2007) expressed that the measurement of the perceived website includes the five measurement items of aesthetics. In aesthetics of website, Wang, Minor, and Wei (2011) expressed that context relies on the level of 1) color, 2) illustrations, 3) image, and 4) simulations. Measurement items of aesthetic, Park et al. (2007) are shown 1) attractiveness, 2) well-organized, 3) colors appropriately, 4) fonts appropriately, 5) multimedia appropriately. According to the literature review for the dimension of ORR, the researchers revealed the dimension of ORR as Table 2.9 Dimensions of Online room reservation website (ORR).

Table 2.9 Dimensions of Online Room Reservation Website (ORR)

Authors	Dimensions
Tanti and Buhalis (2017)	hardware and software; needs and contexts; openness to usage; supply and provision of

Authors	Dimensions
	connectivity
Kuan, Bock, and Vathanophas (2008); Syed and Suroso (2018)	website design
Tanti and Buhalis (2017)	availability; communication; information obtainability; time consumption; supporting experiences.
Ponte, Carvajal-Trujillo, and Escobar-Rodríguez (2015)	personal security
Xu (2017)	perceived ease-of-use; information quality; privacy risk; website aesthetics

According to Table 2.9 Dimensions of online room reservation website (ORR), there are various dimensions of ORR such as information quality, privacy risk, aesthetic, openness to usage, supply and provision of connectivity, and etc. For this research, the researcher justifies the dimension on ORR Along with Table 2.10 because the dimensions from many researchers are different contexts with this research. There is the only research of Xu (2017) which complied with this research context. So, the researcher justifies referring it for concluding dimensions of the online room reservation website. The dimensions for this research are including information quality, privacy risk, and aesthetic (shown in Table 2.10).

Table 2.10 Dimension of Online Room Reservation Website that is Used for This Study

Dimension	**Researcher**
information quality	Xu (2017), Tanti and Buhalis (2017)
privacy risk	Xu (2017), Ponte, Carvajal-Trujillo, and Escobar-Rodríguez (2015)
aesthetic	Xu (2017), Syed and Suroso (2018)

The descriptions of these dimensions are shown as following.

1) Information Quality

The information that customer read on the website is an important thing that makes the customer understand and familiar with the website. The information that the website provides to the customer has to make sure about quality and accuracy. The useful information supports the next purchasing. Information can make customers purchase decisions for a next trip (Sparks & Browning, 2011). Also, Cheng and Loi (2014) found that online customer reviews are one of the most considerable information to momentous impact on customers. Moreover, a good customer' section of a confident hotel increases the attendance of online reviews for the hotel (Vermeulen & Seegers, 2009).

2) Privacy Risk

A privacy risk of customers is the major wall evading customers for servicing an online booking (D. J. Kim, Ferrin, & Rao, 2008). Perceived risk is Bauer (1960) an undefined value subsequent from dangerous customer actions. The perceived risk most divided into two groups (Peter & Ryan, 1976). The first group is the monetary risk (e.g. technology, and product). The second group is information risk (e.g. safety and personal confidentiality) (Bhatnagar, Misra, & Rao, 2000).

3) Aesthetic

Aesthetic is the emotional feature of website quality. Norman (2004) said that aesthetics represented to the bond of designs and sensitive answers. The emotional feature included lively photos, colors, sounds, and outlines (Barnes, 2011). Wang et al. (2011) defined that aesthetic is the level of the suitable practice of colors, illustrations, photos, and simulations of a website produces an impress of beauty.

2.5 Conceptual Framework

2.5.1 Online Customer Service (OCS) Influences on Online Customer Engagement (OCE)

The standing of engagement in online platforms shaped a number of factors to impact customer loyalty. OCE and room reservation has researched the relationship

between OCS and OCE. Lee and Lin (2005) reported that customer service is mainly related to customer purchase intentions. It means online customer service related to repurchase and customer online reviews. Bowden (2009) stated that engagement has a significant room in causal to knowing of service performance. Consequently, the area of this research in customer service related customer engagement that affects customer engagement is service performance (Bowden, 2009). The importance of online customer engagement may be as strong as an online customer service. The improved interaction of customers and the consequential of reference and review (Libai et al., 2010), customer-to-customer communications are significant dimensions of customer engagement (Kumar et al., 2010; van Doorn et al., 2010). The customer interactions (for example: questioning, booking, sharing, reviewing, and etc.) in this moment, there are computerized as well. Also, OCE delivers customer interaction with technology intermediated communication which is an analyst of engagement with OCS (Singh & Crisafulli, 2015).

According to the literature review, the researcher can conclude that OCS influences on OCE (Libai et al., 2010; Kumar et al., 2010; Singh & Crisafulli, 2015). Also, the researcher has not found the literature which reports that OCS does not influences OCE as shown: Figure 2.1 Relationship among constructs – OCS influences on OCE. So, this research projects the following hypothesis for OCS and OCE.

H1: Online Customer Service (OCS) influences on online customer engagement (OCE)

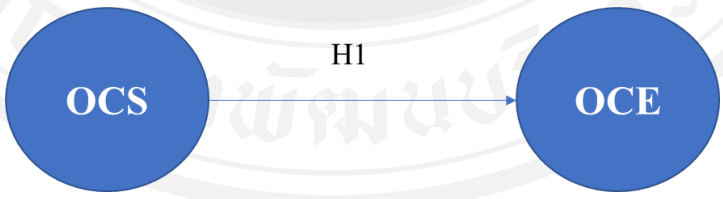


Figure 2.1 Relationship Among Constructs – OCS Influences on OCE

2.5.2 Online Customer Service (OCS) Influences on Online Room Reservation Website (ORR)

Online customer service (OCS) is service delivery to customers using an online technological platform. The online technological platform is concerned with using and applying mobile devices, social media, and websites. When customers make interaction to organizations, for example booking, reviewing, or repurchasing, the efficiency of them is important. Also, the online customer service concerned with customer utilization of self-service technologies (Matthew et al., 2005). Jaywant Singh and Crisafulli (2016) explain online retailers and airtime service employees are recommended to develop websites by learning about the customer service and disappointments of online service. Interactional reasonableness carried through technology-mediated interaction is a good way of gratification with online customer service (Jaywant Singh & Crisafulli, 2016).

According to the literature review, the researcher can conclude that OCS influences on ORR (Matthew et al., 2005; Jaywant Singh and Crisafulli (2016)). However, the researcher has not found the literature which reports that OCS does not influence ORR as shown: Figure 2.2 Relationship among constructs – OCS influences on ORR. This study proposed the following hypothesis for OCS and ORR.

H2: Online customer service (OCS) influences on Online room reservation website (ORR)

Figure 2.2 Relationship Among Constructs – OCS Influences on ORR

2.5.3 Online Customer Experience (OCX) Influences on Online Room Reservation Website (ORR)

For social interaction, customer connects to technology-mediated experiences. These are projected to be comfortable, more participated, and simplified with multi-

media (Gretzel & Jamal, 2009). Also, technology could purpose either as a mediator or as an experience itself (McCarthy & Wright, 2004). Thus, Sundbo and Darmer (2008) revealed that the integration of technology into the experiences should concentrate, not just only the technological development itself. Also, there is a room for awareness and knowledge of the technology concerned in customer experiences (Beeton, 2006; Tussyadiah & Fesenmaier, 2007). Zhang, Gordon, Buhalis, and Ding (2018) describe the experiences are mental in nature and affect users' emotional responses.

According to the literature review, the researcher can conclude that OCX influences on ORR (Gretzel & Jamal, 2009; McCarthy & Wright, 2004; Sundbo & Darmer, 2008; Tussyadiah & Fesenmaier, 2007; Beeton, 2006; (Zhang et al., 2018). However, the researcher has not found the literature which reports that OCX does not influence on ORR as shown: Figure 2.3 Relationship among constructs – OCX influences on ORR. Based on previous research and conclusions, this study proposed the following hypothesis for OCX and ORR.

H3: Online customer experience (OCX) influences on Online room reservation website (ORR)

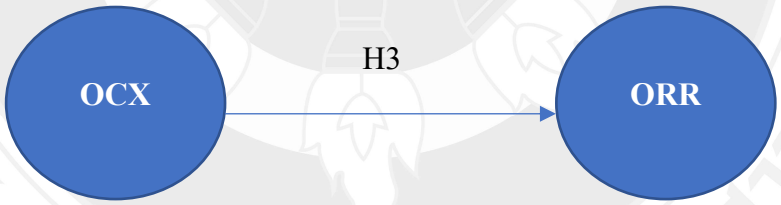


Figure 2.3 Relationship Among Constructs – OCX Influences on ORR

2.5.4 Online customer experience (OCX) Influences on Online Customer Engagement (OCE)

It is important for realizing how OCX can affect OCE in online shopping service contexts (McLean & Wilson, 2016). Online customers are dynamic and enthusiastic to interrelate with corporate and other users for sharing the thought, and experiences (Mackiewicz, 2010). Customer experience supports satisfaction, intention of revisit, and trust (Shobeiri et al., 2014). Meyer and Schwager (2007) proposed

customer experience is the inner and subjective feedback that customers can communicate with an organization (Meyer, 2007). Customer experience is an overall subjective reaction ensuing from touch-points to a company (Gentile, Spiller, & Noci, 2007). Moreover, customer can engage in reasoning and emotional process. A website is an outcome of customer feeling of customer experience. Kumar, Rajan, Gupta, and Dalla Pozza (2019) also recognize the factors that allay the service experience. Also, there proposes that service experience allays the influence of satisfaction and emotional attachment, which ultimately impacts customer engagement. Also, Claffey and Brady's (2014) study projected a pattern of customer engagement, which reinforced the idea that online experience (cognitive appraisal) affected the intensity of sentiment in the simulated situation.

According to the literature review, the researcher can conclude that OCX influences on OCE (McLean & Wilson, 2016; Mackiewicz, 2010; Shobeiri et al., 2014; Meyer & Schwager, 2007; Meyer, 2007; Gentile, Spiller & Noci, 2007; Kumar et al. (2019). However, the researcher has not found the literature which reports that OCX does not influence on OCE as shown: Figure 2.4 Relationship among constructs – OCX influences on OCE. Based on previous research and conclusions, this study proposed the following hypothesis for OCX and OCE.

H4: Online customer experience (OCX) influences on Online customer engagement (OCE)

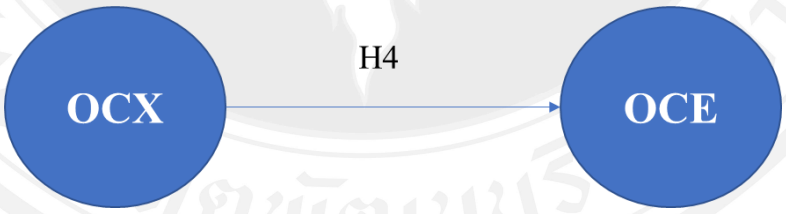


Figure 2.4 Relationship Among Constructs – OCX Influences on OCE

2.5.5 Online Room Reservation Website (ORR) Influences on Online Customer Engagement (OCE)

The internet provides a platform for the rapid of using societies (Wirtz et al., 2013). In the fast developments of online technology, there are new appearance,

societies, and participation. Moreover, technologies impact customers for concentrating online communications, applications, and devices, gather information, and co-creation (Buhalis & Amaranggana, 2013). Demangeot and Broderick (2016) inform that online transaction framework enabling online service managers to reflect on how, liable on a group of services that can design the website to raise customer engagement.

According to the literature review, the researcher can conclude that ORR influences on OCE (Gretzel & Jamal, 2009); McCarthy & Wright, 2004); Sundbo & Darmer, 2008; and etc. Also, the researcher has not found the literature which reports that OCX does not influence on ORR as shown: Figure 2.5 Relationship among constructs – ORR influences on OCE Based on previous research, this study proposed the following hypothesis for ORR and OCE.

H5: Online room reservation website (ORR) influences on Online customer engagement (OCE)

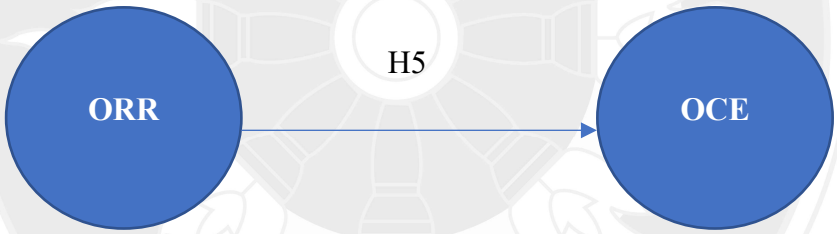


Figure 2.5 Relationship Among Constructs – ORR Influences on OCE

2.5.6 Online Customer Service (OCS) Influences on Online Customer Engagement (OCE), Mediated by Online Room Reservation Website

The self-service technology has transformed service delivery structures. Customers can use a service by technological interactions with service specialists' participation (Meuter, Ostrom, Roundtree, & Bitner, 2000). Communications between hotel reservation service providers and customers can easily use through an online platform. Meuter et al. (2000) stressed that customers' connections with advanced high-tech interactions move the performances. Moreover, creating social media is projected to affect engagement (Homburg, Ehm, & Artz, 2015). If technology with

cocreation is the target (Neuhofer, Buhalis, & Ladkin, 2014), then connectivity is the mechanism that operates it onward.

According to the literature review , the researcher can conclude that OCS influences on OCE, mediated by ORR (Meuter et al., 2000; Homburg et al., 2015; Neuhofer et al., 2014). However, the researcher has not found the literature which reports that OCS influence on OCE, mediated by ORR as shown: Figure 2.6 Relationship among constructs – OCS influences on OCE, mediated by ORR. This study projected the hypothesis for OCS, ORR, and OCE.

H6: Online customer service (OCS) influences on Online customer engagement (OCE), mediated by online room reservation website (ORR).

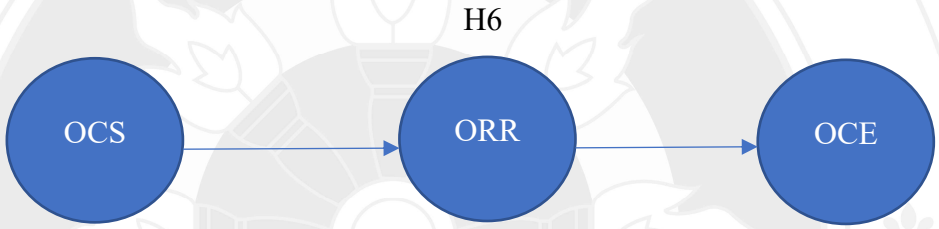


Figure 2.6 Relationship Among Constructs – OCS Influences on OCE, Mediated by ORR

2.5.7 Online Customer Experience (OCX) Influences on Online Customer Engagement (OCE), Mediated by Online Room Reservation Website (ORR)

Cezar and Ögüt (2016) exposed that hotel rooms experience goods whose quality can be evaluated after buying. Customers can look for information from various information to make decisions about buying (Papathanassis & Knolle, 2011). ORR has to services complete information, such as facility, amenity, location, and etc. Ba and Paul (2002) expressed there are two major kinds of the customer concerned: 1) information is not adequate before purchase; and 2) low quality of hotel after staying. The technological platform is altering the nature of the customer experience (Neuhofer & Buhalis, 2012; Tussyadiah & Fesenmaier, 2007). Moreover, a number of organizational factors, including the corporate strategy, executive, principles and, technology are the factors of customer engagement (Shaw, Bailey, & Williams, 2011).

According to the literature review, the researcher can conclude that OCX influences on OCE, mediated by ORR (Cezar & Ögüt, 2016; Papathanassis & Knolle, 2011; Ba & Paul, 2002; Neuhofer & Buhalis, 2012; Tussyadiah & Fesenmaier, 2007 Shaw et al. ,2011) However, the researcher has not found the literature which reports that OCX influence on OCE, mediated by ORR as shown: Figure 2.7 Relationship among constructs – OCX influences on OCE, mediated by ORR, this study proposed the following hypothesis for OCX, ORR, and OCE.

H7: Online customer experience (OCX) influences on Online customer engagement (OCE), mediated by Online room reservation website (ORR)

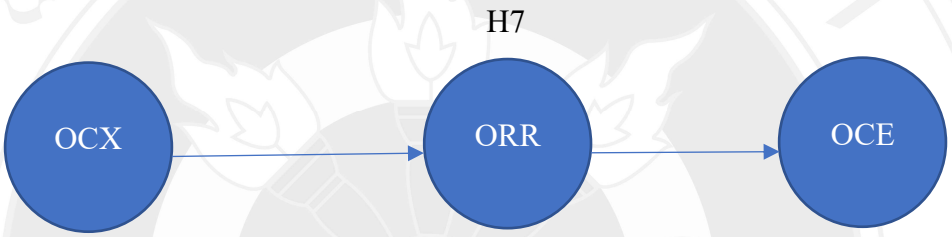


Figure 2.7 Relationship Among Constructs – OCX Influences on OCE, Mediated by ORR

2.5.8 Conceptual Framework

Based on the relevant literature and relationship among constructs, a conceptual framework is proposed on figure following.

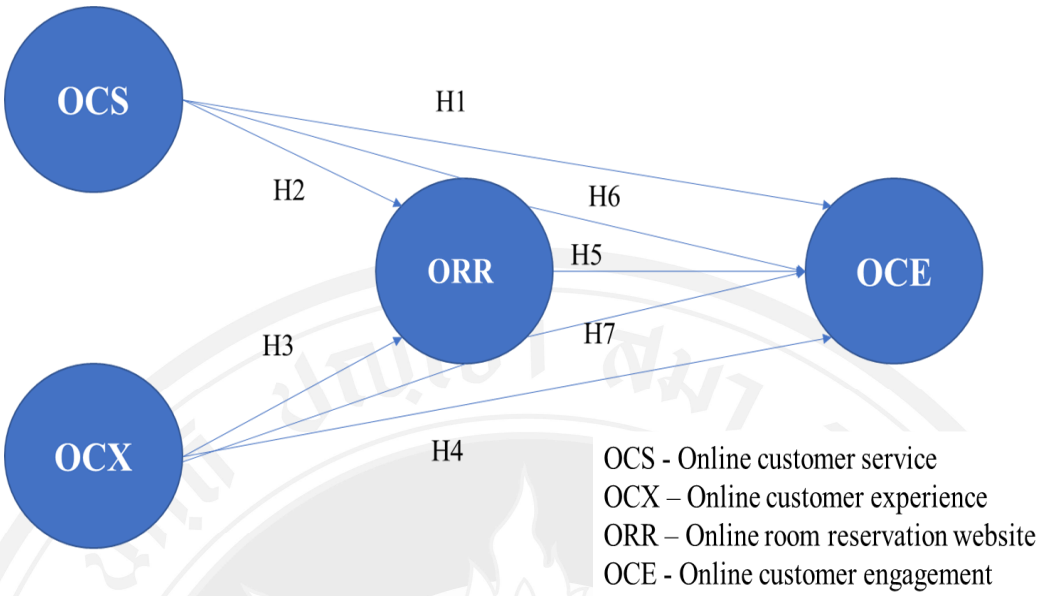


Figure 2.8 Conceptual Framework

According to figure 2.8 Conceptual Framework, the conceptual framework of this thesis is including four constructs (OCS, OCX, ORR, and OCE) and seven hypotheses. The explanation of this conceptual framework describes a relationship among constructs

2.6 Room Reservation Service Providers

In this research, the room reservation service providers mean the organizations who provide online room reservation service to the online customer. There are including online travel agency (OTA) (Booking.com, Tripadvisor, Agoda, Expedia, Traveloka, Hotels.com), hotel (Intercontinental, Centara, Novotel, Hilton, and etc.), hostel, lodging, homestay, and etc.

Booking.com is a room reservation website with a search engine for traveling in 43 languages. The slogan of Booking.com is Homes, houses, and everything in between, although in advertisements is "Booking.com: Booking.yeah". Booking.com is possessed and worked by and United States-based Booking Holdings. The headquarter is located in Amsterdam. is available in 43 languages. The reservation transaction of each day is more than 1,550,000 room nights.

TripAdvisor, Inc. is an American room reservation website that displays hotel reviews, and room bookings and traveling information. Headquarters of TripAdvisor is located in the United States. It is the greatest social travel website in the world, with 315 million reviewers and 500 million reviews of hotels, and other traveling services. TripAdvisor provides a platform for travelers to generate content by travelers.

Agoda.com is one of the popular room reservation websites in the Asian country. Agoda.com provides service with a variety of information about hotels required by tourists in a good-looking and useful character. Alexa.com (2015) reported that Agoda.com is ranked 578 in the most visited websites in the world. Agoda.com is one of the top service providers of online business that fastest rising in the world. This start-up company founded in the year 2005 and expanded rapidly throughout Asia in the year 2007, Agoda is part of Holdings Inc., the largest in the world. The headquartered is in Singapore and the country office in another 53 properties in large cities over 30 countries with more than 3,700 employees worldwide.

Expedia.com is an online room reservation website that provides booking and purchasing service about hotels, air tickets, and travel patterns. The head office is in the United States. Expedia also is one of the online travel agents of the world. Expedia attends both leisure and business travelers with sensitivities and finances ranking from normal customers to premium customers.

Traveloka established in 2012. It is a start-up company with a unicorn level. It provides airline ticketing and room reservation services online in South East Asia countries and Australia. Traveloka has joined corporations with 100 airlines to service customer on 200,000 routes around the world. Also, it services online room reservations to customers in 6 countries in Asian including Indonesia, Malaysia, Singapore, the Philippines, Thailand, and Vietnam.

Hotels.com is an online room reservation website owned by Expedia, Inc. There are 85 websites in 34 languages and lists more than 300,000 hotels in more than 18,000 locations. In Expedia, Inc. Hotels.com was established in 1991 as the Hotel Reservations Network. Hotel.com became a part of Expedia, Inc. in 2002. The headquarter is addressed in the United States.

Qyer.com is a Chinese online traveling experience sharing website that allows travel fanatics to write records, and chat experiences. The head office is located in China.

In this research, the researcher will study only Online travel agency (OTA), including Booking.com, Tripadvisor, Agoda, Expedia, Traveloka, and Hotels.com. The reason is most of the transactions of online room reservation came from OTA.

2.7 Relevance Literature Research

2.7.1 Online Customer Engagement (OCE)

According to OCE research, there are different aspects, for example the role of personality traits in OCE, analysis of the dimensions of OCE, and a process model for identifying OCE patterns. The description is shown as follows: Marbach, Lages, and Nunan (2016) researched the topic named "Who are you and what do you value? Investigating the role of personality traits and customer perceived value in online customer engagement". The aims are to seek customers to engage with service delivered online. The benefits are (i) three traits emerged as items of OCE including requiring for studying, require for action and humanity, and (ii) customer-perceived value occurred as a new value. The result is customers who dedicated to the community (Koh, Kim, & Kim, 2003), corporate involves customers to register with the corporate. Therefore, customer engagement by the status of membership will rise in the corporate as an implication of community, co-creation, and social responsibility (Andersen, Downey, & Tyler, 2005). Bilro, Loureiro, and Ali (2018) also researched in OCE which found that the dimensions of online customer engagement. Moreover, Potdar et al. (2018) researched in OCE found that seven dimensions are 1) communication, 2) interaction, 3) experience, 4) satisfaction, 5) continued involvement, 6) bonding, and 7) recommendation. Barger, Peltier, & Schultz. (2016) reported that four dimensions of social media engagement are 1) reacting to content, 2) commenting on content, 3) sharing content, and 4) posting UGC (User-generated content).

2.7.2 Online Customer Service (OCS)

The relevance literature research of OCS is including:

Jing, Meina, and Gang (2017) study about assessing the cognitive capability generates customer insight and the resolution method, learning the result of customer perceptive capability on OCS insight. The study reported that the impact of customer reasoning capability on OCS perceived worth. There are electroencephalograms (EEG) methods to educate the physical features of customer actions (Ariely & Berns, 2010) and the results show a probable neural process for the effect of customer reasoning capability on service worth insight and the way to inspire organizations to expand OCS.

Cezar and Ögüt (2016) investigated the influence on technology-related to customers influence on review scale (place and customer service). By procedure, there approximates the adaptation rate model. The conclusion revealed a high number of reviews and location score are an important and optimistic impact on discussion rates. Nevertheless, customer service rate and star rate are not affected discussion rate. Additionally, room price and hotel size are destructively related to the discussion rate. The result expressed that a high volume of reviews.

Singh and Crisafulli (2015) study the effect of online customer service recovery patterns – information and technology-related contact, satisfaction, swapping, and word of mouth. The method is scenario-based experimentation. The conclusion is an online information and technology-related contact could be applied as online service recovery patterns. Also, it is able to deliver satisfaction, lesser swapping, and rise reassuring word of mouth. Technology-related contact is a specialist of satisfaction through online service recovery. Nevertheless, customers in participation services prove developed conditions of service recovery.

2.7.3 Online Customer Experience (OCX)

The relevance literature research of OCX is including:

Bilgihan et al. (2016) - Implementing the theory of hotel booking incidents in online customer service. The objective of the research is to learn OCX and ‘‘flow’’ in impacting customer loyalty on online room reservations. The meaning of ‘‘Flow’’ is a status of intentness when customers engaged to corporate. The conclusion of this

research is flow comprises both technical and valuable attributes that affect the flow experience positively. Especially, technical attributes have a high impact on flow than valuable attributes. It means that customers will trust in corporate when they experience flow.

Martin, Mortimer, and Andrews (2015) - Evaluating online customer experience with online reviews. This research observes dimensions of the cognitive and affective situation on online shopping satisfaction and repurchase intents. The result of this research is including three topics. First, aesthetic is the greatest relevance for administrative results. There means the corporate have to service with simplicity and engage customers that focus on affective experiences. Second, the presence of perceived risk, ensuring buying and giving back processes are easy to access (Bianchi & Andrews, 2012). Finally, OCE model has inferences for room reservation service providers with multichannel implications. Understanding online customer experiences is a main driven benefit and supported commercially successful (Klaus, 2013).

Chung, Han, and Joun (2015) researched Tourists' intention to visit a destination: The role of augmented reality (AR) application for a heritage site. The study uses three concerned items. There are including first, technology readiness (TR), it is complete to use technology form a customer perspective. The second is the visual indicator of AR and the last item is the occasional item. The conclusion is TR is a forecaster of supposed helpfulness. Also, visual application and helping situations impacted the ease of use, and ease of use impacted usefulness. In conclusion, usefulness and ease of use impacted the purpose to use AR and visiting a destination via AR.

Klaus (2013) - The case of Amazon.com: towards a conceptual framework of online customer service experience using the emerging consensus technique (ECT) - The objective of the study is to consider for OCX to prove that delivering exceptional online experiences will impact an online shopping transaction. Most of the study emphases only the manageable items of online experience. The methodology is exploratory research. The outcome is useful and emotional factors as the two main dimensions of OCX. Useful factor includes the technical features of the website which consist of the utility, product, communication, community, and interaction. Emotional factors consist of awareness, trust, and price.

2.7.4 Online Room Reservation Website (ORR)

The study of Bilgihan and Bujisic (2015) named The effect of website features in online relationship marketing: A case of online room reservation. The objective is developing a theory-based model for online room reservation in usefulness, technical website structures, customer promise, trust, and e-loyalty by using Structural Equation Modeling for hypothesis analysis. The conclusion is technical features impacts emotional promise and useful feature impacts calculative promise. Both promise dimensions influence on trust.

Also, Tanti and Buhalis (2017) studied the effect of digital connection. The result shows that the factors that increase travelers from obtaining a digital experience are: 1) hardware and software, 2) requirements and settings, 3) honesty to usage, and 4) source and providing of connectivity. The study investigates the positive and/or negative values that arise from being connected or disconnected. A connecting model displays five types of positive and/or negative moments: 1) availability, 2) communication, 3) information obtainability, 4) time consumption, and 5) supporting experiences. An improved thoughtful of the benefit of connecting during the trip can improve the traveler experience.

2.8 Chapter Summary

According to the literature review, there are four constructs concerned online room reservation including Online customer engagement (OCE), Online customer service (OCS), Online customer experience (OCX), and Online room reservation website (ORR).

The first construct is Online Customer Engagement (OCE), there are 3 dimensions including 1) repurchase, 2) word-of-mouth, 3) sharing. The second construct is Online customer service (OCS), there are 4 dimensions including 1) reliability, 2) responsiveness, 3) performance, 4) communication. The third construct is Online customer experience (OCX), there are 3 dimensions including 1) emotional feature, 2) utilitarian feature, 3) social interaction. The last construct is online room

reservation website (ORR), there are 3 dimensions including 1) information quality, 2) privacy risk, 3) aesthetic.

CHAPTER 3

RESEARCH FRAMEWORK AND METHODOLOGY

This chapter defines the research methodology for completing the research objectives. The contents of this chapter are presented into seven main groups. The details are including research design, population and sample, research instrument, data collection, data analysis, research ethics, and chapter summary

3.1 Research Design

The research design is used to fulfill objectives and answer questions (Cooper & Schindler, 2014). This research uses the quantitative research method because the quantitative method can be applied to the research problem. A quantitative method agrees with the researcher study the relations among constructs. The data can be utilized to explore cause and effect relations. This research analyzed collected data by employing the structural equation modeling (SEM) technique using the samples by indicating the size as the number function of the parameter. The aspect of the design is used to develop and confirm tools to measure constructs in the proposed model, including items and the constructs of online room reservations. Definitely, collect information from customers who experienced by purchasing/booking a room reservation. Then, the hypotheses proposed are studied with structural equation modeling (SEM). This research objectives to identify the factors, explore the relative importance of items, and develop a model of various items of customer engagement on online room reservations. The research process is shown in figure following.

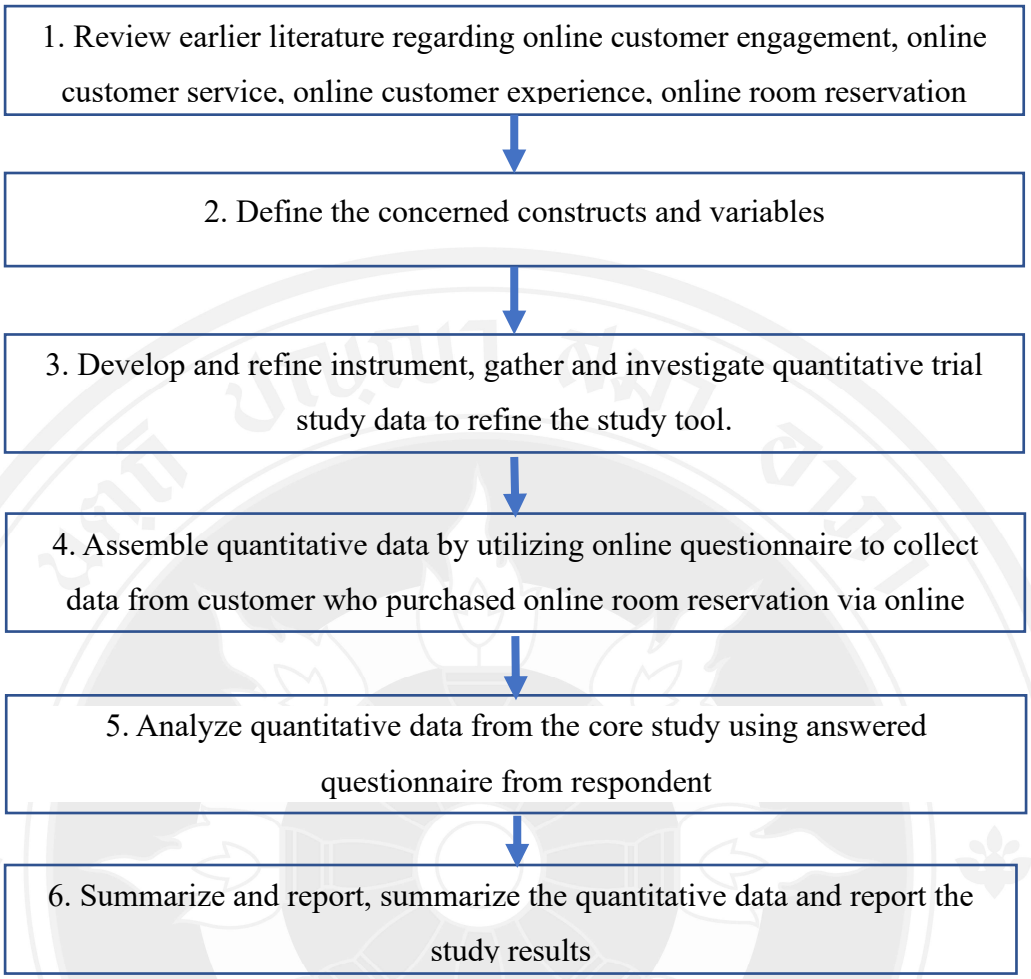


Figure 3.1 The Research Process

The process of this research included the following:

1) Review earlier literature regarding online customer engagement, online customer service, online customer experience, online room reservation website, co-creation, repurchasing, disruptive business, online business, and theories of technology adoption. Also, collect data from documents, textbooks, theories, and context, and information from websites.

2) Define concerned constructs. After the literature review, the construct and variables would be defined.

3) Develop and refine instruments, gather and investigate quantitative trial study data to refine the study tool. Design the instrument for collecting the data as research questions and hypotheses required.

4) Assemble quantitative data by utilizing an online questionnaire to collect data from customers who purchased online room reservations via online shopping channels by the website. This research used a sampling method employed in previous online survey research that controlled participation to invited respondents who are online shoppers to answer the online questions. Respondents received information on the study's purpose, procedures to collect data, confidentiality measures, and participation guidelines before they are asked to complete the questionnaire.

5) Analyze quantitative data from the core study using the answered questionnaires from respondents.

6) Summarize and report, summarize the quantitative data, and report the study results.

3.2 Population and Sampling Techniques

In this research, the population is representative of customers who experienced online room reservations (for example booking by hotel website, online travel agency, hostel, lodgings, homestay, and etc.) with OTA and hotel website for accommodation.

Sampling techniques are a portion of the population that is used to represent conclusions about the whole population (Cooper & Schindler, 2014). The sample would be participants with online channels using convenient sampling techniques to gather information. Each respondent is assigned a random code. Assemble quantitative data by utilizing an online questionnaire to collect data from customer who experienced an online room reservation via OTA, hotel, and other room reservation websites. The reason for selecting convenient sampling technique is the participation who experienced on online room reservation via OTA, hotel, and other room reservation websites. This research uses a sampling method active in previous online survey research that controlled participation to invited respondents who are online shoppers to answer the online questions (Wani & Malik, 2013). This should be considered with the items required for analysis. In this research, there are 45 items, A sample size required minimum level of SEM model has to be ten times the largest number of the determinative index used to quantify one construct; or ten times the

main quantity of internal model tracks focused on a specific construct in the internal model (Barclay et al., 1995).

In this research, the sample size can be calculated by 45 items multiply 10 =450 sample sizes. To receive the appropriate and accurate number for the analysis, the researcher set the size of the sample group at equal or more than 450 people using convenient sampling techniques to gather information. The researcher would collect data from 450 samples as the population set in the quantitative data collection. This research analyzed data by the structural equation modeling (SEM) technique using the samples by indicating the size as the number function of the parameter. A sample draws statistical inferences for quantitative research. The purpose of this study is to study what online room reservation customer thought and felt about online room reservations and what they are engaged in and active. The researcher will use information collected from the sample to make inferences about the entire population, which eliminated the need to increase the sample size to enhance the generalization. To complete the survey, customer gives permission to share information about their online room reservation.

3.3 Research Instrument Development

This is a quantitative research using questionnaire survey data from the target online room reservation and collecting data from online room reservation customers who experienced and purchased by online room reservation. The research uses questionnaires as the tool to collect data by online form for the survey. The questionnaires ask for data from the informant, especially customers who experienced an online room reservation. This is a self-administered questionnaire and contains three main sectors: the first concerns general demographic information and experience online room reservation. The types of questions are a checklist and filling the gap. The second sector survey opinion is opinion and perception on online room reservation and the third sector surveys perceived engagement behaviors and opinion on online room reservations. The last sector contains open-ended questions that require suggestions. Finally, the instrument development process is including 5 steps shown in Figure 3.2.

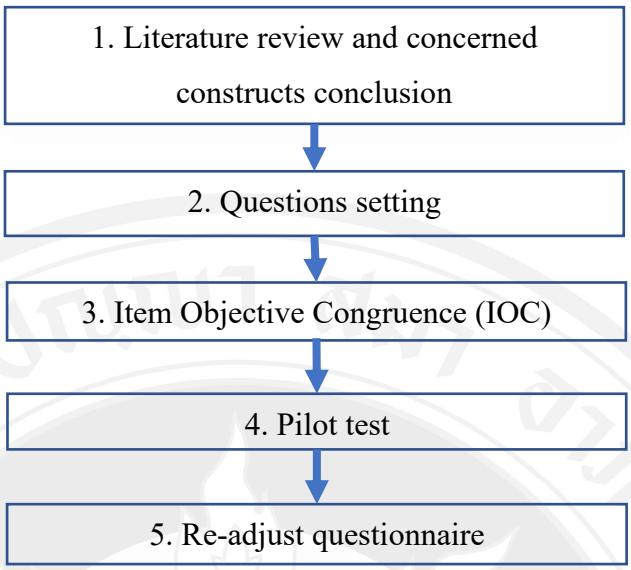


Figure 3.2 Instrument Development Process

The instrument development process is including 5 steps as below:

3.3.1 Literature Review and Concerned Constructs Conclusion

The researcher reviews concerned literature and concludes the constructs regarding customer service, online customer service, customer experience, online customer experience, Online room reservation website, customer engagement, online customer engagement, online room reservation, co-creation, repurchasing, disruptive business, online business, and theory of technology adoption. Also, collect data from documents, textbooks, theories, and context and information from websites.

According to the literature review, the construct of this research is including online customer engagement, online customer service, online customer experience, and online room reservation website. There are items and questions of each construct shown as following:

Table 3.1 The Constructs and Dimensions of the Research

Construct	Dimension
Online customer engagement	1) repurchase
	2) word-of-mouth
	3) sharing
Online customer service	1) reliability
	2) responsiveness
	3) performance
	4) communication
Online customer experience	1) emotional feature
	2) utilitarian feature
	3) social interaction
Online room reservation website	1) information quality
	2) privacy risk
	3) aesthetic

According to Table 3.1 The constructs and dimensions of the research, the dimensions of each construct can be defined as details: Online customer service construct - dimensions are reliability, responsiveness, performance, and communication. Online customer experience construct - dimensions are emotional feature, utilitarian feature, and social interaction. Online room reservation website construct - dimensions are information quality, privacy risk, and aesthetic. Online customer engagement construct - dimensions are repurchase, word-of-mouth, and sharing.

3.3.2 Questions Setting

To define the concerned construct of online room reservation. The design of the questionnaire is according to the scope of the research, developing the questions from related ideas and theories, including similar research. The study is in the form of software to process the data and add more information. The questions are limited to

conform to the objectives of the research and the scope of the idea which is appropriate to the respondent. A five-point Likert scale questionnaire that is developed will be generated on online channels.

Researching instruments can be divided as follows:

Part I: Respondent's General Information

Part II: Customer opinion and behavior

Part III: Opinion and behavior on online room reservation - opinion and behavior including:

1) Online customer service (OCS)
2) Online customer engagement (OCX)
3) Online room reservation website (ORR)
4) Online customer engagement (OCE)

Part V: Suggestions - Open-closed questions requiring additional opinions.

The key factors and questions on online customer service are shown in Table below:

Table 3.2 Key Factors in This Research on Online Customer Service

Researchers	**Dimension**	**Factor**	**Question for this research**
Parasuraman, Zeithaml, and Malhotra (2005); Yang et al. (2004)	Reliability	- constantly	- capacity to perform the guaranteed service constantly
Parasuraman et al. (2005); Yang et al. (2004)	Reliability	- precisely	- capacity to perform the guaranteed service precisely
Sengupta, Ray, Trendel, and Vaerenbergh (2018)	Responsiveness	- prompt response to customer requests	- prompt service delivery - prompt responses by e-mail, chat, or other

Researchers	Dimension	Factor	Question for this research
			means
Sengupta et al. (2018)	Responsiveness	- the speed in resolving customer problems	- problems resolving quickly - information retrieving rapidly
Casalo, Flavian, Guinaliu, and Ekinci (2015)	Responsiveness	- prompt services	- informing important information promptly - providing real-time information
Wang, Truong, and Bank (2018)	Performance	- use	- online service with a good performance
Singh, Sandhu, Metri, and Kaur (2018)	Performance	- information	- information with a good performance
De Pelsmacker, Van Tilburg, and Holthof (2018)	Communication	- informing customer of important information	- enough information
Birinci, Berezina, and Cobanoglu (2018)	Communication	- availability of status of transactions	- knowing status of transaction
Rao, Yang, and Yang (2018)	Communication	- customer information	- understanding customer information
Hossain, Dwivedi, Chan, Standing, and Olanrewaju (2018)	Communication	- clear answer	- clear answer

The key factors and questions on online customer experience are shown in Table below:

Table 3.3 Keys Factors in This Research on Online Customer Experience

Researchers	**Dimension**	**Factor**	**Question for this research**
Bilgihan et al. (2016)	Emotional features	- entertainment	- joy of online booking experience - enjoyable of online booking - email alerts of special offers - beautiful images on the website
Bilgihan et al. (2016)	Emotional features	- enjoyment	- fun of using website - enjoyed elements that are different from the others
Rose et al. (2012)	Utilitarian feature	- ease of use	- easy to use
Neuhofer and Buhalis (2014)	Utilitarian feature	- cognitive aspects	- economic value for money
Kumar and Thakur (2016)	Utilitarian feature	-convenience	- convenience - finding the required room
Kamal, Abdullah, Nor, Ngelambong, and Bahari (2018)	Utilitarian feature	- time savings	- time saving
Kumar and Thakur (2016)	Utilitarian feature	- information availability	- product price information - easy information

Researchers	Dimension	Factor	Question for this research
			assessment - finding required information - information completion - customer care service information - reviews written by other travelers
Bilgihan et al. (2016)	Social interaction	- sociability experience	- member of a website's community - information of social networking - reviewing of places to visit on social channels - communicating experience to others on social media after the trip

The key factors and questions on online room reservation website are shown in Table below:

Table 3.4 The Keys Factors in This Research on Online Room Reservation Website

Researchers	Dimension	Factor	Question for this research
Chen and Chang (2018)	Information quality	- information quality	- high quality information
Hwang et al. (2018)	Information quality	- up-to-date	- up-to-date information of accommodation
Wen (2012)	Information quality	- accuracy	- accuracy of accommodation information
Cheng, Fu, Sun, Bilgihan, and Okumus (2019)	Information quality	- in-depth descriptions	- in-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information) - good source of information
Ponte et al. (2015)	Privacy risk	- privacy information	- privacy of personal information during a transaction
Ponte et al. (2015)	Privacy risk	- access information	- no unauthorized person accessing personal information
Ponte et al. (2015)	Privacy risk	- use other purposes	- no personal information for other purposes
Ponte et al. (2015)	Privacy risk	- sell personal	- no selling personal

Researchers	Dimension	Factor	Question for this research
		information	information to others
Jacobson and Idziorek (2016)	Privacy risk	- safe to use credit cards	- safe to use credit cards
Lehto, Shi, Anaya, Lehto, and Cai (2018)	Aesthetic	- color	- proper Colors
Law (2019)	Aesthetic	- graphics	- proper Graphics
Gavilan et al. (2018); Park et al. (2007)	Aesthetic	- image	- attractive of images
Bilro, Loureiro, and Ali (2018); Park et al. (2007)	Aesthetic	- animations	- proper multimedia features

The key factors and questions on online customer engagement are shown in Table below:

Table 3.5 The Key Factors and Questions on Online Customer Engagement

Researchers	Dimension	Factor	Question for this research
Shin, Thai, Grewal, and Kim (2017)	Repurchase	- likely to repurchase in the near future	- possibility for purchase in the near future
Lena Jingen Liang, HS Chris Choi, and Marion Joppe (2018)	Word-of-mouth	- word-of-mouth	- often read other tourists' online reviews - choose to book by gather information from tourists' online

Researchers	Dimension	Factor	Question for this research
			reviews
Harrigan et al. (2017)	Sharing	- sharing information	- share my direct experience to others - share my opinion, suggestion, and comment to others
Filieri and McLeay (2014)	Sharing	- motivations for sharing	- motivations for sharing

3.3.3 Item Objective Congruence (IOC)

The design and quality inspection of the research tool as the design of the questionnaire is according to academic principles and its quality must validity by using IOC (Item Objective Congruence) Index between questions and objectives by experts. Three experts as the least number to make the exact judgment (Rovinelli & Hambleton, 1977). Three experts will be including three kinds of concerned of this research including researcher of online room reservation or/and concerned area, expert of statistical analysis and research design, and a specialist or a person who involves in hotel or OTA business. The design and quality inspection of the research tool as the design of the questionnaire is according to academic principles and its quality must-have content validity as follows:

1) Using Item Objective Congruence Index (IOC) between questions and objectives, having three experts as the least number to make the exact judgment (Rovinelli & Hambleton, 1977); and

2) The questionnaire will receive precise answers no matter who responds or when. There are no limits on the number of people doing the pre-test, depending on the convenience. The result of the quality test of the research tool as the questionnaire has to higher than 0.50 in every question.

3) The results of IOC process show that is shown in Table 3.6

Table 3.6 Results of IOC

Construct	Number of				
	dimensions	**items before IOC process**	**removed items**	**adjusted items**	**total items for the next step**
Online customer service	4	16	4	3	12
Online customer experience	3	18	3	5	15
Online room reservation website	3	13	2	1	11
Online customer engagement	3	8	1	5	7
Total	13	55	10	14	45

According to Table 3.6 Results of IOC, first, the results of online customer service show that online customer service includes 4 dimensions, 16 items. After IOC process proceeding, the items are removed 4 items, and adjusted 3 items. The total items for the next step are 12 items. Second, the results of online customer experience show that online customer experience includes 3 dimensions, 18 items. After IOC process proceeding, the items are removed 3 items, and adjusted 5 items. The total items for the next step are 15 items. Third, the results of online room reservation website show that online room reservation website includes 3 dimensions, 13 items. After IOC process proceeding, the items are removed 2 items, and adjusted 1 item. The total items for the next step are 11 items. Also, fourth, the results of online customer engagement show that online customer engagement includes 3 dimensions, 8 items. After IOC process proceeding, the items are removed 1 item, and adjusted 5 items. The total items for the next step are 7 items. Finally, the overall results show that there are including 13 dimensions, 55 items. After IOC process

proceeding, the items are removed 10 items, and adjusted 14 items. The total items for the next step are 45 items.

3.3.4 Pilot Test

The questionnaire will receive precise answers no matter who responds or when. The validity analysis uses Cronbach's alpha coefficient (Cronbach & Meehl, 1955) from the experimental group of 30 people. The Cronbach's alpha coefficient would be over .6 for acceptance. Data collection using, a questionnaire is to test the results. Also, this research uses exploratory factor analysis (EFA) for data analysis. Rules of sample size have been advanced, such as the lowest sample size of 100 or 200 (Boomsma, 1982), 5 or 10 observations per appraised item (Bollen, 1989). Also, Ferguson and Cox (1993) suggest that 100 respondents are the absolute minimum number to be able to undertake an exploratory factor analysis. As a result, this thesis will use 109 respondents for the pilot test.

According to the pilot test, the researcher analyzes the data with descriptive analysis and exploratory factor analysis (EFA). The results of the pilot test show as followings:

3.3.4.1 Descriptive Analysis and Assessment of Normality

In general profile, the respondents who have experienced in online room reservation responded to the survey items on the four constructs of the research, online customer service (OCS), online customer experience (OCX), online room reservation website (ORR), and online customer engagement (OCE), with scoring their opinions from 1 (not at all important) to 5 (very important). The data characteristics are essential for any research using structural equation modeling (SEM) when the hypothesized model is multifaceted to confirm the accurateness of the research results (Schumacker & Lomax, 2004). Therefore, this part utilizes related descriptive statistics for two significant aspects;

1) using mean ($\overline{X}$) standard deviations (S.D.) to assess the level of respondents' perception of each variable to complete research questions.

2) screening initial data to evaluate the normal distribution against skewness (Skew.) and kurtosis (Kur.) values (the distribution scores) as part of data check before confirmatory factor analysis (CFA).

3.3.4.2 Descriptive Statistics for Online Customer Service (OCS) for Pilot Test

The measurement scales for online customer service (OCS) for the pilot test recognize measured by two key dimensions; reliability (REA), and capability (CAP) with a total of 12 items. As described in Table 3.7, the overall perceived OCS of the sample is at a very important level ($\bar{X}$ = 4.55) indicating that online customer service is very important for online room reservations. About two dimensions, the means of all dimensions are very important and similar, in which reliability the highest means ($\bar{X}$, 4.54, SD, .76) followed by Capability ($\bar{X}$, 4.55, SD, .62) correspondingly. According to separate indices, all of the means scores are very important. The highest mean score is knowing the status of the transaction ($\bar{X}$, 4.70, SD, .83) and the lowest mean score is understanding customer information ($\bar{X}$, 4.38, SD, .52). The mean value of each measurement item ranged from 4.38 to 4.70. The standard deviation ranged from .52 to .83. The means and SD of variables are the accuracy of records keeping ($\bar{X}$, 4.45, SD, .83), keeping promise of company ($\bar{X}$, 4.62, SD, .68), prompt service delivery ($\bar{X}$, 4.60, SD, .55), prompt responses by e-mail, chat, or other means ($\bar{X}$, 4.50, SD, .63), Problems resolving quickly ($\bar{X}$, 4.70, SD, .60), informing important information promptly ($\bar{X}$, 4.58, SD, .60), providing real-time information ($\bar{X}$, 4.56, SD, .65), online service with a good performance ($\bar{X}$, 4.53, SD, .60), content with a good performance ($\bar{X}$, 4.38, SD, .72), knowing status of transaction ($\bar{X}$, 4.69, SD, .52), understanding customer information ($\bar{X}$, 4.43, SD, .66), and clear answer ($\bar{X}$, 4.51, SD, .70). Following the variable's value, the skewness value of each measurement item ranged from -2.11 to -.74. Also, the kurtosis ranged from -.50 to 4.41. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCS, as shown in Table 3.7, are suitable for further analysis.

Table 3.7 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Service (OCS) for Pilot Test

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
REA	**Reliability**	**4.54**	**.76**	**-1.91**	**3.92**	**Very Important**
REA1	- Accuracy of records keeping	4.45	.83	-1.89	4.35	Very Important
REA2	- Keeping promise of company	4.62	.68	-1.92	3.49	Very Important
CAP	**Capability**	**4.55**	**.62**	**-1.22**	**1.14**	**Very Important**
CAP1	- Prompt service delivery	4.60	.55	-.91	-.22	Very Important
CAP2	- Prompt responses by e-mail, chat, or other means	4.50	.63	-1.10	1.20	Very Important
CAP3	- Problems resolving quickly	4.70	.60	-2.11	4.41	Very Important
CAP4	- Informing important information promptly	4.58	.60	-1.33	2.21	Very Important
CAP5	- Providing real-time information	4.56	.65	-1.27	1.70	Very Important
CAP6	- Online service with a good performance	4.53	.60	-1.05	-.16	Very Important
CAP7	- Content with a good performance	4.38	.72	-1.00	.80	Very Important
CAP8	- Knowing status of transaction	4.69	.52	-1.54	1.06	Very Important
CAP9	- Understanding customer information	4.43	.66	-.94	-.50	Very Important
CAP10	- Clear answer	4.51	.70	-1.33	.88	Very Important
	Overall Level	**4.55**	**.64**	**-1.34**	**1.60**	**Very Important**

Note: N=109, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

3.3.4.3 Descriptive Statistics for Online Customer Experience (OCX) for Pilot Test

The measurement scales for online customer service (OCX) for the pilot test recognize measured by two key dimensions; emotional feature & social interaction (EMO), and utilitarian feature (UTI) with a total of 15 items. As described in Table 3.8, the overall perceived OCX of the sample is at a very important level ($\bar{X}$ = 4.25) indicating that online customer experience is very important for online room reservation. About two dimensions, the means of all dimensions are very important and similar, in which utilitarian feature the highest means ($\bar{X}$, 4.53, SD, .70) followed by emotional feature & social interaction ($\bar{X}$, 3.69, SD, 1.08). According to separate indices, all of the means scores are very important. As Table 3.8 shows the mean and standard deviation of observed variables in OCX construct, the variables of emotional feature & social interaction dimension are not at the very important level. The mean value of each measurement item ranged from 3.22 to 4.62. The standard deviation ranged from .595 to 1.22. The means of variables are enjoyable of online booking (3.93), email alerts of special offers (3.73), beautiful images on the website (4.00), members of a website's community (3.55), and reviewing of places to visit on social channels (3.22). The variables of utilitarian feature dimension are at a very important level. The means of variables are ease of use (4.62), economic value for money of online booking (4.55), convenience of online booking (4.61), finding the required room (4.51), time saving (4.61), product price information (4.60), easy information assessment (4.45), finding required information (4.50), information completion (4.62), and customer care service information (4.28). Following the variable's value, the skewness value of each measurement item ranged from 2.24 to -.06. Also, the kurtosis ranged from -1.03 to 7.78. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCX, as shown in Table 3.8, are suitable for further analysis.

Table 3.8 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Experience (OCX) for Pilot Test

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
EMO	**Emotional feature & Social interaction**	**3.69**	**1.08**	**-.43**	**-.53**	**Fairly Important**
EMO1	- Enjoyable of online booking	3.93	.94	-.60	-.16	Fairly Important
EMO2	- Email alerts of special offers	3.73	1.17	-.57	-.55	Fairly Important
EMO3	- Beautiful images on the website	4.00	.91	-.67	.044	Fairly Important
EMO4	- Member of a website's community	3.55	1.18	-.26	-.98	Important
EMO5	- Reviewing of places to visit on social channels	3.22	1.22	-.06	-1.03	Important
UTI	**Utilitarian feature**	**4.53**	**.70**	**-1.84**	**4.47**	**Very Important**
UTI1	- Ease of use	4.62	.69	-2.43	7.78	Very Important
UTI2	- Economic value for money of online booking	4.55	.74	-2.14	5.86	Very Important
UTI3	- Convenience of online booking	4.61	.65	-1.82	3.62	Very Important
UTI4	- Finding the required room	4.51	.80	-2.20	6.02	Very Important
UTI5	- Time saving	4.61	.64	-2.25	8.40	Very Important
UTI6	- Product price information	4.60	.60	-1.19	.42	Very Important
UTI7	- Easy information assessment	4.45	.75	-1.76	4.38	Very Important
UTI8	- Finding required information	4.50	.72	-1.53	2.44	Very Important
UTI9	- Information completion	4.62	.64	-1.92	4.22	Very Important
UTI10	- Customer care service information	4.28	.83	-1.17	1.54	Very Important
	Overall Level	**4.25**	**.83**	**-1.37**	**2.80**	**Very Important**

Note: N=109, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

3.3.4.4 Descriptive Statistics for Online Room Reservation Website (ORR) for Pilot Test

The measurement scales for online room reservation website (ORR) for the pilot test recognize measured by three key dimensions; information quality (INF), privacy risk (RIS), and aesthetic (AES) with a total of 11 items. As described in Table 3.9, the overall perceived ORR of the sample is at a very important level ($\bar{X}$ = 4.38) indicating that online room reservation website is very important for online room reservation. About three dimensions, there is the highest dimension at very important level is perceived risk ($\bar{X}$, 4.75, SD, .59) followed by information quality ($\bar{X}$, 4.49, SD, .64) and aesthetic ($\bar{X}$, 3.92, SD, .89). As Table 3.9 shows the mean and standard deviation of observed variables in ORR construct, the variables of information quality and privacy risk dimensions are at the very important level. The mean value of each measurement item ranged from 3.86 to 4.84. The standard deviation ranged from .47 to .96. The means of variables are up-to-date information of accommodation (4.52), in-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information) (4.57), good source of information (4.39), privacy of personal information during a transaction (4.76), no unauthorized person accessing personal information (4.76), no personal information for other purposes (4.84), and safe to use credit cards (4.63). However, all variables of aesthetic dimension are at the important level. The means of variables are proper Colors (3.89), proper graphics (3.86), attractive of images (3.99), and proper multimedia features (3.94). Following the variables value, the skewness value of each measurement item ranged from -3.63 to -.43. Also, the kurtosis ranged from -.62 to 7.42. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of ORR, as shown in Table 3.9, are suitable for further analysis.

Table 3.9 Mean, Standard Deviations, Skewness, and Kurtosis of Online Room Reservation Website (ORR) for Pilot Test

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
INF	**Information quality**	**4.49**	**.64**	**-.93**	**-.11**	**Very Important**
INF1	- Up-to-date information of accommodation	4.52	.63	-.98	-.08	Very Important
INF2	- In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)	4.57	.66	-1.25	.36	Very Important
INF3	- Good source of information	4.39	.64	-.54	-.62	Very Important
RIS	**Privacy risk**	**4.75**	**.59**	**-3.04**	**6.49**	**Very Important**
RIS1	- Privacy of personal information during a transaction	4.76	.54	-2.58	7.42	Very Important
RIS2	- No unauthorized person accessing personal information	4.76	.58	-3.50	7.03	Very Important
RIS3	- No personal information for other purposes	4.84	.47	-3.63	4.96	Very Important
RIS4	- Safe to use credit cards	4.63	.75	-2.45	6.55	Very Important
AES	**Aesthetic**	**3.92**	**.89**	**-.64**	**.32**	**Fairly Important**
AES1	- Proper Colors	3.89	.96	-.75	.32	Fairly Important
AES2	- Proper Graphics	3.86	.92	-.67	.45	Fairly Important
AES3	- Attractive of images	3.99	.80	-.43	-.30	Fairly Important
AES4	- Proper multimedia features	3.94	.88	-.72	.81	Fairly Important
	Overall Level	**4.38**	**.71**	**-1.59**	**2.45**	**Very Important**

Note: N=109, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

3.3.4.5 Descriptive Statistics for Online Customer Engagement (OCE) for Pilot Test

The measurement scales for online customer engagement (OCE) for the pilot test recognize measured by two key dimensions; repurchase & word-of-mouth (REP), and sharing (SHA) with a total of 7 items. As described in Table 3.10 the overall perceived OCE of the sample is at a fairly important level ($\bar{X}$ = 4.02). About two dimensions, the means of two dimensions are different, in which repurchase & word-of-mouth ($\bar{X}$, 4.23, SD, .82) followed by sharing ($\bar{X}$, 3.48, SD, 1.01). According to separate indices, table 3.10 shows the mean and standard deviation of observed variables in OCE, the mean value of each measurement item ranged from 3.47 to 4.32. The standard deviation ranged from .72 to 1.02. The means of variables are a possibility for repurchase in the near future (4.32), I rely on the reviews with very high or very low ratings for the hotel (4.27), previous reviews on the hotel affect my willingness to make a reservation (4.31), often read other tourists' online reviews (4.15), and choose to book by gather information from tourists' online reviews (4.11). However, two observed variables in the sharing dimension are not at a very important level. The means of variables are share my direct experience to others (3.49), and Share my opinion, suggestion, and comment to others (3.47). Following the variables value, the skewness value of each measurement item ranged from -.97 to -.10. Also, the kurtosis ranged from -.70 to .69. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCE, as shown in Table 3.10, are suitable for further analysis.

Table 3.10 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Engagement (OCE) for Pilot Test

Code	Variables/Indicators	Mean	SD	Skewness	Kurtosis	Level of Important
REP	**Repurchase & Word-of-mouth**	**4.23**	**.82**	**-.88**	**.32**	**Very Important**
REP1	- Possibility for	4.32	.72	-.72	-.16	Very

Code	Variables/Indicators	Mean	SD	Skewness	Kurtosis	Level of Important
	repurchase in the near future					Important
REP2	- I rely on the reviews with very high or very low ratings for the hotel	4.27	.79	-.97	.64	Very Important
REP3	- Previous reviews on the hotel affect my willingness to make a reservation	4.31	.78	-.85	-.05	Very Important
REP4	- Often read other tourists' online reviews	4.15	.92	-.95	.45	Very Important
REP5	- Choose to book by gather information from tourists' online reviews	4.11	.87	-.89	.69	Very Important
SHA	**Sharing**	**3.48**	**1.01**	**-.10**	**-.65**	**Fairly Important**
SHA1	- Share my direct experience to others	3.49	1.01	-.10	-.61	Fairly Important
SHA2	- Share my opinion, suggestion, and comment to others	3.47	1.02	-.10	-.70	Important
	Overall Level	**4.02**	**.87**	**-.66**	**.04**	**Fairly Important**

Note: N=109, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

3.3.4.6 Summary Results of Descriptive Statistics of Four Constructs for Pilot Test

Table 3.11 presents the overall results of the four constructs of the study. The three constructs are at a very important level including OCS ($\bar{X}$, 4.55, SD, .64), OCX ($\bar{X}$, 4.25, SD, .83), and ORR ($\bar{X}$, 4.38, SD, .71). The different level is OCE ($\bar{X}$, 4.02, SD, .87) in a fairly level. Lastly, evidence shows that the skewness and kurtosis values of all constructs seen the normality assumption of SEM. Thus, all data are appropriate for exploratory and confirmatory factor analysis discussed in the next section.

Table 3.11 Summary Results of the Descriptive Analysis for Four Constructs for Pilot Test

Constructs	Mean	SD	Skewness	Kurtosis	Level of Important
Online Customer Service (OCS)	4.55	0.64	-1.34	1.60	Very Important
Online Customer Experience (OCX)	4.25	0.83	-1.37	2.80	Very Important
Online room reservation website (ORR)	4.38	0.71	-1.59	2.45	Very Important
Online Customer Engagement (OCE)	4.02	0.87	-0.66	0.04	Fairly Important
Overall	**4.30**	**0.77**	**-1.24**	**1.72**	**Very Important**

Note: N=109, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

3.3.4.7 Exploratory Factor Analysis (EFA) for Pilot Test

The statistical and methodological decisions of EFA cutoff (Benjamini & Hochberg, 1995), the analysis is scale reliability with Cronbach's alpha coefficient and exploratory factor analyses (EFA). Accurately, a scale is considered reliable if its observed variables had a corrected item-total correlation greater than .3 and a Cronbach's alpha coefficient greater than .6. In addition, the criteria required in the EFA includes (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014): 1) Eigenvalue ≥ 1 ; 2) total variance explained ≥ 50%; 3) KMO ≥ .6; 4) Significance coefficient of the KMO test ≤ .05; 5) factor loadings of all observed variables are ≥.5; and 6) weight difference between the loadings of two factors >.3. The researcher uses exploratory factor analysis (EFA) using pilot test amount 109 respondents. The analysis of each construct shows as 4 constructs:

1) Measures and Statistics of Online Customer Service (OCS) Construct for Pilot Test

The results of the test of the measures and statistics of OCS according to EFA process. The data inspection techniques, the results show that corrected item-total correlation>.5, $\chi 2$ =601.525, Sig.=.000, Cronbach's alpha coefficient =.897. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.875; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures (Hair Jr et al., 2014) resulting in 12 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 3.12 shows the EFA analysis. The EFA result presents that there are 2 variable components can be grouped. The first component is "Capability" (explained variance 38.757%), and the second component is "reliability" (explained variance 21.316%). The components can be cumulated with the variance of 60.073%. The total amount of these two components can be described as more than 60% so, there can be proved the components appropriate for identifying components.

Table 3.12 Exploratory Factor Analysis (EFA) of Online Customer Service (OCS) Construct

Label	Observed variables	Components	
		1	2
REA1	-Accuracy of records keeping	.055	.793
REA2	-Keeping promise of company	.260	.461
CAP1	-Prompt service delivery	.318	.174
CAP2	-Prompt responses by e-mail, chat, or other means	.507	.027
CAP3	-Problems resolving quickly	.365	.176
CAP4	-Informing important information promptly	.431	.089
CAP5	-Providing real-time information	.467	.129
CAP6	-Online service with a good performance	.421	.149
CAP7	-Content with a good performance	.524	.140
CAP8	-Knowing status of transaction	.313	.180
CAP9	-Understanding customer information	.479	.102
CAP10	-Clear answer	.465	.256

Note: N=109, Cronbach's Alpha= .897, KMO=.875, Approx. Chi-Square= 601.525, df= 66, Sig.=.000

2) Measures and Statistics of Online Customer Experience (OCX) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ =1004.758, Sig.=.000, Cronbach's alpha coefficient =.894. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.861; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures resulting in 15 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 3.13 shows the EFA analysis. The EFA result presents that there are 2 variable components can be grouped. The first component is "emotional feature & social interaction" (explained variance 38.637%), and the second component is "utilitarian feature" (explained variance 21.421%). The components can be cumulated with the variance of 60.358%. Total amount of these two components can be described more than 60% so, there can be proved the components appropriate for identifying components.

Table 3.13 Exploratory Factor Analysis (EFA) of Online Customer Experience (OCX) Construct

Label	Observed variables	Components	
		1	2
EMO1	-Enjoyable of online booking	.180	.824
EMO2	-Email alerts of special offers	.120	.847
EMO3	-Beautiful images on the website	.243	.615
EMO4	-Member of a website's community	.078	.749
EMO5	-Reviewing of places to visit on social channels	.152	.524
UTI1	-Ease of use	.845	.193
UTI2	-Economic value for money of online booking	.814	.119
UTI3	-Convenience of online booking	.555	.398
UTI4	-Finding the required room	.797	.069
UTI5	-Time saving	.712	.311
UTI6	-Product price information	.740	.357
UTI7	-Easy information assessment	.740	.124
UTI8	-Finding required information	.697	.345
UTI9	-Information completion	.740	.124
UTI10	-Customer care service information	.697	.345

Note: N=109, Cronbach's Alpha= .894, KMO=.861, Approx. Chi-Square= 1004.758, df= 105, Sig.=.000

3) Measures and Statistics of Online Room Reservation Website (ORR) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ =738.229, Sig.=.000, Cronbach's alpha coefficient =.874. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.834; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures resulting in 11 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 3.14 shows the EFA analysis. The EFA result presents that there are 3 variable components can be grouped. The first component is "information quality" (explained variance 28.377%), the second component is "risks privacy" (explained variance 25.101%), and the third component is "aesthetic" (explained variance 21.253%). The components can be cumulated with the variance of 74.690%. Total amount of these two components can be described more than 60% so, there can be proved the components appropriate for identifying components.

Table 3.14 Exploratory Factor Analysis (EFA) of Online Room Reservation Website (ORR) Construct

Label	**Observed variables**	**Component**		
		1	**2**	**3**
INF1	-Up-to-date information of accommodation	.246	.222	.756
INF2	-In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)	.065	.334	.815
INF3	-Good source of information	.180	.253	.796
RIS1	-Privacy of personal information during a transaction	.057	.715	.400
RIS2	-No unauthorized person accessing personal information	.070	.873	.249

Label	Observed variables	Component		
		1	2	3
RIS3	-No personal information for other purposes	.121	.874	.246
RIS4	-Safe to use credit cards	.296	.657	.115
AES1	-Proper Colors	.919	.123	.025
AES2	-Proper Graphics	.934	.115	.065
AES3	-Attractive of images	.742	.097	.355
AES4	-Proper multimedia features	.801	.172	.209

Note: N=109, Cronbach's Alpha= .874, KMO=.834, Approx. Chi-Square= 738.229, df= 55, Sig.=.000

4) Measures and Statistics of Online Customer Engagement (OCE) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ =329.652, Sig.=.000, Cronbach's alpha coefficient =.803. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.720; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures resulting in 7 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 3.15 shows the EFA analysis. The EFA result presents that there are 2 variable components can be grouped. The first component is "repurchase & word-of-mouth" (explained variance 43.268%) with five observation variables, and the second component is "sharing" (explained variance 25.105%) with two variables. The components can be cumulated with the variance of 68.373%. Total amount of these two components can be described more than 60% so, there can be proved the components appropriate for identifying components.

Table 3.15 Exploratory Factor Analysis (EFA) of Online Customer Engagement (OCE) Construct

Label	Observed variables	Components	
		1	2
REP1	-Possibility for repurchase in the near future	.580	.101
REP2	-I rely on the reviews with very high or very low ratings for the hotel	.749	.235
REP3	-Previous reviews on the hotel affect my willingness to make a reservation	.833	.179
REP4	-Often read other tourists' online reviews	.835	.077
REP5	-Choose to book by gather information from tourists' online reviews	.832	.036
SHA1	-Share my direct experience to others	.081	.919
SHA2	-Share my opinion, suggestion, and comment to others	.203	.899

Note: N=109, Cronbach's Alpha= .803, KMO=.720, Approx. Chi-Square= 329.652, df=21, Sig.=.000

5) Summarizes Measures and Statistics of 4 Constructs

The results of the analysis show that 45 observed variables of four constructs indicate that these variables clearly show that these variables are also appropriate and valid. The EFA result presents that there are nine dimensions. The first dimension is "reliability" with two observation variables, the second is "Capability" with ten observation variables, the third dimension is "emotional feature & social interaction" with five observation variables, the fourth dimension is "utilitarian feature" with ten observation variables, the fifth dimension is "information quality" with three observation variables, the sixth dimension is "privacy risk" with four observation variables, the seventh dimension is "aesthetic" with four observation variables, the eighth component is "repurchase & word-of-mouth" with five observation variables, and the last dimension is "sharing" with two observed variables. In conclusion, the EFA indicates that 45 observed variables, clearly show that these variables are also appropriate and valid for the main survey.

3.3.4.8 Re-adjust questionnaire

After the pilot test, the researcher will re-adjust the questionnaire by referring to the result of the pilot test. Then, the questionnaire will be

used for the main survey. Then, data will be collected for the main survey. The re-adjust questionnaire would be launched for collecting data by the number of sample sizes and the online questionnaire would be submitted to target respondents. For this pilot test, EFA indicates that 45 observed variables, clearly can be concluded that these variables are also appropriate and valid for the main survey.

3.4 Data Collection

All instruments and procedures for this study, including the questionnaire, and the data collection process, are used as the tool to collect survey responses by an online survey. The questionnaire will be developed using the Google forms application (Motyl, Baronio, Uberti, Speranza, & Filippi, 2017). The data collection methodology design to take answer the questions by submitting an online questionnaire via email/LINE/Website to target respondents The data would be collected by participants with online channels using accidental sampling techniques to gather information. At the end of the survey, each respondent is assigned a random code. Assemble quantitative data by using an online questionnaire to collect data from customers who purchased online room reservations via online shopping channels by website, mobile application, and other online channels. This research used a sampling method employed in previous online survey research that restricted participation in invited respondents who are online shoppers, and who are voluntarily willing to complete the survey questions. Respondents received information on the study's purpose, procedures to collect data, confidentiality measures, and participation guidelines before they are asked to complete the questionnaire. The process of data collection is shown in Figure following.

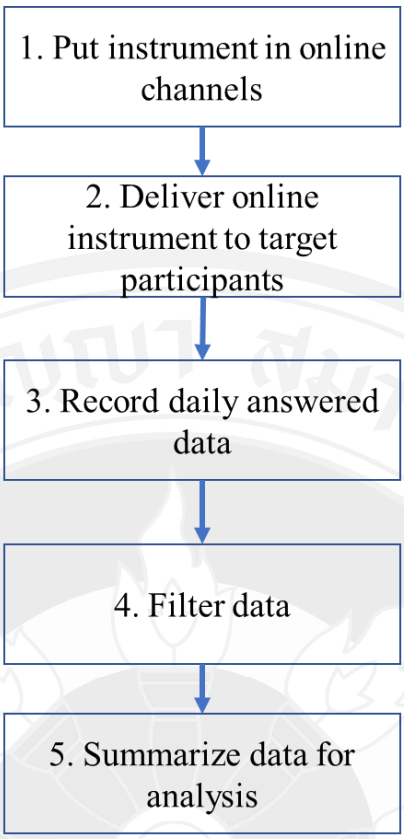


Figure 3.3 Data Collection Process

According to Figure 3.3 Data Collection Process, the process of data collection of this thesis, there includes 5 steps. First, the researcher put the designed instrument that passed Validity, Index of Item Objective Congruence (IOC), and Reliability test process in online channels such as website, email, and etc. Second, the researcher delivers online instruments to target participants, persons who experienced an online room reservation, and have been purchased online room reservations for accommodation. Then, the researcher records daily answered data to the data warehouse. Fourth, the researcher filters data by referring to the population profile. Finally, the researcher summarized the filtered data for analysis.

3.5 Data Analysis

3.5.1 Descriptive Analysis

The data characteristics are essential for any research using structural equation modeling (SEM) when the hypothesized model is multifaceted to confirm the accurateness of the research results (Schumacker & Lomax, 2004). Therefore, this part utilizes related descriptive statistics for two significant aspects;

1) using mean ($\overline{X}$) standard deviations (S.D.) to assess the level of respondents' perception to each variable of complete research questions.

2) screening initial data to evaluate the normal distribution against skewness (Skew.) and kurtosis (Kur.) values (the distribution scores) as part of data check before confirmatory factor analysis (CFA).

Normality refers to "the degree to which the distribution of the sample data corresponds to a normal distribution" (Hair et al., 2014). Normality relates to matter for any researchers that concern inferential statistics, including structural equation modeling (SEM). Normally, SEM has an assessment technique of a maximum likelihood (ML) method with the assumption that specific indices are normal distributions when input data are normal, and all shared distributions of all balancing variables are classically scattered (Kline, 2015). Plentiful studies (Kline, 2015) suggests noticing the nonnormality through the procedures of skewness and kurtosis values (univariate frequency distributions). When data are extremely skewed or when most scores are on one side of the measurement level (being asymmetrical), variance and covariance among random variables will be affected, while kurtosis will have an impact on the statistical measurement analysis. Consequently, this research tests the normality of all variables against the acceptable standards between +3 and -3, and +10 and -10, correspondingly, for skewness and kurtosis as per the guideline set by Kline (2015).

3.5.2 Exploratory Factor Analysis (EFA)

EFA is the analysis to survey and indicate the common factor that able to explain the relationship among variables by creating a new variable in the form of a common factor. The principal component analysis is used to extract the factors

(Costello & Osborne, 2011). The common factors will be grouped according to their relationship and delist the variables that cannot be grouped, to consider the suitability and relationship of the variables from Kaiser-Meyer-Olkin (KMO), Commonality, and Principal Components Analysis. The following criteria are including I) each factor must have to be an eigenvalue more than 1; and II) the cut-off item criteria is factor loadings lower than .50, high cross-loadings over .40, and low communalities cooperation lower than .30 (Hair et al., 2009).

The commonality is the sharing the features of the variance of the variables that are explainable. If the result is closer to zero, it means that the variable variance cannot be explained or can be explained a little. If the coefficient is closer to 1, it is explainable. This research analyzed the factors by Principal Component that set Initial commonality to every variable to be 1. Thus, the commonalities of the variable observed from the research are over 0.5 for every variable, it is regarded that the variables can be analyzed by the next step.

3.5.3 Structural Equation Model

The testing process is evaluation assessment by following the general succession of testing proposed projected by Brown (2006): 1) assess test the confirmatory factor analysis (CFA) model distinctly definitely in each group; 2) assess test of identical form; 3) assess test the quality of factor loadings; and 4) assess test the equality of item indicator intercepts captures. Resemblance Comparison across different changed groups could be finished completed by adding filling the minimum least requirements necessities of equal factor loadings and equal indicator intercepts (Hair, Black, Babin, Anderson, & Tatham, 2006). This research analyzed data by the structural equation modeling (SEM) technique using the samples by indicating the size as the number function of the parameter. The various online channels would be used by email, Line, weblink, and etc. Structural equation modeling (SEM) that is a statistical method is developed and tested systems in social actions, learning, and advertising, natural science, and finances (Raykov & Marcoulides, 2006). Also, SEM is broadly practiced on social action and science of actions for measuring error in experiential variables (Raykov & Marcoulides, 2006). Moreover, effects concerned a model can be attained directly (Raykov &

Marcoulides, 2006). SEM comprises the assessment of model measuring and review of a model with structure (Byrne, 1998).

Quantitative data uses descriptive statistics and statistical analysis including percentage and mean, and factor analysis by statistical methods. Data will be recorded and collected for analysis using AMOS Version 23 (SEM-Structural Equation Model) by discriminant analysis into model analysis to find model fit in compliance with the conceptual framework and hypothesis testing. The SEM method can test the measurement features of the constructs (Hair, Anderson, Tatham, & Black, 1998). Besides, SEM supports total testing of model fit and specific constraint approximate tests concurrently. The structural model fit indices can be proved. Some indices are tested, with chi-square statistic ($\chi 2$), normed chi-square statistic ($\chi 2/df$), comparative fit index (CFI), the root mean square error of approximation (RMSEA), Tucker Lewis index (TLI), and goodness-of-fit index (GFI). The cut-off value of the goodness of fit indices is listed in Table 3.16.

Table 3.16 Cut-Off Values for Goodness of Fit Indices

Goodness of fit indices	**Threshold**	**References**
Chi-squares ($\chi 2$)	Non-Significant	Kline (1998) Browne and Cudeck (1992)
Normed Chi-squares ($\chi 2$ /df)	<5.0	Hair et al. (2009) Tabachnick, Fidell, and Ullman (2007)
Root Mean Square Error of Approximation (RMSEA)	<.08	Schreiber, Nora, Stage, Barlow, and King (2006) Browne and Cudeck (1992)
Goodness-of-Fit Index (GFI)	>.90	Ahmad et al. (2012); Byrne (1998); Hu and Bentler (1999)
Comparative Fit Index (CFI)	≥ .90	Hu and Bentler (1999); Tabachnick, Fidell, and Ullman (2007)
Tucker Lewis Index (TLI)	≥.90	Ahmad et al. (2012); Marsh, Balla, and McDonald (1988)

According to Table 3.16 Cut-Off Values for Goodness of Fit Indices, the cut-off values of each index would be referred to the threshold column. In consequence, the result will determine if the alternative result has more than one in terms of theoretical conclusion and managerial conclusion. Furthermore, the suggestions will assist with future research. Scores are given for the factors affecting the opinion to use and purchase online tourism shopping. The 5-point Likert Scale is applied to interpret the scores as follows:

Class Interval = (highest score – lowest score) / number of scales

= (5-1) / 5

= 0.80

1.00-1.80 average means the lowest level

1.81-2.60 average means the low level

2.61-3.40 average means the medium level

3.41-4.20 average means the high level

4.21-5.00 average means the highest level

A structural equation model analysis with a measurement model represents the relationship between latent variables and observable variables. The structural model also presents the causal relationships between exogenous and endogenous variables which may be recursive and linear additive or non-recursive and linear additive. As a result, the structural model will reflect the factor analysis. The research must study all theories related to the variables that affect the dependent variables to build the hypothesis or the relationship models between all variables.

3.5.4 Path Analysis

Path analysis will analyze the path of independent variables to dependent variables by direct and indirect path analysis. Thus, the key to this analysis is to separate the size of the path from the direct and indirect methods to compare the matrix. The research must study all theories related to the variables that affect the dependent variables to build the hypothesis or the relationship models between all variables. Trials of significance for all paths. For measurement, the standard method for assessment, the loadings of path recommend at .70 or higher.

3.5.5 Confirmation Factor Analysis (CFA)

Confirmation Factor Analysis (CFA) is a statistical analysis that the researcher can examine the measures of constructs. In order to CFA, there can identify the factors required in the data between latent and observed variables. Also, the researcher can make decisions to support or not support the theoretical review. Besides, the methodology of CFA, the researcher analyzes construct validity quantified by variables selected which related the construct (Straub, 1989), the factors of construct validity composed of convergent and discriminant validity. Also, the CFA process includes analysis of Average variance extracted (AVE) and Composite reliability (CR) which use to assess the convergent validity of the model. The thresholds of AVE and CR are above .50, and above .70 correspondingly (Hair, Black, Babin, & Anderson, 2010). Additionally, factor loadings passed at higher than 0.60 (Chin, Gopal, & Salisbury, 1997).

3.6 Research Ethics

The Research ethics of this thesis including the following guidelines are considered in this research:

1) Participants who reply to the online questionnaire of this research will be qualified basis requirements of participants of this research. All participants are completely answered about the research.

2) Informed consensus contains the right to request removal from the requests at any time. Contributors will receive with full right to know the research information and implication. The implication is highlighted over the research to understand the agreement. The research does not involve any illusion of contributors.

3) For protective confidentiality, contributors are advised and assured that the information provided is in the highest level of confidentiality. Consequently, this research manages initials of contributors' names as assumed name for the providence

3.7 Chapter Summary

The third chapter clarified the essential research method of this research and explained the fixed research procedures performed in the research. The process of this research is divided into two parts. The first part is research design including sampling techniques, collecting data, questionnaire design. The second part is collecting and analyzing data including screening data, testing normality, reliability, and validity, validating a second-order influential construct, and analyzing SEM. The section included detailed descriptions of research design, conceptual framework, research instrument, data collection, and analysis. Moreover, the applied approaches are concerned approach, and ethic.

CHAPTER 4

DATA ANALYSIS AND RESULTS

The objective of chapter 4 is to summarize and present the results from this study with three objectives. There are including 1) To identify the factors of online customer services, online customer experience, online room reservation website, and online customer engagement, 2) To investigate the variables of online customer engagement, 3) To develop a structural equation model of enhancing online customer engagement. This study uses a survey questionnaire with the 45 items of four constructs to conduct a quantitative study. Respondents of the survey are 451 respondents who have used online room reservation service, Comrey and Lee (2013) explained the rating scale for evaluating EFA sample size quality (100 = poor; 1000 = excellent) which data analysis used with IBM SPSS statistics 22 and Amos 23 software. The data analysis and results are as following: Introduction, Respondent Profile, Descriptive Analysis and Assessment of Normality, Exploratory Factor Analysis (EFA), Measurement Model Assessment, Structural Model, Hypotheses testing, and Chapter summary.

4.1 Introduction

The process of analysis report is descriptive statistics analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), measurement model analysis, structural model, and hypotheses testing. A model is verified and related to the primary model projected in the research to expose significant paths for hypothesis testing. Then, the researcher revises the model referred CFA and measurement model for proposing a structural model. Finally, the reporting of hypothesis testing is shown as a final model and presented at the discussion part. By the way, the meaning of each dimension/variable represents as follows.

Table 4.1 List of Meaning of Dimensions/Variables

Abbreviation		Meaning
REA	→	-Reliability
REA1	→	-Accuracy of records keeping
REA2	→	-Keeping promise of company
CAP	→	-Capability
CAP1	→	-Prompt service delivery
CAP2	→	-Prompt responses by e-mail, chat, or other means
CAP3	→	-Problems resolving quickly
CAP4	→	-Informing important information promptly
CAP5	→	-Providing real-time information
CAP6	→	-Online service with a good performance
CAP7	→	-Content with a good performance
CAP8	→	-Knowing status of transaction
CAP9	→	-Understanding customer information
CAP10	→	-Clear answer
EMO	→	-Emotional Feature
EMO1	→	-Enjoyable of online booking
EMO2	→	-Email alerts of special offers
EMO3	→	-Beautiful images on the website
EMO4	→	-Member of a website's community
EMO5	→	-Reviewing of places to visit on social channels
UTI	→	-Utilitarian feature
UTI1	→	-Ease of use
UTI2	→	-Economic value for money of online booking
UTI3	→	-Convenience of online booking
UTI4	→	-Finding the required room
UTI5	→	-Time saving
UTI6	→	-Product price information
UTI7	→	-Easy information assessment
UTI8	→	-Finding required information
UTI9	→	-Information completion
UTI10	→	-Customer care service information
INF	→	-Information quality
INF1	→	-Up-to-date information of accommodation
INF2	→	-In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)
INF3	→	-Good source of information
RIS	→	-Privacy risk
RIS1	→	-Privacy of personal information during a transaction
RIS2	→	-No unauthorized person accessing personal information
RIS3	→	-No personal information for other purposes
RIS4	→	-Safe to use credit cards
AES	→	-Aesthetic
AES1	→	-Proper Colors

Abbreviation		Meaning
AES2	→	-Proper Graphics
AES3	→	-Attractive of images
AES4	→	-Proper multimedia features
REP	→	-Repurchase & Word-of-mouth
REP1	→	-Possibility for repurchase in the near future
REP2	→	-I rely on the reviews with very high or very low ratings for the hotel
REP3	→	-Previous reviews on the hotel affect my willingness to make a reservation
REP4	→	-Often read other tourists' online reviews
REP5	→	- Choose to book by gather information from tourists' online reviews
SHA	→	-Sharing
SHA1	→	-Share my direct experience to others
SHA2	→	-Share my opinion, suggestion, and comment to others

According to table 4.1, the abbreviation of dimensions and variables of this analysis are explained the meaning as the right column.

4.2 Respondent Profile

The respondent profile presents socio-demographic information, opinion, and behavior on online room reservations. The researcher reports the descriptive statistics for each extracted factor and its measurement variables in terms of means and standard deviations are presented. The data analysis of the demographic information of the respondents is shown in Table 4.2 The gender of respondents shows 37.50% male, and 62.50% female. The most marital status is marriage (joint) (46.34%) and single (46.12%). Among which the generation with the highest percentage is generation X (Born 1965-1979) (49.67%), and the lowest percentage is generation M (Born 1995-2015) (1.77%). Relating to the education level, the majority of the respondents are bachelor's degree (46.12%) and master's degree or above (42.56%), and the minority is a junior high school or below (0.67%). Most of the respondents (46.34%) are 50,000 baht of revenue and above, and the least (2.22%) is 10,000 baht below.

Table 4.2 Demographic Characteristics of the Sample (n = 451)

Demographic	Category	Frequency (n=451)	Percentage (%)
Gender	Male	169	37.50
	Female	282	62.50
Marital Status	Single	208	46.12
	Marriage (joint)	209	46.34
	Marriage (separate)	14	3.10
	Divorced	9	2.00
	Widowed	11	2.44
Generation	Gen. M (Born 1995-2015)	8	1.77
	Gen. Y (Born 1980-1994)	144	31.93
	Gen. X (Born 1965-1979)	224	49.67
	Baby Boomer (Born 1944-1964)	75	16.63
Education	Junior High School or below	3	0.67
	High School or Voc. Cert.	27	5.99
	Dip./High Voc. Cert. or Diploma	21	4.66
	Bachelor's Degree	208	46.12
	Master's Degree or above	192	42.56
Revenue/month	10,000 baht below	10	2.22
	10,001 - 20,000 baht	43	9.54
	20,001 - 30,000 baht	71	15.74
	30,001 - 40,000 baht	59	13.08
	40,001 – 50,000 baht	59	13.08
	50,000 baht above	209	46.34

Table 4.3 presents results regarding respondents' opinion and behavior. The majority of respondents (60.31%) indicated they book room for staying in 1-2 days a trip, 17.52% for 3-4 days, and the rest (22.17%) is for more than 4 days. The accompanying persons that they usually travel are families (55.65%), friends/colleagues (31.05%), alone (10.64%), and other (2.66%). Most respondents (50.55%) book for staying in Thailand only, and staying both Thailand and foreign country show 44.79%, while, only 4.66% stay in a foreign country only. There are about half of respondents (49.89%) indicated 1-2 people traveling with, 35.92% traveling with 3-4 people, and 14.19% traveling with more than 4 people. The frequency of booking per year is 1-2 times (45.01%), 3-4 times (34.37%) and more

than 4 times (20.62%). Most of respondents (36.14%) spent 3,001-5,000 baht for booking a trip, 31.94% less than 3,000 baht, 5,001-10,000 baht (17.29%), 10,001-20,000 baht (9.53%), 20,001-30,000 baht (3.33%), and the rest (1.77%) is more than 30,000 baht. The most online channel that respondents often book is Agoda (53.44%), followed by Booking.com (23.28%), and direct hotel (10.20%).

Table 4.3 Opinion and Behavior of Respondents (n = 451)

Opinion and behavior	**Category**	**Frequency**	**Percentage %**
Booking days	1-2 days	272	60.31
	3-4 days	79	17.52
	more than 4 days	100	22.17
Accompanying person	Alone	48	10.64
	Friends/colleagues	140	31.05
	Families	251	55.65
	Other	12	2.66
Booking Location	Thailand only	228	50.55
	Foreign country only	21	4.66
	Both Thailand and Foreign country	202	44.79
No. of people traveling	1-2 people	225	49.89
	3-4 people	162	35.92
	More than 4 people	64	14.19
Booking Frequency/Year	1-2 times	203	45.01
	3-4 times	155	34.37
	More than 4 times	93	20.62
Purchasing cost/time	less than 3,000 baht	144	31.94
	3,001-5,000 baht	163	36.14
	5,001-10,000 baht	78	17.29
	10,001-20,000 baht	43	9.53
	20,001-30,000 baht	15	3.33
	more than 30,000 baht	8	1.77
Most often channel	Direct hotel website	46	10.20
	Airline website	4	0.89
	Tripadvisor	1	0.22
	Agoda	241	53.44
	Hotels.com	5	1.11
	Trivago	20	4.43
	Booking	105	23.28

Opinion and behavior	Category	Frequency	Percentage %
	Expedia	12	2.66
	Airbnb	6	1.33
	Traveloka	9	2.00
	Other	2	0.44

4.3 Descriptive Analysis and Assessment of Normality

In general profile, the respondents who have experienced in online room reservation responded to the survey items on the four constructs of the research, online customer service (OCS), online customer experience (OCX), online room reservation website (ORR), and online customer engagement (OCE), with scoring their opinions from 1 (not at all important) to 5 (very important). The data characteristics are essential for any research using structural equation modeling (SEM) when the hypothesized model is multifaceted to confirm the accurateness of the research results (Schumacker & Lomax, 2004). Therefore, this part utilizes related descriptive statistics for two significant aspects;

1) using mean ($\bar{X}$) standard deviations (S.D.) to assess the level of respondents' perception of each variable to complete research questions.

2) screening initial data to evaluate the normal distribution against skewness (Skew.) and kurtosis (Kur.) values (the distribution scores) as part of data check before confirmatory factor analysis (CFA).

4.3.1 Descriptive Statistics for Online Customer Service (OCS)

The measurement scales for online customer service (OCS) of this research recognizes measured by two key dimensions; reliability (REA), and capability (CAP) with a total of 12 items. As described in Table 4.4, the overall perceived OCS of the sample is at a very important level ($\bar{X}$ = 4.50) indicating that online customer service is very important for online room reservation. About two dimensions, the means of all dimensions are very important and similar, in which reliability the highest means ($\bar{X}$, 4.51, SD, .745) followed by Capability ($\bar{X}$, 4.50, SD, .682) correspondingly.

According to separate indices, all of the means scores are very important. The highest mean score is knowing status of transaction ($\bar{X}$, 4.65, SD, .599) and the lowest mean score is understanding customer information ($\bar{X}$, 4.41, SD, .688). The mean value of each measurement item ranged from 4.41 to 4.65. The standard deviation ranged from .599 to .808. The means and SD of variables are accuracy of records keeping ($\bar{X}$, 4.46, SD, .08), keeping promise of company ($\bar{X}$, 4.56, SD, .618), prompt service delivery ($\bar{X}$, 4.49, SD, .641), prompt responses by e-mail, chat, or other means ($\bar{X}$, 4.44, SD, .692), Problems resolving quickly ($\bar{X}$, 4.58, SD, .724), informing important information promptly ($\bar{X}$, 4.49, SD, .700), providing real-time information ($\bar{X}$, 4.52, SD, .694), online service with a good performance ($\bar{X}$, 4.48, SD, .668), content with a good performance ($\bar{X}$, 4.43, SD, .687), knowing status of transaction ($\bar{X}$, 4.65, SD, .599), understanding customer information ($\bar{X}$, 4.41, SD, .688), and clear answer ($\bar{X}$, 4.47, SD, .722). Following the variable's value, the skewness value of each measurement item ranged from -1.785 to -.922. Also, the kurtosis ranged from .011 to 2.974. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCS, as shown in Table 4.4, are suitable for further analysis.

Table 4.4 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Service (OCS)

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
REA	**Reliability**	**4.51**	**.745**	**-1.609**	**2.548**	**Very Important**
REA1	-Accuracy of records keeping	4.46	.808	-1.655	2.974	Very Important
REA2	-Keeping promise of company	4.56	.681	-1.563	2.121	Very Important
CAP	**Capability**	**4.50**	**.682**	**-1.233**	**1.175**	**Very Important**
CAP1	-Prompt service delivery	4.49	.641	-.922	.011	Very

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
CAP2	-Prompt responses by e-mail, chat, or other means	4.44	.692	-1.165	1.502	Important Very Important
CAP3	-Problems resolving quickly	4.58	.724	-1.785	2.886	Very Important
CAP4	-Informing important information promptly	4.49	.700	-1.329	1.716	Very Important
CAP5	-Providing real-time information	4.52	.694	-1.271	.850	Very Important
CAP6	-Online service with a good performance	4.48	.668	-1.048	.471	Very Important
CAP7	-Content with a good performance	4.43	.687	-.998	.566	Very Important
CAP8	-Knowing status of transaction	4.65	.599	-1.543	1.588	Very Important
CAP9	-Understanding customer information	4.41	.688	-.941	.468	Very Important
CAP10	-Clear answer	4.47	.722	-1.331	1.690	Very Important
	Overall Level	**4.50**	**.69**	**-1.296**	**1.404**	**Very Important**

Note: N=451, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

4.3.2 Descriptive Statistics for Online Customer Experience (OCX)

The measurement scales for online customer service (OCX) of this research recognizes measured by two key dimensions; emotional feature & social interaction (EMO), and utilitarian feature (UTI) with a total of 15 items. As described in Table 4.5, the overall perceived OCX of the sample is at a very important level ($\bar{X}$ = 4.25) indicating that online customer experience is very important for online room reservation. About two dimensions, the means of all dimensions are very important and similar, in which utilitarian feature the highest means ($\bar{X}$, 4.52, SD, .699) followed by emotional feature & social interaction ($\bar{X}$, 3.71, SD, 1.091). According to

separate indices, all of the means scores are very important. As Table 4.5 shows the mean and standard deviation of observed variables in OCX construct, the variables of emotional feature & social interaction dimension are not at the very important level. The mean value of each measurement item ranged from 3.29 to 4.60. The standard deviation ranged from .652 to 1.305. The means of variables are enjoyable of online booking (3.87), email alerts of special offers (3.80), beautiful images on the website (4.04), members of a website's community (3.55), and reviewing of places to visit on social channels (3.29). The variables of utilitarian feature dimension are at a very important level. The means of variables are ease of use (4.50), economic value for money of online booking (4.46), convenience of online booking (4.60), finding the required room (4.53), time saving (4.58), product price information (4.58), easy information assessment (4.52), finding required information (4.53), information completion (4.56), and customer care service information (4.32). Following the variable's value, the skewness value of each measurement item ranged from -1.889 to -.227. Also, the kurtosis ranged from -1.031 to 4.386. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCX, as shown in Table 4.4, are suitable for further analysis.

Table 4.5 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Experience (OCX)

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
EMO	**Emotional feature & Social interaction**	**3.71**	**1.091**	**-0.459**	**-.614**	**Fairly Important**
EMO1	-Enjoyable of online booking	3.87	.945	-.539	-.299	Fairly Important
EMO2	-Email alerts of special offers	3.80	1.101	-.633	-.446	Fairly Important
EMO3	-Beautiful images on the website	4.04	.913	-.571	-.392	Fairly Important
EMO4	-Member of a website's community	3.55	1.189	-.324	-.901	Important
EMO5	-Reviewing of places to visit on social channels	3.29	1.305	-.227	-1.031	Important

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
UTI	**Utilitarian feature**	**4.52**	**.699**	**-1.492**	**2.351**	**Very Important**
UTI1	-Ease of use	4.50	.697	-1.272	1.351	Very Important
UTI2	-Economic value for money of online booking	4.46	.748	-1.355	1.776	Very Important
UTI3	-Convenience of online booking	4.60	.687	-1.712	2.677	Very Important
UTI4	-Finding the required room	4.53	.740	-1.889	4.386	Very Important
UTI5	-Time saving	4.58	.653	-1.684	3.623	Very Important
UTI6	-Product price information	4.58	.660	-1.584	2.564	Very Important
UTI7	-Easy information assessment	4.52	.687	-1.405	1.913	Very Important
UTI8	-Finding required information	4.53	.677	-1.364	1.535	Very Important
UTI9	-Information completion	4.56	.652	-1.419	1.769	Very Important
UTI10	-Customer care service information	4.32	.793	-1.237	1.912	Very Important
	Overall Level	**4.25**	**.830**	**-1.148**	**1.362**	**Very Important**

Note: N=451, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

4.3.3 Descriptive Statistics for Online Room Reservation Website (ORR)

The measurement scales for the online room reservation website (ORR) of this research recognizes measured by three key dimensions; information quality (INF), privacy risk (RIS), and aesthetic (AES) with a total of 11 items. As described in Table 4.6, the overall perceived ORR of the sample is at a very important level ($\bar{X}$ = 4.349) indicating that online room reservation website is very important for online room reservation. About three dimensions, there is the highest dimension at very important is perceived risk ($\bar{X}$, 4.673, SD, .662) followed by information quality ($\bar{X}$, 4.480, SD, .688) and aesthetic ($\bar{X}$, 3.928, SD, .9514). As Table 4.6 shows the mean and standard deviation of observed variables in ORR construct, the variables of information quality

and privacy risk dimensions are at the very important level. The mean value of each measurement item ranged from 3.85 to 4.70. The standard deviation ranged from .628 to 1.000. The means of variables are up-to-date information of accommodation (4.49), in-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information) (4.54), good source of information (4.41), privacy of personal information during a transaction (4.69), no unauthorized person accessing personal information (4.69), no personal information for other purposes (4.70), and safe to use credit cards (4.61). However, all variables of aesthetic dimension are at the important level. The means of variables are proper Colors (3.87), proper graphics (3.85), attractive of images (4.03), and proper multimedia features (3.96). Following the variables value, the skewness value of each measurement item ranged from -2.512 to -.553. Also, the kurtosis ranged from -.164 to 7.148. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of ORR, as shown in Table 4.5, are suitable for further analysis.

Table 4.6 Mean, Standard Deviations, Skewness, and Kurtosis of Online Room Reservation website (ORR)

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
INF	**Information quality**	**4.48**	**.688**	**-1.145**	**.905**	**Very Important**
INF1	-Up-to-date information of accommodation	4.49	.674	-1.039	.221	Very Important
INF2	-In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)	4.54	.667	-1.354	1.726	Very Important
INF3	-Good source of information	4.41	.723	-1.042	.767	Very Important

Code	Variables/Indicators	Mean	SD	Skew.	Kur.	Level of Important
RIS	**Privacy risk**	**4.67**	**.662**	**-2.165**	**4.637**	**Very Important**
RIS1	-Privacy of personal information during a transaction	4.69	.628	-2.080	3.971	Very Important
RIS2	-No unauthorized person accessing personal information	4.69	.671	-2.512	7.148	Very Important
RIS3	-No personal information for other purposes	4.70	.631	-2.062	3.402	Very Important
RIS4	-Safe to use credit cards	4.61	.719	-2.006	4.025	Very Important
AES	**Aesthetic**	**3.93**	**.951**	**-.606**	**-.123**	**Fairly Important**
AES1	-Proper Colors	3.87	1.000	-.628	-.083	Fairly Important
AES2	-Proper Graphics	3.85	.973	-.553	-.151	Fairly Important
AES3	-Attractive of images	4.03	.912	-.657	-.164	Fairly Important
AES4	-Proper multimedia features	3.96	.918	-.587	-.092	Fairly Important
	Overall Level	**4.35**	**.774**	**-1.320**	**1.888**	**Very Important**

Note: N=451, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

4.3.4 Descriptive Statistics for Online Customer Engagement (OCE)

The measurement scales for online customer engagement (OCE) of this research recognizes measured by two key dimensions; repurchase & word-of-mouth (REP), and sharing (SHA) with a total of 7 items. As described in Table 4.7 the overall perceived OCE of the sample is at a fairly important level ($\bar{X}$ = 4.08). About two dimensions, the means of two dimensions are different, in which repurchase & word-of-mouth ($\bar{X}$, 4.26, SD, .821) followed by sharing ($\bar{X}$, 3.62, SD, 1.058). According to separate indices, table 4.6 shows the mean and standard deviation of observed variables in OCE, the mean value of each measurement item ranged from

3.59 to 4.35. The standard deviation ranged from .758 to 1.062. The means of variables are a possibility for repurchase in the near future (4.27), I rely on the reviews with very high or very low ratings for the hotel (4.31), previous reviews on the hotel affect my willingness to make a reservation (4.35), often read other tourists' online reviews (4.23), and choose to book by gather information from tourists' online reviews (4.15). However, two observed variables in the sharing dimension are not at a very important level. The means of variables are share my direct experience to others (3.65), and Share my opinion, suggestion, and comment to others (3.59). Following the variables value, the skewness value of each measurement item ranged from -1.068 to -.393. Also, the kurtosis ranged from .018 to .692. When exploring each measurement item for skewness and kurtosis, the outcomes show that the values of all items are within the suggested threshold (skewness = ±3, kurtosis = ±10) (Kline, 2015) accepting the normality assumption. Thus, the measurement scales of OCE, as shown in Table 4.7, are suitable for further analysis.

Table 4.7 Mean, Standard Deviations, Skewness, and Kurtosis of Online Customer Engagement (OCE)

Code	Variables/Indicators	Mean	SD	Skewness	Kurtosis	Level of Important
REP	**Repurchase & Word-of-mouth**	**4.26**	**.821**	**-.953**	**.502**	**Very Important**
REP1	-Possibility for repurchase in the near future	4.27	.799	-.950	.663	Very Important
REP2	-I rely on the reviews with very high or very low ratings for the hotel	4.31	.762	-.963	.684	Very Important
REP3	-Previous reviews on the hotel affect my willingness to make a reservation	4.35	.758	-.892	.018	Very Important
REP4	-Often read other tourists' online reviews	4.23	.898	-1.068	.692	Very Important
REP5	-Choose to book by gather information from tourists' online reviews	4.15	.886	-.892	.453	Very Important

Code	Variables/Indicators	Mean	SD	Skewness	Kurtosis	Level of Important
SHA	**Sharing**	**3.62**	**1.058**	**-.417**	**-0.424**	**Fairly Important**
SHA1	-Share my direct experience to others	3.65	1.062	-.440	-.413	Fairly Important
SHA2	-Share my opinion, suggestion, and comment to others	3.59	1.053	-.393	-.434	Important
	Overall Level	**4.08**	**.888**	**-.800**	**.238**	**Fairly Important**

Note: N=451, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

4.3.5 Summary Results of Descriptive Statistics of Four Constructs

Table 4.8 presents the overall results of the four constructs of the study. The three constructs are at a very important level including OCS ($\bar{X}$, 4.50, SD, .690), OCX ($\bar{X}$, 4.25, SD, .830), and ORR ($\bar{X}$, 4.35, SD, .774). The different level is OCE ($\bar{X}$, 4.08, SD, .888) at a fairly level. Lastly, evidence shows that the skewness and kurtosis values of all constructs seen the normality assumption of SEM. Thus, all data are appropriate for exploratory and confirmatory factor analysis discussed in the next section.

Table 4.8 Summary Results of the Descriptive Analysis for Four Constructs

Constructs	Mean	SD	Skewness	Kurtosis	Level of Important
Online Customer Service (OCS)	4.50	.690	-1.296	1.404	Very Important
Online Customer Experience (OCX)	4.25	.830	-1.148	1.362	Very Important
Online room reservation website (ORR)	4.35	.774	-1.320	1.888	Very Important
Online Customer	4.08	.888	-0.800	0.238	Fairly Important

Constructs	Mean	SD	Skewness	Kurtosis	Level of Important
Engagement (OCE)					
Overall	**4.295**	**.796**	**-1.141**	**1.223**	**Very Important**

Note: N=451, $\bar{X}$ = Mean, SD = Standard deviation, Skew. = Skewness, Kur. = Kurtosis

4.4 Exploratory Factor Analysis (EFA) of Main Survey

The statistical and methodological decisions of EFA cutoff (Benjamini & Hochberg, 1995), the analysis is scale reliability with Cronbach's alpha coefficient and exploratory factor analyses (EFA). Accurately, a scale is considered reliable if its observed variables had a corrected item-total correlation greater than .3 and a Cronbach's alpha coefficient greater than .6. In addition, the criteria required in the EFA includes (J. F. Hair Jr et al., 2014): 1) Eigenvalue ≥ 1; 2) total variance explained ≥ 50%; 3) KMO ≥ .6; 4) Significance coefficient of the KMO test ≤ .05; 5) factor loadings of all observed variables are ≥.5; and 6) weight difference between the loadings of two factors >.3. The researcher uses exploratory factor analysis (EFA) using pilot test amount 451 respondents. The analysis of each construct shows as 4 constructs:

4.4.1 Measures and Statistics of Online Customer Service (OCS) Construct

The results of the test of the measures and statistics of OCS according to EFA process. The data inspection techniques, the results show that corrected item-total correlation>.5, $\chi 2$ =2683.908, Sig.=.000, Cronbach's alpha coefficient =.916. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.875; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical

procedures (J. F. Hair Jr et al., 2014) resulting in 12 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 4.9 shows the EFA analysis. The EFA result presents that there are 2 variable components that can be grouped including capability and reliability. There can be proved the components appropriate for identifying components.

Table 4.9 Exploratory Factor Analysis (EFA) of Online Customer Service (OCS) Construct

Label	Observed variables	Components	
		1	2
REA1	-Accuracy of records keeping	.165	.865
REA2	-Keeping promise of company	.336	.770
CAP1	-Prompt service delivery	.577	.368
CAP2	-Prompt responses by e-mail, chat, or other means	.689	.298
CAP3	-Problems resolving quickly	.566	.439
CAP4	-Informing important information promptly	.736	.208
CAP5	-Providing real-time information	.693	.358
CAP6	-Online service with a good performance	.764	.300
CAP7	-Content with a good performance	.752	.171
CAP8	-Knowing status of transaction	.700	.295
CAP9	-Understanding customer information	.775	.127
CAP10	-Clear answer	.677	.314

Note: N=451, Cronbach's Alpha= .916, KMO= .943, Approx. Chi-Square= 2683.908, df= 66, Sig.=0.000

4.4.2 Measures and Statistics of Online Customer Experience (OCX) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ == 3657.021, Sig.=.000, Cronbach's alpha coefficient =.890. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.922; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two

factors >.3. Following standard statistical procedures resulting in 15 observed variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 4.10 shows the EFA analysis. The EFA result presents that there are 2 variable components that can be grouped including emotional feature & social interaction and utilitarian feature. There can be proved the components appropriate for identifying components.

Table 4.10 Exploratory Factor Analysis (EFA) of Online Customer Service (OCX) Construct

Label	Observed variables	Components	
		1	2
EMO1	-Enjoyable of online booking	.260	.769
EMO2	-Email alerts of special offers	.158	.794
EMO3	-Beautiful images on the website	.289	.589
EMO4	-Member of a website's community	.147	.759
EMO5	-Reviewing of places to visit on social channels	-.007	.675
UTI1	-Ease of use	.673	.276
UTI2	-Economic value for money of online booking	.753	.216
UTI3	-Convenience of online booking	.798	.197
UTI4	-Finding the required room	.803	.129
UTI5	-Time saving	.762	.166
UTI6	-Product price information	.798	.020
UTI7	-Easy information assessment	.730	.128
UTI8	-Finding required information	.801	.211
UTI9	-Information completion	.779	.139
UTI10	-Customer care service information	.593	.397

Note: N=451, Cronbach's Alpha= .890, KMO=.922, Approx. Chi-Square= 3657.021, df= 105, Sig.=.000

4.4.3 Measures and Statistics of Online Room Reservation Website (ORR) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ =2941.713, Sig.=.000, Cronbach's alpha coefficient =.877. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.879; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures resulting in 11 observed

variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 4.11 shows the EFA analysis. The EFA result presents that there are 3 variable components that can be grouped including information quality, risks privacy, and aesthetic. There can be proved the components appropriate for identifying components.

Table 4.11 Exploratory Factor Analysis (EFA) of Online Room Reservation Website (ORR) Construct

Label	Observed variables	Components		
		1	2	3
INF1	-Up-to-date information of accommodation	.201	.189	.813
INF2	-In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)	.145	.442	.746
INF3	-Good source of information	.264	.276	.720
RIS1	-Privacy of personal information during a transaction	.116	.781	.322
RIS2	-No unauthorized person accessing personal information	.079	.827	.217
RIS3	-No personal information for other purposes	.090	.833	.245
RIS4	-Safe to use credit cards	.131	.774	.120
AES1	-Proper Colors	.881	.067	.153
AES2	-Proper Graphics	.919	.054	.083
AES3	-Attractive of images	.814	.167	.210
AES4	-Proper multimedia features	.838	.148	.223

Note: N=451, Cronbach's Alpha= .877, KMO=.879, Approx. Chi-Square= 2941.713, df= 55, Sig.=.000

4.4.4 Measures and Statistics of Online Customer Engagement (OCE) Construct

The results show that corrected item-total correlation>.5, $\chi 2$ =1736.874, Sig.=.000, Cronbach's alpha coefficient =.864. In addition, Eigenvalue ≥ 1; total variance explained ≥ 50%; KMO=.828; significance coefficient=.000; factor loadings of all observed variables are ≥.5; and weight difference between the loadings of two factors >.3. Following standard statistical procedures resulting in 7 observed

variables, indicates that these variables clearly show that these variables are also appropriate and valid. Table 4.12 shows the EFA analysis. The EFA result presents that there are 2 variable components that can be grouped including repurchase & word-of-mouth, and sharing. So, there can be proved the components appropriate for identifying components.

Table 4.12 Exploratory Factor Analysis (EFA) of Online Customer Service (OCE) Construct

Label	Observed variables	Components	
		1	2
REP1	-Possibility for repurchase in the near future	.567	.352
REP2	-I rely on the reviews with very high or very low ratings for the hotel	.820	.252
REP3	-Previous reviews on the hotel affect my willingness to make a reservation	.859	.174
REP4	-Often read other tourists' online reviews	.844	.154
REP5	-Choose to book by gather information from tourists' online reviews	.823	.207
SHA1	-Share my direct experience to others	.182	.922
SHA2	-Share my opinion, suggestion, and comment to others	.266	.888

Note: N=451, Cronbach's Alpha= .864, KMO=.828, Approx. Chi-Square=1736.874, df=21, Sig.=.000

4.4.5 Summarizes Measures and Statistics of 4 Constructs

The results of 4.3.1-4.3.4 show that 45 observed variables of four constructs indicate that these variables clearly show that these variables are also appropriate and valid. The EFA result presents that there are nine dimensions. The first dimension is "reliability" with two observation variables, the second is "capability" with ten observation variables, the third dimension is "emotional feature & social interaction" with five observation variables, the fourth dimension is "utilitarian feature" with ten observation variables, the fifth dimension is "information quality" with three observation variables, the sixth dimension is "privacy risk" with four observation variables, the seventh dimension is "aesthetic" with four observation variables, the eighth component is "repurchase & word-of-mouth" with five observation variables, and the last dimension is "sharing" with two observed variables. In conclusion, the

EFA indicates that 45 observed variables, clearly show that these variables are also appropriate and valid.

4.5 Measurement Model Assessment

To assess measurement reliability and validity of the revised 45-item scale measurement model, exploratory factor analysis followed by confirmatory factor analysis (CFA) using the maximum likelihood method is carried out (Hair Jr, Black, Babin, Anderson, & Tatham, 2010). Software package IBM AMOS 23.0 is used to conduct CFA and subsequent path analysis in this study. To reduce measurement error by improving individual variables, the researcher chooses to develop multivariate measurements (summated scales) for which several variables are joined in a composite measure to represent a concept for avoiding the use of only a single variable to represent a concept and instead to use several variables as indicators, The use of multiple indicators enables the researcher to more precisely specify the desired responses. It does not place total reliance on a single response, but instead on the "average" response to a set of related responses (J. F. Hair, Black, Babin, Anderson, & Tatham, 2006). Also, the researcher uses indices for confirming model fit as the acceptable thresholds of the four indices; chi-square/df ($\chi 2$ / df) $\leq$ 3.00, comparative fit index (CFI) $\geq$ .90, root mean square error of approximation (RMSEA) < .07, standardized root mean square residual (RMR) < 0.08, tucker-lewis index (TLI) $\geq$ .90 (Hair et al., 2014; Schumacker & Lomax, 2010). If any measurement model did not fit the data well, a model modification would be considered by eliminating the indicators with factor loadings below 0.5 (Hair et al., 2010) or with high correlation measurement errors through the review of modification indices (MI) to improve or achieve the model fit. Reliability and convergent validity are substantially examined. Cronbach's alpha of greater than .60 is used to describe the acceptable internal consistency of each latent variable. Convergent validity is one of the methods used to assess the construct validity and refers to "the degree to which two measures of the same concept are correlated" (Schumacker & Lomax, 2010). Composite reliability (CR) and average variance extracted (AVE) are used to assess the convergent validity with the suggested cut-off values of .7 and .5 or above (Hair et al., 2014),

respectively. After all the measurement models achieved the model fit, reliability, and convergent validity, all latent variables along with their final measurement scales are loaded to test the correlation among the four constructs of the study as well as for discriminant validity test, structural modeling, and the research hypotheses testing. The analysis separates into 4 constructs as follows:

4.5.1 Assessment of Measurement Model Fit for OCS Construct

Online customer service (OCS) of this study is specified as a higher-order factor including two components including Reliability (REA) and Capability (CAP) which instead on the average response to a set of related responses (Hair et al., 2006). Reviewing the modification indices (MI), the results and factor loadings show that the MI has no recommendation which means the model fit at the first time (see Figure 4.1 and Table 4.13 for the statement of OCS's indicators). In addition, the results illustrated that the projected OCS model demonstrated a model fit to the data with the OCS factor that incorporates the remaining indicators obtained a satisfied goodness-of-fit indices as follows; CFI = 1., RMSEA = .011, RMR = .004, and TLI = 1.

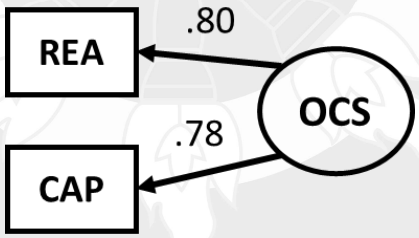


Figure 4.1 Measurement Model of OCS on Amos 23.0 Version

Table 4.13 Goodness-of-Fit Indices Results of OCS

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria	-	-	> .05	< 5	≥.90	≤.08	≤.08	≥.90
Model fit	1.059	1	.303	1.059	1	.011	.004	1

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.5.2 Assessment of Reliability and Convergent Validity for OCS

As summarized in Table 4.14, the researcher analyzes the Structural Equation Model by deleting the observed variable which Factor Loading <.60, and confirming factor referring to the CFA theory. Concerning the reliability of the modified scales of OCS construct, Cronbach's alpha is .759 exceeding the suggested level of 0.6. As presented in Table 4.14, the standardized factor loading of 2 variables is statistically significant (t-value > 1.96) at 0.001 level and substantial, all higher than 0.50. Among the two variables, CAP is higher loading (.802) than REA (.782). Likewise, the CR scores = .783; and AVE = .783 which the recommended thresholds of 0.70 and 0.50, respectively. These findings recognized the being of the convergent validity with a good model fit requiring that the measurement scales are reliable and valid representing the OCS construct well for further analysis.

Table 4.14 Results for OCS Model

Construct/ Dimension	Label	Factor loading	t-value	CR	AVE
OCS - Online Customer Service Construct (α=.759)				**.783**	**.783**
Reliability	REA	.782	18.760		
Capability	CAP	.802	19.549		

Note: N=451, all items are significant at p > 0.001. α = Cronbach's alpha coefficient, CR = construct reliability or composite reliability, AVE = average variance extracted

4.5.3 Assessment of Measurement Model Fit for OCX Construct

Online customer experience (OCX) of this study is specified as a higher-order factor including two components including Emotional feature & Social interaction (EMO) and Utilitarian Feature (UTI) which instead on the average response to a set of related responses (Hair et al., 2006). The results illustrated that the projected OCX model demonstrated a model fit to the data with CFI = 1.000, RMSEA = .000, RMR = .004, and TLI = 1.000 with reviewing the modification indices (MI) results and factor loadings. The MI has no recommendation so, the model fit at the first time (see Figure 4.2 and Table 4.15 for the statement of OCX's indicators).

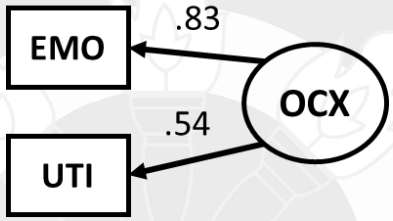


Figure 4.2 Measurement Model of OCX on Amos 23.0 Version

Table 4.15 Goodness-of-Fit Indices Results of OCX

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria	-	-	> .05	< 5	≥.90	≤.08	≤.08	≥.90
Model fit	.341	1	.559	.341	1	.000	.004	1

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.5.4 Assessment of Reliability and Convergent Validity for OCX

As summarized in Table 4.16, the researcher analyzes the Structural Equation Model by deleting the observed variable which Factor Loading <.60, and confirming factor referring the CFA theory. Regarding the reliability of the modified

scales of OCX construct, Cronbach's alpha is .623 exceeding the suggested level of 0.6. As presented in Table 4.16, the standardized factor loading of 2 variables is statistically significant (t-value > 1.96) at 0.001 level and substantial. Among the two variables, UTI is higher loading (.832) than EMO (.545). Likewise, the CR scores= .721; and AVE= .594) which the recommended thresholds of 0.70 and 0.50, respectively. These findings recognized the being of the convergent validity with a good model fit requiring that the measurement scales are reliable and valid representing the OCX construct well for further analysis.

Table 4.16 Results for OCX Model

Construct/ Dimension	Label	Factor loading	t-value	CR	AVE
OCX - Online Customer Experience Construct (α=.623)				**.721**	**.594**
Emotional feature & Social interaction	EMO	.545	11.050		
Utilitarian Feature	UTI	.832	20.790		

Note: N=451, all items are significant at p > 0.001. α = Cronbach's alpha coefficient, CR = construct reliability or composite reliability, AVE = average variance extracted

4.5.5 Assessment of Measurement Model Fit for ORR Construct

Online room reservation website (ORR) of this study is specified as a higher-order factor including three components including Information quality (INF), Privacy risk (RIS), and Aesthetic (AES) which instead on the average response to a set of related responses (Hair et al., 2006). Reviewing the modification indices (MI), the results and factor loadings show that the MI has no recommendation which means the model fit at the first time (see Figure 4.3 and Table 4.17 for the statement of ORR's indicators). In addition, the results illustrated that the projected ORR model demonstrated a model fit to the data with the ORR factor that incorporates the remaining indicators obtained a satisfied goodness-of-fit indices as follows; CFI = .995, RMSEA = .058, RMR = .014, and TLI = .985.

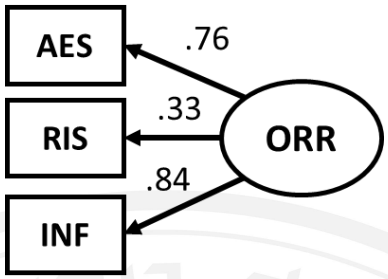


Figure 4.3 Measurement Model of ORR on Amos 23.0 Version

Table 4.17 Goodness-of-Fit Indices Results of ORR

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria			> .05	< 5	≥.90	≤.08	≤.08	≥.90
Model fit	2.539	1	.111	2.539	.995	.058	.014	.985

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.5.6 Assessment of Reliability and Convergent Validity for ORR

As summarized in Table 4.18, the researcher analyzes the Structural Equation Model by deleting the observed variable which Factor Loading <.60, and confirming factor referring the CFA theory. Concerning the reliability of the modified scales of ORR construct, Cronbach's alpha is .708 exceeding the suggested level of 0.6. The standardized factor loading of 3 variables is statistically significant (t-value > 1.96) at 0.001 level and substantial, all higher than 0.50. Among the two variables, INF is the highest loading (.842) followed by AES (.761) and RIS (.335). Likewise, the CR scores = .867; and AVE = .673 which the recommended thresholds of 0.70 and 0.50, respectively. These findings recognized the being of the convergent validity with a

good model fit requiring that the measurement scales are reliable and valid representing the ORR construct well for further analysis.

Table 4.18 Results for ORR Model

Construct/ Dimension	Label	Factor loading	t-value	CR	AVE
ORR - Online room reservation website Construct (α=.708)				**.867**	**.673**
Information Quality	INF	.842	21.665		
Privacy Risk	RIS	.335	5.778		
Aesthetic	AES	.761	17.370		

Note: N=451, all items are significant at p > 0.001, α = Cronbach's alpha coefficient, CR = construct reliability or composite reliability, AVE = average variance extracted

4.5.7 Assessment of Measurement Model Fit for OCE Construct

Online customer engagement (OCE) of this study is specified as a higher-order factor including two components including Repurchase & word-of-mouth (REP) and Sharing (SHA) which instead on the average response to a set of related responses (Hair et al., 2006). Reviewing the modification indices (MI), the results and factor loadings show that the MI has no recommendation which means the model fit at the first time (see Figure 4.4 and Table 4.19 for the statement of OCE's indicators). In addition, the results illustrated that the projected OCE model demonstrated a model fit to the data with the OCE factor that incorporates the remaining indicators obtained a satisfied goodness-of-fit indices as follows; CFI = .977, RMSEA = .079, RMR = .023, and TLI = .977.

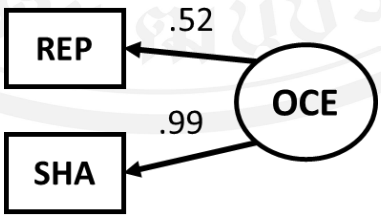


Figure 4.4 Measurement Model of OCE on Amos 23.0 Version

Table 4.19 Goodness-of-Fit Indices Results of OCE

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria			> .05	< 5	≥.90	≤.08	≤.08	≥.90
Model fit	3.785	1	.052	3.785	.977	.079	.023	.977

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.5.8 Assessment of Reliability and Convergent Validity for OCE

As summarized in Table 4.20, the researcher analyzes the Structural Equation Model by deleting the observed variable which Factor Loading <.60, and confirming factor referring the CFA theory. Concerning the reliability of the modified scales of OCE construct, Cronbach's alpha is .654 exceeding the suggested level of 0.6. As presented in Table 4.xx, the standardized factor loading of 2 variables is statistically significant (t-value > 1.96) at 0.001 level and substantial, all higher than 0.50. Among the two variables, REP is higher loading (.995) than SHA (.516). Likewise, the CR scores = .719; and AVE = .614 which the recommended thresholds of 0.70 and 0.50, respectively. These findings recognized the being of the convergent validity with a good model fit requiring that the measurement scales are reliable and valid representing the OCE construct well for further analysis.

Table 4.20 Results for OCE Model

Construct/ Dimension	Label	Factor loading	t-value	CR	AVE
OCE - Online Customer Engagement Construct (α=.654)				**.719**	**.614**
Repurchase & word-of-mouth	REP	.995	29.694		
Sharing	SHA	.516	11.696		

Note: N=451, all items are significant at p > 0.001. α = Cronbach's alpha coefficient, CR = construct reliability or composite reliability, AVE = average variance extracted

4.5.9 Overall Measurement Model

4.5.9.1 Assessment for Goodness-of-Fit of the Overall Measurement Model

The measurement model for SEM analysis included the four focal constructs of the study, online customer service (OCS), online customer experience (OCX), online room reservation website (ORR), and online customer engagement (OCE). After the measurement model of each research, construct achieved the acceptable goodness-of fit, the remaining 9 indicators along CFA process to estimate the fit indices for the overall measurement model as illustrated in Figure 4.5. The result demonstrated that the full measurement model fit is satisfactory with $\chi 2$ / df = 2.917, CFI = .994, RMSEA =0.065, RMR = 0.043, and TLI = 0.967. All fit indices, as presented in Table 4.21, surpassed the recommended values (Hair et al., 2014; Schumacker & Lomax, 2010).

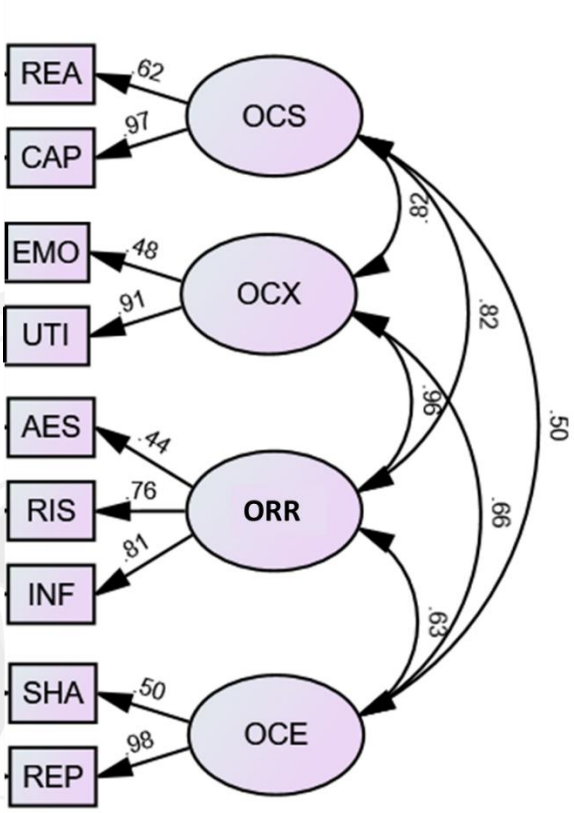


Figure 4.5 Overall Measurement Model for Research Constructs

Table 4.21 Goodness-of-Fit Indices Result for the Final Measurement Model

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria	-	-	> .05	< 5	≥.90	≤.08	≤.08	≥.90
Initial model	365.263	21	0.000	17.3910	0.833	0.191	0.071	0.714
Final model	19.432	11	0.054	1.7665	0.996	0.041	0.012	0.987

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.5.9.2 Assessment of Reliability and Convergent Validity of the Measurement Model

As summarized in Table 4.22, standardized factor loading for all variables is higher than the recommended value of 0.50 (Hair, 2010). The Cronbach's alpha coefficient of all measurement scales is between .623–.759 exceeding suggested thresholds (>.60). The convergent validity of all measurement scales is confirmed, as the composite reliability (CR) and average extracted variance (AVE) of all measurement scales are higher than the suggested value of 0.70 and 0.50, respectively (Fornell & Larcker, 1981; Hair et al., 2014).

Table 4.22 Results of Reliability and Convergent Validity of Measurement Model

Construct/ Dimension	**Label**	**Factor loading**	**t-value**	**CR**	**AVE**
OCS - Online Customer Service Construct (α=.759)				*.803*	*.680*
Reliability	REA	.618	13.656		
Capability	CAP	.973	22.496		
OCX - Online Customer Experience Construct (α=.623)				*.721*	*.594*
Emotional feature & Social interaction	EMO	.909	21.481		
Utilitarian Feature	UTI	.481	10.341		
ORR - Online room reservation website Construct (α=.708)				*.867*	*.673*
Information Quality	INF	.807	19.244		
Privacy Risk	RIS	.756	17.860		
Aesthetic	AES	.445	9.237		
OCE - Online Customer Engagement Construct				*.719*	*.614*

Construct/ Dimension	Label	Factor loading	t-value	CR	AVE
Repurchase (α=.654) & word-of-mouth	REP	15.585	.980		
Sharing	SHA	9.621	.496		

Note: N=451, all variables are statistically significant at $p < 0.001$, α = Cronbach's alpha coefficient, CR = construct reliability or composite reliability, AVE = average variance extracted

4.5.9.3 Discriminant Validity and Correlation Matrix Among Four Constructs

This study applied the measure set by Fornell and Larcker (1981) to test the discriminant validity of the four constructs. The four constructs of the study should not be highly intercorrelated, correlation coefficient below 0.90, to confirm that each construct explains its indicators instead of other constructs in the model (Kline, 2015). This study utilized the criterion set by Fornell and Larcker (1981) to test the discriminant validity of the four constructs. The relationship of each pair or the estimated correlation coefficients of latent constructs was compared with the square root of AVE (average variance extracted) of latent constructs. Later, the estimated correlations among the four constructs should be lower than the square root of AVE to be found the discriminant validity (Hair Jr, Hult, Ringle, & Sarstedt, 2016).

Table 4.23 Discriminant Validity and Correlation Matrix Among the Research Constructs

Construct	Mean	SD	OCS	OCX	ORR	OCE
OCS	4.50	.690	**. 825**			
OCX	4.25	.830	.724	**.711**		
ORR	4.35	.774	.657	.067	**.820**	
OCE	4.08	.888	.567	.097	.038	**.784**

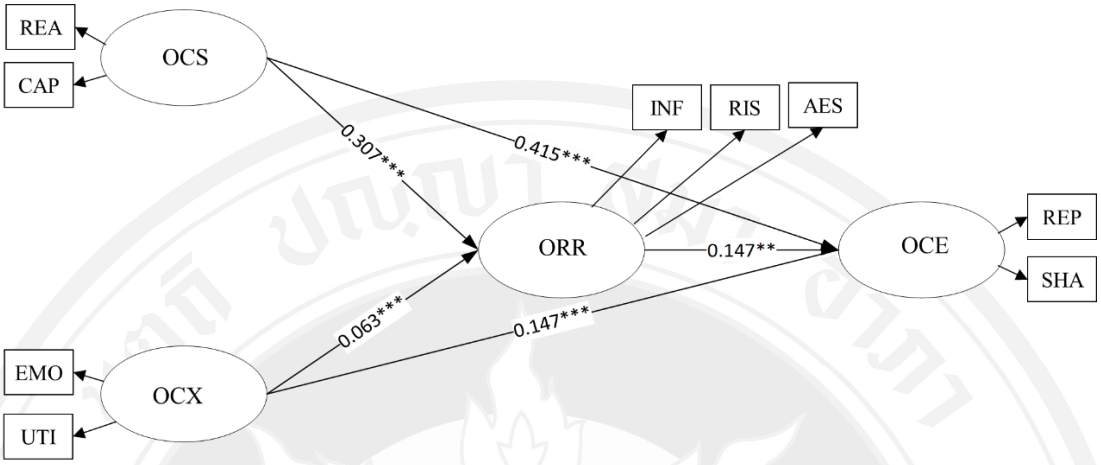
Note: n=451, SD = Standard deviation, OCS: Online customer service, OCX: Online customer experience, ORR: Online room reservation website, OCE: Online customer engagement, AVE: Average variance extracted, Diagonal figures in bold represent the square root of AVE of the latent variables.

As reported in Table 4.23, the relationship between four constructs existed with the positive correlation coefficients from .038 (ORR and OCE) to .724 (OCS and OCX) indicating a moderate to the strong relationship among the constructs. The square roots of AVE (as presented as the diagonal figures in bold in Table 4.23) of online customer service (.825), online customer experience (.711), online room reservation website (.820), and online customer engagement (.784) are greater than the estimated correlation coefficients (off-diagonal figures) among the constructs. Overall, the discriminant validity for this measurement model and the four constructs is supported.

4.6 Structural Model

According to the first stage of the two-stage modeling process (J. C. Anderson & Gerbing, 1988) that complicated sequences of CFA, the final measurement model fit the sample data well besides established that the measurement scales are a well-constructed, reliable, and valid for structural equation modeling (SEM) analysis. The structural model encompasses of 1) online customer service (OCS) (two dimensions, reliability and capability), 2) online customer experience (OCX) (two dimensions, utilitarian feature, and emotional feature & social interaction), 3) online room reservation website (ORR) (three dimensions, information quality, privacy risk and

aesthetic), and 4) online customer engagement (OCE) (two dimensions, repurchase & word of mouth and sharing).



Note: N=451; *p < 0.05, **p<0.01, ***p< 0.001

Figure 4.6 The Structural Model of the Study

In the second stage, SEM is conducted with the maximum likelihood method to test the research hypotheses through AMOS v. 23. The path among these four constructs illustrated in Figure 4.6 for this structural equation model which is regarded as the hypotheses model of this study. The hypotheses model yielded a good fit to the data with $\chi 2/Df = 0.9545$, CFI = 1, RMSEA = 0, RMR = .006, and TLI = 1 as Table 4.24. All fit indices are within the acceptable range (J. Hair Jr et al., 2010). The results of goodness of-fit are as followed sector.

Table 4.24 Goodness-of-Fit Indices Result for the Structural Model

Fit Indices	$\chi 2$	df	p-value	$\chi 2$ / df	CFI	RMSEA	RMR	TLI
Criteria	-	-	> .05	< 5	≥.90	≤.08	≤.08	≥.90
Final model	3.818	4	.431	.9545	1	0	.006	1

Note: N=451, $\chi 2$ = Chi-squares, df = Degree of freedom, CFI = comparative fit index, RMSEA = root mean square error of approximation, RMR = root mean square residual, TLI = tucker-lewis index

4.6.1 Hypotheses testing

The second objective of this study is to investigate the variables of online customer engagement. SEM is the method to perform, and estimate for the parameters of the seven paths of the structural model as presented in Figure 4.7. Figure 4.7 shows a model with only four latent constructs for the interpretation of the hypothesis testing. Section 4.6.2 focuses on determining the direct effect as proposed in H1 to H5. Section 4.6.3 focused on testing the mediating effect of online room reservation website as formulated in H6 and H7.

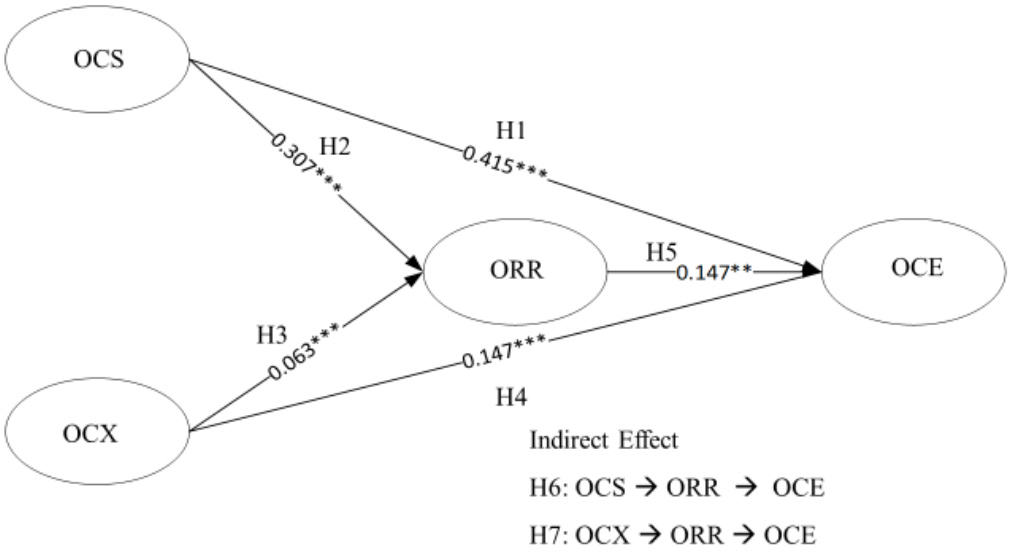


Figure 4.7 Hypothesis Testing Result with the Standardized Estimates (β)

4.6.2 Hypothesis Testing of Direct Effect: H1 – H5

H1: Online customer service (OCS) influences on online customer engagement (OCE)

Hypothesis 1 predicted that online customer service significantly influences online customer engagement. The structural model as presented in Figure 4.7 showed the path coefficient (β) of the direct variable OCS on OCE. In this study, OCS is in the form of reliability and capability, while OCE represents repurchasing & word-of-mouth, and sharing. As illustrated in Table 4.25, Hypothesis 1 is accepted, OCS depicted an insignificant related to OCE ($\beta = .415$, $t = 7.845$, $p < 0.001$).

H2: Online customer service (OCS) influences on online room reservation website (ORR)

Hypothesis 2 expects online customer service (OCS) significantly influence online room reservation website (ORR). The structural model presented in Figure 4.7 estimates the path coefficient of online customer service (OCS) on online room reservation website (ORR). The outcomes exposed that online room reservation website is positively related to ORR ($\beta = .307$, $t = 11.081$, $p < 0.001$), validating Hypothesis 2. Thus, online customer service is likely to influence online room reservation website.

H3: Online customer experience (OCX) influences on online room reservation website (ORR)

Hypothesis 3 proposed that online customer experience (OCX) is positively interrelated to online room reservation website (ORR). The model presented in Figure 4.7 shows the path estimates of online customer experience on online room reservation website. The results, as shown in Table 4.25, demonstrated that online customer experience is positively and significantly related to online room reservation website, supporting Hypothesis 3 ($\beta = .063$, $t = 5.162$, $p < 0.001$). The result signifies that online customer experience is likely to online room reservation website.

H4: Online customer experience (OCX) influences on online customer engagement (OCE)

Further, online customer experience is positively related to online customer engagement. The path of online customer experience, and online customer engagement, estimates as illustrates in Figure 4.7 and Table 4.25. Results showed that

online customer experience is positively and significantly related to online customer engagement, supporting Hypothesis 4 ($\beta = .147$, $t = 6.547$, $p < 0.001$). There is signifying that the more provision from online customer experience is available, online customer engagement will likely be higher.

H5: Online room reservation website (ORR) influences online customer engagement (OCE)

Hypothesis 5 proposed that online room reservation website has a positive influence on online customer engagement. Hypothesis 5 is validated as presented in Figure 4.7 and Table 4.25 ($\beta = .063$, $t = 3.017$, $p < 0.01$) confirming that ORR has a positive and significant influence on OCE. The findings show that the higher level of ORR, the better OCE will likely be customer engaging.

4.6.3 Hypotheses Testing for the Mediating Role of ORR: H6 – H7

Online room reservation website (ORR) is hypothesized as a mediator mediating the relationship between the three focal independent variables (online customer service, online customer experience, and online customer engagement). The role of ORR as a mediator is primarily validated by the indication of the acceptable overall model fit (Hair et al., 2014). Rely on the present research (Gordon, Adler, Day, & Sydnor, 2019), the test of the mediating effect for Hypothesis 6, and 7, is conducted by operating bootstrapping method (Preacher & Hayes, 2004) and the Aroian Sobel test (Baron & Kenny, 1986) as recommended by MacKinnon, Lockwood, Hoffman, West, and Sheets (2002). The Sobel test distributed by Baron and Kenny (1986) is a suitable process for this study since the skewness and kurtosis values analysis for the normality distribution of the data. This study performed the Sobel test equation using the following formula developed by MacKinnon, Warsi, and Dwyer (1995) to obtain the z-values to assess the mediation effects of ORR. The calculation is conducted through the online software established by Preacher and Leonardelli (2001) to obtain the z-values and p-values for additional explanation.

$$\text{z-value} = a*b/SQRT(b^2*sa^2 + a^2*sb^2 + sa^2*sb^2)$$

Where a = unstandardized regression estimates between the independent variable and mediator (ORR).

b = unstandardized regression estimates between mediator (ORR) and dependent variable (OCE).

sa = standard error (SE) of *a.*

sb = standard error (SE) of *b* (Preacher & Leonardelli, 2001)

The bootstrapping technique, the more modern practice, comprises the resampling process of the original data set to settle the significance of the indirect effect relationship (Hayes, 2009). This technique used by AMOS with setting the figure of bootstrap samples which typically are at least 1000 or 5000 resampling times to generate the confident level percent (Hayes, 2009). This study applied 2000 bootstrap samples with 95% bias-corrected CIs (confidence intervals) as advised by Preacher and Hayes (2008) and broadly accepted by several studies, such as Gordon, Adler, et al. (2019), and Xu et al. (2018). Therefore, the mediating effect will be confirmed if the indirect effect cascades between the lower and upper bound CIs with 95% confidence interval requesting that the indirect effect does not include zero (Hayes, 2009; Preacher & Hayes, 2008). The summary outcomes of the mediation effects of ORR created from bootstrapping method and the Sobel test are presented in Table 4.25 and explained in Hypothesis 6, and 7.

H6: Online customer service (OCS) influences on Online customer engagement (OCE), mediated by Online room reservation website (ORR)

As for Hypothesis 6, ORR is a mediator with the relationship between online customer service and online customer engagement. The results from the bootstrapping and the Sobel test exposed that the mediating effect of ORR between online customer service and online customer engagement is significant (standardized indirect effect = .019, CI = .007(LL) to .046(UL), $z = 2.8273$, $p < 0.01$). According to Baron and Kenny (1986)'s mediation analysis, if the path estimate from the independent variable to the dependent variable is significant when the mediator is included in the model, then partial mediation is justified. As shown in Table 4.25, online customer service is significantly related to online room reservation website (Hypothesis 2). Consequently, Hypothesis 6 is accepted by the partial mediation effect of ORR.

H7: Online customer experience (OCX) influences on Online customer engagement (OCE), mediated by Online room reservation website (ORR)

Hypothesis 7 proposes that ORR is hypothesized to mediate the relationship between online customer experience and online customer engagement. The results from the bootstrapping and the Sobel test exposed that the mediating effect of ORR between online customer experience and online customer engagement is significant (standardized indirect effect = .004, CI = .001(LL) to .007(UL), z = 2.5426, $p < 0.05$). As shown in Table 4.25, online customer experience is significantly related to online room reservation website (Hypothesis 3). Consequently, Hypothesis 7 is supported by the partial mediation effect of ORR.

Table 4.25 Summary Results of Hypothesis Testing for H1 to H7

Hypothesis	**β**	**b**	**SE**	**t-value**	**Results**
H1: OCS →OCE	.415	.542	.069	7.845***	Accepted
H2: OCS→ORR	.307	.657	.059	11.081***	Accepted
H3: OCX→ORR	.063	.067	.013	5.162***	Accepted
H4: OCX→OCE	.147	.095	.014	6.547***	Accepted
H5: ORR→OCE	.063	.038	.013	3.017**	Accepted
Mediating effects of OCE	**Standard indirect effects**	**Bootstrapping 95% CIs**		**Sobel test Z-values**	**Results**
		LL CIs	**UL CIs**		
H6: OCS → ORR → OCE	.019	.007	.046	2.8273**	Accepted
H7: OCX→ ORR → OCE	.004	.001	.007	2.5426*	Accepted

Note: n=451; *p < 0.05; **p < 0.01; ***p < 0.001 (two-tailed), β = standardized path coefficient, b = unstandardized coefficient, SE = standard error, OCS = online customer service, OCX = online customer experience, ORR = online room reservation website, OCE = online customer engagement, bootstrapping with 2000 resamples, CIs = Confident intervals, LL = lower bound level, UL = upper bound level

4.6.4 Summary of Hypothesis Testing (Direct, Indirect, and Total Effects)

In conclusion, the proposed hypotheses model generated a good fit to experiential data ($\chi 2/Df = .954$, CFI = 1.000, RMSEA = .000, RMR = .006, and TLI = 1.000). Overall results as presented in Table 4.26 for the hypothesized structural model testing show that the experiential data supports all seven proposed hypotheses, H1-H7 demonstrate the significant direct effect relationship of OCS, OCX, ORR, and OCE. Regarding the total effects on OCE as shown in Table 4.26, H1 is the strongest effect on OCE significantly, followed by H6: online customer service influences on online customer engagement mediated by online room reservation website (OCS → ORR → OCE). The results of square multiple correlations in Table 4.26, these three focal constructs jointly explained 26.8% of the variance in online customer engagement. The indirect relationship in H6 and H7 are supported by the value of standardized indirect effect and Z-values resulting from bootstrapping and the Sobel tests, similarly.

Table 4.26 Summary of Direct Effect, Indirect Effect, and Total Effect

Exogenous variables	**Endogenous variables**					
	ORR			OCE		
	DE	IE	TE	DE	IE	TE
OCS	.657***	-	.657	.542***	.025**	.567
OCX	.067***	-	.067	.095***	.003**	.098
ORR	-	-	-	.038**	-	.038
SMC(R^2)	ORR = .114			OCE = .268		
Model fit statistics						
$\chi 2/Df = .954$, CFI = 1.000, RMSEA = .000, RMR = .006, TLI = 1.000						

Note: DE = Direct effect, IE = Indirect effect, TE = Total effect, SMC = Square multiple correlation, OCS = online customer service, OCX = online customer experience, ORR = online room reservation website, OCE = online customer engagement, bootstrapping with 2000 resamples, CIs = Confident intervals, LL = lower bound level, UL = upper bound level

4.7 Chapter Summary

This chapter presents the empirical outcomes both in descriptive statistics and inferential statistics. The data (n=451) is primarily measured for the normality. Then, an analysis of exploratory factor analysis (EFA) and a series of confirmatory factor analysis (CFA). Each construct is analyzed as well as the overall measurement model and modified to accomplish the model fit. The construct validity for all measurement scales is supported. Then, structural equation modeling (SEM) is utilized and established that the structural model accomplished the model fit with the results of hypotheses testing. All seven hypotheses are confirmed. However, the final chapter will explain the empirical results and illustrate the conclusion for the study, including academic implications, useful practical recommendations, and limitations and future research.

CHAPTER 5

DISCUSSION AND CONCLUSION

This empirical study has confirmed online customer service, online customer experience, online room reservation website, and online customer engagement as the research conceptual framework within the online room reservation context in Thailand. This chapter is the last chapter to discuss and conclude the outcome of this study which consists of summarizing results on the research objectives, discussion of the development model process, and adoption of enhancing online customer engagement. It explains the practical and theoretical implications of the research. The chapter concludes the reflecting on the limitations of the research and provides suggestions for future investigation.

5.1 Summarized Results on Research Objectives

According to an inclusive literature review in Chapter 2, the key objective of this study is to examine the causal effects of online customer service, online customer experience, and online room reservation website on online customer engagement of the online room reservation context in Thailand. The research utilized a quantitative study employing an online survey questionnaire as a research tool. The data are collected from 451 respondents who have used an online room reservation service. In addition, the measurement model analysis is following the structural equation model process towards the structural model and hypothesis testing. To explain the result of the research, the researcher will clarify each of the research objectives correspondingly. Consequently, the three principal research objectives are including

1) To identify the factors of online customer services, online customer experience, online room reservation website, and online customer engagement

2) To investigate the variables of online customer engagement

3) To develop a structural equation model of enhancing online customer engagement

5.2 Summarized Results on Research Objective 1: To Identify the Factors of Online Customer Services, Online Customer Experience, Online Room Reservation Website, and Online Customer Engagement

According to the factor analysis of this research, the results show that the factors of online customer services, online customer experience, online room reservation website, and online customer engagement are shown as follows:

1) Online customer service construct – the factors are including reliability, and capability. The analysis reports that reliability is one of the key factors of online customer service. The other factor is capability which is including responsibility, performance, and communication. The first latent variable is reliability with two observed variables including accuracy of records keeping and keeping promise of company. The second latent variable is capability (responsibility, performance, and communication) with ten observed variables including prompt service delivery, prompt responses by e-mail, chat, or other means, problems resolving quickly, informing important information, providing real-time information, online service with a good performance, content with a good performance, knowing status of transaction, understanding customer information, and clear answer

2) Online customer experience construct – the factors are including emotional feature & social interaction and utilitarian feature. The analysis reports that there are two latent variables and fifteen observed variables. The first latent variable is emotional feature & social interaction with five observed variables including enjoyable of online booking, email alerts of special offers, beautiful images on the website, member of a website's community, and reviewing of places to visit on social channels. The second latent variable is utilitarian feature with ten observed variables including ease of use, economic value for money of online booking, convenience of online booking, finding the required room, time saving, product price information, easy information assessment, finding required information, information completion, and customer care service information.

3) Online room reservation website construct – the factors are including information quality, privacy risk, and aesthetic. The results are consisting of three latent variables and eleven observed variables. The first latent variable is information quality with three observed variables including up-to-date information of accommodation, in-depth descriptions of accommodation, and its services (e.g., room amenities, facility information, location, surrounding area information), and good source of information. The second latent variable is privacy risk with four observable variables consisting of privacy of personal information during a transaction, no unauthorized person accessing personal information, no personal information for other purposes, and safe to use credit cards. The third latent variable is aesthetic with four observed variables including proper colors, proper graphics, attractive of images, and proper multimedia features.

4) Online customer engagement construct – the factors are including repurchase & word-of-mouth and sharing. The results are consisting of two latent variables and seven observed variables. The first latent variable is repurchase & word-of-mouth with five observed variables which consist of possibility for repurchase in the near future, rely on the reviews with very high or very low ratings for the hotel, previous reviews on the hotel affect my willingness to make a reservation, often read other tourists' online reviews, and choose to book by gather information from tourists' online reviews. The second latent variable is sharing with two observed variables including share my direct experience to others, and share my opinion, suggestion, and comment to others.

5.3 Summarized Results on Research Objective 2: To Investigate the Variables of Online Customer Engagement

According to SEM applying to study the causal effect of the four constructs. The influences of online customer service and online customer experience on online room reservation website and online customer engagement can be described by hypotheses. The outcomes of the analysis are all seven proposed influences (hypotheses) of this study are confirmed. The influences of four constructs are H1: Online customer service influences on online customer engagement, H2: Online

customer service influences on online room reservation website, H3: Online customer experience influences on online room reservation website, H4: Online customer experience influences on online customer engagement, H5: Online room reservation website influences online customer engagement, H6: Online customer service influences on Online customer engagement, mediated by online room reservation website, and H7: Online customer experience influences on online customer engagement, mediated by online room reservation website. The summary results of hypothesis testing for research objective 2 are as shown on Table 5.1.

Table 5.1 Summary Results of Hypothesis Testing for Research Objective 2

	Hypothesis	**Results**
H1	Online customer service influences Online customer engagement	Accepted
H2	Online customer service influences on Online room reservation website	Accepted
H3	Online customer experience influences on Online room reservation website	Accepted
H4	Online customer experience influences on Online customer engagement	Accepted
H5	Online room reservation website influences Online customer engagement	Accepted
H6	Online customer service (OCS) influences on Online customer engagement (OCE), mediated by Online room reservation website (ORR)	Accepted
H7	Online customer experience (OCX) influences on Online customer engagement (OCE), mediated by Online room reservation website (ORR)	Accepted

5.4 Summarized Results on Research Objective 3: To Develop a Structural Equation Model of Enhancing Online Customer Engagement

This study initiates the structural equation model of enhancing online customer engagement. The model includes four constructs namely; 1) online customer service, 2) online customer experience, 3) online room reservation website, and 4) online customer engagement. According to Figure 5.1, the descriptions of dimensions of each construct can be explained as follows 1) online customer service construct comprises reliability and capability dimensions, 2) online customer experience construct comprises emotional features and utilitarian features dimensions, 3) online room reservation website construct comprises information quality, privacy risk, and aesthetics, and 4) online customer engagement comprises repurchase & word-of-mouth, and sharing. Therefore, the structural equation model of enhancing online customer engagement is as shown in Figure 5.1.

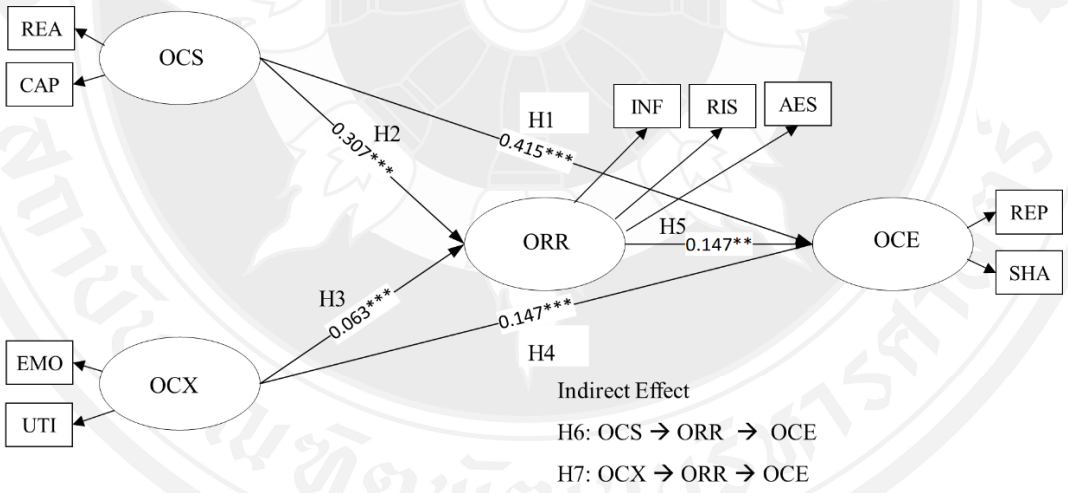


Figure 5.1 The Structural Model of Enhancing Online Customer Engagement

The model shows that online customer service influences online customer engagement and online room reservation website while online customer experience influences online room reservation website and online customer engagement. Additionally, online room reservation website influences online customer

engagement. The model can be described that online customer service influences online customer engagement mediated online room reservation website and online customer experience influences online customer engagement mediated online room reservation website.

5.5 Discussion on Research Objectives

5.5.1 Objective 1: To Identify the Factors of Online Customer Services, Online Customer Experience, Online Room Reservation Website, and Online Customer Engagement

According to the factor analysis of this research, the results show that the factors of the four constructs are the following: 1) Online customer service construct – the factors are including reliability, and capability. The analysis reports that reliability is one of the key factors of online customer service which consistent with the research by Al-dweeri, Moreno, Montes, Obeidat, and Al-dwairi (2019). Also, ur Rehman, Hussain, and Ghafoor (2020) explain reliability is the dimension in the e-service. The other factor is capability which is including responsibility, performance, and communication which in line with Rita, Oliveira, and Farisa (2019); ur Rehman et al. (2020) who supports that responsibility is a factor of online customer service, Chen, Lyu, Li, Zhou, and Li (2017) who supports that performance is a factor of online customer service, and Lee et al. (2020) who explains communication is a factor of online customer service. 2) Online customer experience construct – the factors are including emotional feature & social interaction and utilitarian feature. The results align with Hou, Zhao, and Zheng (2019)'s research in emotional feature and Stein and Ramaseshan (2019)' s research in utilitarian feature. 3) Online room reservation website construct – the factors are including information quality, privacy risk, and aesthetic. The results are consistent with the paper of Zhou, Yan, Yan, and Shen (2020) (information quality), C.-C. Chen and Chang (2018) (privacy risk), and Kirillova and Chan (2018) (aesthetic). 4) The final construct, Online customer engagement – the factors are including repurchase & word-of-mouth and sharing which in line with the studies of Lim, Cheah, Waller, Ting, and Ng (2019) (repurchase & word-of-mouth), and Bilro, Loureiro, and Guerreiro (2019) (sharing).

5.5.2 Objective 2: To Investigate the Variables of Online Customer Engagement

1) Online customer service and Online customer engagement

Bowden (2009) states that engagement has an important place in contributing to an understanding of service performance and Vivek et al. (2012) suggested that online customer engagement requires toward the interaction/participation with online customer services. Also, the current study reports a significant relationship between online customer service and online customer engagement (Hypothesis 1). There is some research that reports the relationship between online customer service and online customer engagement. For example, Reichheld and Detrick (2003) explain customer service increases intention to purchase and Oyewole (2002) reviews that customer service let word-of-mouth recommendation, comply with Bowden (2009) describes customer service influence customer re-purchasing. In conclusion, this study confirms the hypothesis: online customer service influences online customer engagement as Cheng, Fu, Sun, Bilgihan, and Okumus (2019) reports that online customer service impacts re-purchasing of customer and Buell, Ramdas, and Sonmez (2020) explains customer service delivery increase customer engagement (Buell et al., 2020).

2) Online Customer Service and Online Room Reservation Website

Regarding online customer service, the empirical outcomes of the present analysis validate a significantly positive relationship and direct influence of online room reservation, thus supporting Hypotheses 2. Consistent with online customer service theory, Jaywant Singh and Crisafulli (2016) explain interactional reasonableness carried through technology-mediated interaction is a good way of satisfaction with online service (Jaywant Singh & Crisafulli, 2016). The result suggests that online customer service supports online room reservation website. The study advocates that delivering online service with reliability and capability could be regarded as information quality, privacy risk, and aesthetic of online room reservation website. As McLean and Wilson (2016) suggest that the credibility of the website as well as the success of the search drives the need for online customer support and

managers should deliver service to customers with online support, through systems such as an online help desk or a live chat function. As well, the supposed length of time spent on the website impacts the need to pursue online customer service (McLean & Wilson, 2016).

3) Online Customer Experience and Online Room Reservation Website

The empirical results reveal that online customer experience is positively and significantly related to online room reservation website confirming the direct effect and Hypothesis 3. The results of this study are similar to McLean and Wilson (2016) reveals the importance of website credibility indications and information quality indications that drive the accomplishment of customer experience. The study indicates delivering emotion feature and utilitarian feature of customer experience support online room reservation platform, in terms of information quality, privacy risk, and aesthetic. Moreover, Kurniawati, Kusyanti, and Mursityo (2018) report that the website and information quality have an optimistic and important effect on online customer experience and Agarwal (2019) show that online experience for online customers is the main to competitive advantage on the cyber. Also, Bilgihan et al. (2016) report that easiness to find the website, ease of use, perceived usefulness, emotional and utilitarian features, perceived enjoyment, and social interaction are the variables of the combined online customer experience. The further suggestion of Foster and Schwesig (2019) ’s book, techniques for improving customer experience include a graphical user interface, a component, a server system, a variety of profile data associated with the user/service, and graphical user interface.

4) Online Customer Experience and Online Customer Engagement

As the empirical results, the researcher reveals online customer experience is significantly and positively related to online customer engagement confirming Hypothesis 4. The finding recommends that a high level of online customer experience influences a significant heightening for online customer engagement. The outcome is in agreement with Agarwal (2019) who reports that several researchers underline the vital character that online customer experience shows in effecting online purchasing. The emotion feature and utilitarian feature of

customer experience influence online customer engagement, in terms of repurchasing, word-of-mouth, and sharing. Moreover, Bilgihan et al. (2016) report that the combination of engagement including positive word-of-mouth and repurchasing are the consequences of captivating online customer experience. Bilro et al. (2018) report that online customer experience uses significant direct and indirect effects on customer engagement while customer service has a minimal effect on customer engagement.

5) Online Room Reservation Website Influences Online Customer Engagement

As Connell, Marciniak, Carey, and McColl (2019) identify that website signifies an energetic touchpoint in customer engagement as well as VO, Chovancová, and Tri (2019) explains that website impacts customer engagement. Hypothesis 5 of this study is online room reservation website influences online customer engagement which results supported the hypothesis. The discoveries besides expose that online customer engagement professed a high level of repurchasing and word-of-mouth. In-line with the research of Busalim, Hussin, and Iahad (2019) who reports that a key engagement factor in the new e-commerce era with a suitable platform. Furthermore, Pengnate, Sarathy, and Lee (2019) recommend that website meaningfully influences customer engagement as well as Seo, Lee, Chung, and Park (2015) report that dimensions of the website both perceived usability and perceived aesthetics are completely connected to customer engagement. The findings of this hypothesis analysis can be applied for delivering information quality. Thus, information quality reflects a high-quality relationship in online customer engagement. There can be confirmed that online platforms have further authorized customers to engage more with firms (Liu, Shin, & Burns, 2019).

6) Online Customer Service Influences Online Customer Engagement, Mediated Online Room Reservation Website

Based on the empirical finding, the study shows that online room reservation website moderately mediates the relationship between online customer service and online customer engagement; so, online customer service influences on online customer engagement, mediated by online room reservation website

confirming Hypothesis 6. The results explain an agree that this relationship inferring to online customer service and online customer engagement among online room reservation website. The theory explains that the website hosting provider based on the past customer service text communications that respond to the questions and then receive a recommendation from the website regarding creating or publishing their website (Lewandowski, Tsai, & Berk, 2020). Also, the pattern to build engage customers are utilizing the growth of online channel (Hennig-Thurau et al., 2010) and online customer engagement delivers customer interaction with technology intermediated communication which is an analyst of engagement with online customer service (J Singh & Crisafulli, 2015). Consequently, customer engagement occurs at the level of the product, as opposed to the website Connell et al. (2019). Thus, customer engagement along with technological factors is an important factor that provides the greatest influence in customer engagement Busalim et al. (2019).

7) Online Customer Experience Influences Online Customer Engagement, Mediated Online Room Reservation Website

Results also show that online room reservation website is a full mediator between online customer experience and online customer engagement. Thus, the results of the analysis show the supporting Hypothesis 7. The findings also reveal that a high impact of online customer engagement is online customer experience (Bilro et al., 2018) which drives on a website (Connell et al., 2019). Also, websites encouraged to form social networking (Olugbola, 2017) and modified forms of customer development in their quest to explore online customer experience (Simon & Kim, 2017). In addition, a web-based business model reflects customer experience (Moisescu 2018) and components of websites (product feature crop, lifestyle photo, photo size, product video) relate the customer experience (i.e., social, sensory, informative, or entertaining) (Bleier, Harmeling, & Palmatier, 2019). Thus, online customer engagement relied on online customer experience and identification (Rather, 2020) via the website and online customer engagement relates to customer experience and interacts with each other, resulting in the overall customer experience" (Lemon & Verhoef, 2016).

5.6 Conclusion and Recommendations

5.6.1 Practical Implications

According to the fit model of this research, the model of enhancing online customer engagement can be described in which online customer engagement can be increased by improving online customer service, online customer experience, and online room reservation website as the following contents.

5.6.1.1 Online Customer Service

As delivering online customer service is a fundamental of every business that could start and go on. In the fit model of the research, online customer service only influences online room reservation website, this result can be described that company and manager could increase online customer engagement significantly with improving online customer service by mediating online room reservation website. So, the company and manager could deliver online customer service with reliability, and capability (responsiveness, performance, and communication) through the room reservation website. Practically, the tool that uses for developing online customer service to be standardized in anybody, anytime, and anywhere is a service standard. The service standard is a plan of the service provider that designed for delivering services to the online customers. The example parts of service standards are service process, service level agreement, service recovery policy, and etc. Service providers also could train the staff for following the service standard. Additionally, the room for improvement can be found during servicing to customers and handling customer complaints, the manager could record and analyze customer data for setting the improvement topics. Also, applying followed practical recommendations could be useful for improving online customer services to achieve the customer engagement target. All managers and employees can apply for online service with higher quality. The insightful practical recommendations are be explained each latent factor as following.

1) Reliability

Reliability is the higher impact of online customer service to customers than another one. Reliability is including two key items, accuracy of records keeping and keeping promise of company. So, the company and manager

should record and keep customer profiles and data on the company system. The customer profile should include customer name, address, mobile number, transaction, expenses, items of service delivered, preference, like and unlike items, and etc. Then, manage customer data with accuracy and deliver service to customers with customers required as referring the customer data personalized. Due to the promises, delivering services in the promised time and fulfilling the promises completed a positive impact on online customer service (Al-dweeri, Moreno, Montes, Obeidat, & Al-dwairi, 2019). Finally, the company and manager must let either staff or system keep the promise with delivering service to customers.

2) Responsiveness & Performance

In this context, the recommendation of responsiveness & performance of online customer service could be explained in the following details. The example of practical patterns that delivering responsiveness & performance in online customer service; such as prompt service delivery, problems resolving quickly, online service with a good performance, clear answer, and etc. The results of responsiveness & performance analysis hold three practical approaches to improve online customer service practically. First, the manager and company could increase the speed and prompt of online customer service with controlled the time to service customers such as response time, waiting time, time of resolving customer problems. Second, the company can decide the strategy of customer service that should set up and transform the service strategy into a digital platform or maintain the traditional system of service. Third, the company can apply by using firms' official social media (Grégoire et al., 2019; Grégoire, Salle, & Tripp, 2015), which is a customer complaint handling with service recovery. Finally, the company and manager could utilize the tracking service performance with technology for counting and tracking the time of every transactions of services. It means that if company and manager can measure the result of customer service of their staff and system, the staff and system can be known what should be improved.

5.6.1.2 Online Customer Experience

The fit model of this research can be confirmed that online customer experience directly both impact online room reservation website and online customer engagement. This study has correspondingly emphasized the vital impact of

customer experience on an online room reservation journey. The dimensions of online customer experience can be separated into two parts, including emotional and utilitarian feature. The finding of a model analysis of online customer experience, emotional feature is dramatically higher impact than utilitarian feature. With emotional feature, the concerned customer is emotional part of thinking such as enjoy, beautiful. The actions of company and manager for improving online customer experience are a majority because it increases online customer engagement obviously. It means that in practical recommendations are company and manager could improve online customer experience through emotional feature & social interaction and utilitarian feature to their customer experiences. Service providers could develop customer experience in these topics: stating enjoyable website, setting email alerts of special offers, presenting beautiful images, providing a website's community, and reviewing of places to visit on social channels. Then, service providers could keep on utilitarian feature on the website. The implementation for service provider is delivering customer experience by keeping on ease of use, value for money, convenience, able to find room/price/required information, saved time, easy information assessment, completed information, and provided customer care service information. Similarly, company and manager could realize that online customer experience is entrepreneurial initiatives. Improving the pathways capture value of customer-generated content (Micu, Bouzaabia, Bouzaabia, Micu, & Capatina, 2019) is one of the good alternatives. There can be a new business model platform that increases customer experience significantly. The deep recommendations are be explained by each latent factor as following for company and manager implementing conveniently.

1) Emotional feature & Social interaction

The emotional feature is the higher loading than utilitarian feature in online customer experience construct align with Stein and Ramaseshan (2019) reports that overall customer experience is meaningfully stronger for emotional orientation than for utilitarian orientation. The emotional feature concerned the feeling and emotion of customers when online books the hotel. It is such including enjoyable, and beautiful. Managers and companies should develop and improve online customer experience during online booking hotels by letting customers involve

and share experiences such as co-create and share positive emotions (Wu & Gao, 2019). Also, attraction and activity (de Hooge, 2017) and customer's emotional, and sensorial are the main dimensions to explain most discrete emotions (Lemon & Verhoef, 2016) which manager and company can develop and improve online customer experience during online booking. Moreover, emotional feature positively affected to responsiveness of online tourism website. Neither two-way interaction nor controllability has a meaningfully positive effect on emotional feature of customer experience (Luo, Luo, Huang, & Huang, 2019) because customer experience is a tactical differentiator in setting the customer-company dynamics in a business competition (Bhattacharya, Srivastava, & Verma, 2019).

2) Utilitarian feature

The utilitarian feature of online customer experience construct concerned the functional and reasonable of feeling and thought of customer. Even though, Stein and Ramaseshan (2019) reports that overall customer experience assessments mobilize significant positive influence are significantly stronger for customers with emotional than utilitarian. So, company and manager should develop their customer journey (process) during online booking for making a better online customer experience such as speed, ease of use, time-saving, easy information assessment, finding required information, information completion, and etc. Improving customer experience, the company and manager have to track the experiences of customers frequently from customer perception to increase good experience (Zomerdijk and Voss, 2010). Also, the company and manager have to employ to hold the present customer experience by setup the monitoring and alert system for maintaining and improving the level of customer experience. Moreover, the company and manager can know what customer required on utilitarian feature by studying from customer complaint records and opening the recommendation box in the booking transaction form for customer filling-in. Then, the company and manager can improve their customer experience on an utilitarian feature by analyzing and selecting the improvement points from these topics.

5.6.1.3 Online room reservation website

According to the fit model of the present research, online room reservation website is a mediator that both affected by online customer service

and online customer experience, and influences on online customer engagement significantly. This understanding can help company and manager to achieve their online customer engagement target basically. In addition, the present study has significant practical implications in line with Kamal et al. (2018) and Li et al. (2017)' s study on online room reservation for practical development in website. Due to online room reservation website is the key channel to connect the customer for providing information, service, experience, relation, revenue, and engagement. As the website is the backbone of this business, service providers have to set up platforms, features, products, services, contents, pictures, information, and etc. Also, service providers could be more focused and concentrate on this step seriously. The key techniques that can support service providers for developing the website are regarding information quality, privacy risks, and aesthetics website. The first recommendation is an improvement the online customer service through the website with referred reliability, performance, and communication through service delivery. The second, company and manager could improve their online customer experiences stated emotional feature & social interaction and utilitarian feature. The third recommendation is a concentration in the website features which are including information quality, privacy risk, and aesthetic that shown in the following paragraph. The fourth recommendation is improving the website, company and manager could set up the tracking system on the website of usage of customer behaviors (Abdullah et al., 2019). The fifth, the practical perception, the present findings recommend that company and manager can accept online room reservation technology and improve the website platforms and contents to serve customers as customer required. The improvement concept cannot be once or twice a year but there can improve continually as much as possible. Also, manager and company could analyze the functions and features that customer often uses and improving their areas. The sixth recommendation is company and manager could connect customer via social media platforms (Saito et al., 2019) to individual customers, such as sending promotion or marketing campaign information to make a long-term relationship between customer and revenue to the company. So, developing suitable approaches to the website is an energetic impact on online room reservation website and business. The tactical recommendations for the company and manager are presented as following.

1) Information Quality

Information quality on online room reservation website is very signification because the customer usually browses the hotel website to book the hotel information (Emir et al., 2016). Also, customers will be satisfied and loyal to the hotel if the hotel website can provide information accurately (Tan, 2015) and website features are better suited for informed communication and service pertinence (Zhou, Yan, Yan, & Shen, 2020). The items of information quality are up-to-date information, in-depth descriptions, and good source of information. Concerning information quality, service providers could provide in-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding), and up-to-date information of accommodation. The one thing that company and manager could realize the online room reservation website is designing directly booking website (without mediators) (Emir et al., 2016) because it makes increasing customer satisfaction, and revenue, and reducing cost. Finally, company and manager could provide a useful reference of hotel and receive and support customer feedback including ratings, reviews, and rating volume (Chen & Chang, 2018).

2) Privacy Risk

During customers booking the hotel, customers could provide personal information such as name, contact channels, credit card information, and etc. which concerned their privacy risk. The privacy risk is ensuring information security on the booking website is a way to increase the trust of customers (Chen & Chang, 2018). From the study, privacy risks of customers are one of the items that concerned online room reservation construct. Protecting privacy information and perceived privacy risk of customer is important. The practical recommendations referring privacy risks, service providers could 1) keep privacy of personal information during a transaction, 2) no unauthorized person accessing personal information, 3) no personal information for other purposes, 4) safe to use credit cards. In addition, there are reducing customer' perception of risk, it also rises the privacy concerns, which in turn affect the trust negatively (Ozturk, Nusair, Okumus, & Singh,

2017). Company and manager have to 5) focus on customer perception of risk and 6) quickly solve the privacy worries (Ozturk et al., 2017).

3) Aesthetic

Website aesthetic is increasingly probably to be booked and supposed as able to deliver better services (Kirillova & Chan, 2018). Website aesthetic concerns proper colors, graphics, attractive of images, and proper multimedia features which the company and manager can develop and improve on the online room reservation website. Therefore, the practical recommendations are 1) aesthetics website is the technique that service providers could use colors, graphics, images, and multimedia on the website as beautiful as customer required. 2) company and manager could hire professional photographers to illustrate and explain hotel information as be aesthetic of hotels because they can apply the value to the website such as expressive (e.g. color), aesthetics (Kirillova & Chan, 2018). 3) company and manager could implement aesthetics not only on the website but also, other channels for attracting a hotel's aesthetic effect. For example, implementing on social media platforms. Then, 4) Producing beautiful images by using applications to transform the imaged to be the beautiful ones (Kirillova & Chan, 2018).

5.6.1.4 Online Customer Engagement

Online customer engagement is the result of this present research model. From the fit model, there can be proved that the highest influence on online customer engagement is online room reservation website so the company and manager can firstly improve on their websites. The results will make online customer engagement be better. Practically, service providers should monitor the level of customer engagement. The tool and technique of this construct are tracking system and improvement. The tracking system is an online implementation system to record and analyze the level of customer engagement, which is including the amount of customers that repurchase customers, refer to others (called word-of-mouth), and share direct experience with others or share opinions, suggestion, and comment with others. These measures could be real-time tracked and reported. Supervisors and managers can make decisions for solving problems in several scenarios when unexpected results reported. The other technique is an improvement. An improvement is only the way that makes customer engagement level increased because there is no

company increases engaged customer without improvement. Due to the booking website cannot be improved by itself, any improvements came from staff. Therefore, service providers should set up staff to work as a team/section for working on an improvement project especially. This team/section could experience managing big data technologies and improving projects for enhancing customer engagement scores. Also, the practical recommendations that the company and manager can improve their learning and understanding the emergent online customer engagement construct. (N. Luo, Wang, Jin, Ni, & Zhang, 2019), and implementing the projected measure of this study (repurchasing, word-of-mouth, sharing) into customers. In addition, designing the activities to let customers share opinions during booking is essential. Even though, this research study and analysis a website platform only but sharing opinions of customers setting can be implemented on social media platforms for encouraging customer engagement. Moreover, the company can set up the community of customers on the online platform by registering the membership customer. (N. Luo et al., 2019). In practical recommendations are company and manager could improve online customer engagement by measuring and tracking the result of it which including repurchase, referred customer rate, and shared customer rate. It will make managers understand the status of engagement of customers continually. So, the company can adopt the strategy when the engagement level is not on the standard. The other profound practical recommendations are explained as follows.

1) Repurchase & Word-of-mouth

Repurchase & word-of-mouth are the dimension of online customer engagement in which engaged customers will express these actions on the online platforms by both website and social media. So, the company and manager can implement strategies that emphasize customer values, and benefits such as provide promotion campaigns, discounts, souvenirs, etc. In addition, the company and manager can design the rewarding program to let customer collect the points/coins while purchasing and redeem points/coins while repurchasing (van Doorn et al., 2010). Finally, the company and manager can reach the new customers by implementing the channels to let customers create content and review the positive opinions to platforms (Bilro, Loureiro, & Guerreiro, 2019).

2) Sharing

The performs of sharing are the actions of customers to share direct experience, opinion, suggestion, and comment of customers to others. Improving sharing, the company and manager can create the designed contents for sales purposes. Also, setting a box or a platform for taking customer-generated content is a good way to implement which Wang et al. (2017) concludes that customer-generated content is perceived to be credible than generated by the company. On the other hand, the company and managers should be attentive to the benefit and usage of the information provided by them to develop the service (Bilro et al., 2019). Furthermore, the company and manager can analyze reviews that customers earlier posted for other hotels to recognize in advance what make customers feel happy and unhappy.

5.6.1.5 A model of Enhancing Online Customer Engagement

According to the fit model of this research, the model of enhancing online customer engagement can be described in which online customer engagement can be increased by improving online customer service, online customer experience, and online room reservation website as the following contents. Therefore, it is essential to convey them to develop a model of enhancing online customer engagement, called “EOCE Avenue”. The structure of an enhancing online customer engagement model for implementing to online room reservation service providers is shown in Figure 5.2.

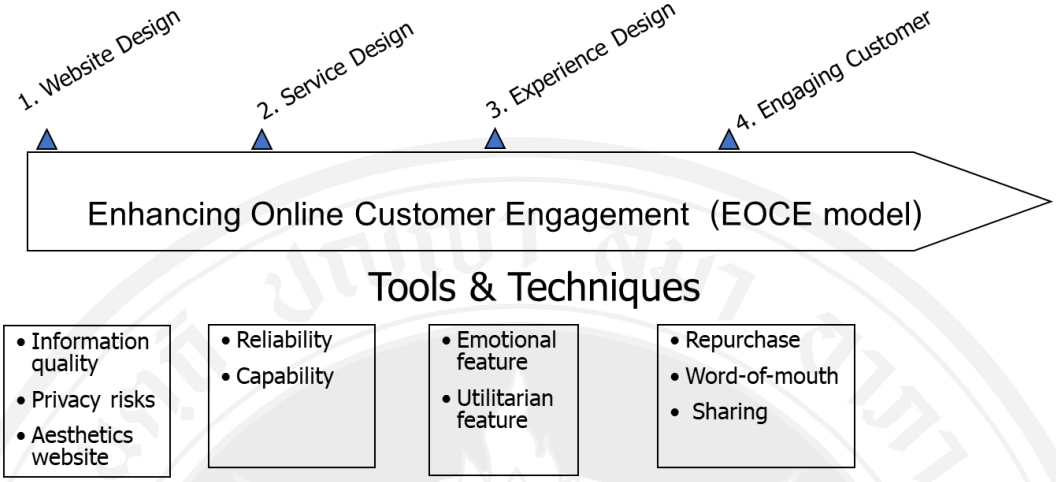


Figure 5.2 A Model of Enhancing Online Customer Engagement (EOCE Avenue)

The EOCE Avenue, it presents as an avenue that the driver has to drive through four milestones for enhancing online customer engagement. Online room reservation service providers can follow, step-by-step of the model, from milestone 1 to milestone 4. The implementation approach can be presented as follows.

Milestone 1 is a website design. Service providers have to set up platforms, features, products, services, contents, pictures, information, and etc. The website is the backbone of this business. Service providers could be more focused and concentrate on this step seriously. The key techniques that can support service providers for developing the website are regarding information quality, privacy risks, and aesthetics website. Concerning information quality, service providers could provide in-depth descriptions of accommodations and its services (e.g., room amenities, facility information, location, surrounding), and up-to-date information on accommodation. Referring to privacy risks, service providers could keep privacy of personal information during a transaction, no unauthorized person accessing personal information, no personal information for other purposes, and safe to use credit cards. Finally, aesthetics website is the technique that service providers could use colors, graphics, images, and multimedia on the website as beautiful as customer required.

Milestone 2 is service design; it is the step that service providers have to implement when a website designed. This milestone contains two concerned tools including service standard and customer experience. The service standard is a plan of the service provider that designed for delivering services to the online customer. The example parts of service standards are service process, service level agreement, service recovery policy, and etc. Service providers also could train the staff for following the service standard.

Milestone 3 is an experience design. This milestone let service providers realize two techniques. There are emotional features & social interaction, and utilitarian features. Emotional feature & social interaction that service providers could develop customer experience are stating enjoyable website, setting email alerts of special offers, presenting beautiful images, providing a website's community, and reviewing of places to visit on social channels. Then, service providers could keep on utilitarian feature on the website. The implementation for service provider is delivering customer experience by keeping on ease of use, value for money, convenience, able to find room/price/required information, saved time, easy information assessment, completed information, and provided customer care service information.

Milestone 4 is the engaging customer; this milestone is the step that shows the results of implementation on milestone number 1 to 3 which the key results that service providers should monitor are the level of customer engagement. The measurement of customer engagement is re-purchase, word-of-mouth, and sharing. Service providers could track the number of customers that repurchasing, refer to others (called word-of-mouth), and share direct experience with others or share opinions, suggestions, and comments to others. These measures could be real-time tracked and reported. Supervisors and managers can make decisions for solving problems in several scenarios when unexpected results reported. The other technique is an improvement. An improvement is only the way that makes customer engagement level increased because there is no company increases engaged customer without improvement. Due to the room reservation website cannot be improved by itself, any improvements came from the staff. Therefore, service providers should set up staff to work as a team/section for working on an improvement project especially.

This team/section could experience managing big data technologies and improving projects for enhancing customer engagement scores.

Finally, this model can be used for either new online room reservation service providers or existing service providers. They can follow the milestone of the model for fulfilling as recommended. Also, customer requirements never end up, company and manager could re-start the model at milestone 1 when completed milestone 4 already. In the same way, there can be said that the company and manager should start at milestone 1 again at least once a year.

5.6.2 Academic Implication

An academic implication of this study importantly provides several implications to the existing figure of literature. First, the study is exceptional that develops a theoretical model exploring the relationship between online customer service, online customer experience, online room reservation website, and online customer engagement concurrently in the model in which online customer services, and online customer experience are referred to as independent variables, with customer engagement as a subsequent variable to validate the mediating effect of online room reservation website. The structural equation model (SEM) analysis recommends that the model is valid to empirical provision for all seven hypotheses. This topic presents academic implication intuition regarding online customer engagement and its significant relationship with online customer service, online customer experience, and online room reservation website. As theory concerned, researcher develops the model empirically contributes to the online tourism research to develop the thoughtful of the fundamental relationship of these four key constructs in an online room reservation website and business.

Second, the study acknowledges substantial covers the online customer engagement in tourism literature in various aspects. it connected customer engagement to customer service (Vivek, Beatty, Dalela, & Morgan, 2014), customer experience, and website (Connell et al., 2019; Linda D Hollebeek et al., 2019). The empirical study is connecting these concepts. The findings underline the significance of a new approach to clarify online customer engagement in online room reservation

context. These findings are projected to be generalizable to the room reservation website and business.

Third, the present study correspondingly advances the thoughtful of online customer engagement (Busalim et al., 2019). There is knowledge about the roles of each dimension within customer engagement. Therefore, the present study covers the literature by empirically exploring this theoretical implication in online customer engagement in online room reservation context (Connell et al., 2019). The empirical findings show that online customer experience, and online room reservation website influence online customer engagement. Mainly, repurchase & word-of-mouth is significantly higher loadings on online customer engagement than sharing.

Finally, the present research fits in a rising literature stream that studies the association among online customer engagement, online customer service, online customer experience, and online room reservation website. However, this study is different from other literature. Due to this study concludes four major constructs related to online customer engagement for studying while most literature study a relationship between online customer engagement and other one construct, either online customer experience (Agarwal, 2019), online customer service (V Kumar et al., 2019), website (Connell et al., 2019; Linda D Hollebeek et al., 2019). Another approach is studying by itself, online customer engagement only (Pansari & Kumar, 2017).

5.7 Limitations and Future Research

The present research analyzes the relationship among four constructs and presents a theoretical framework and model with various theoretical implications and practical recommendations presented above, the limitations in this research should be recognized for future researches.

First, this study analyzes the relationship among four constructs which on the online room reservation website. Nevertheless, the growth of social media usage in this era, the next research should analyze the relation among construct compare with online room reservation websites and social media. Also, comparing loading between website and social media influences online customer engagement. The result will

guide the company and manager to develop their online platform strategy to achieve online customer engagement targets.

Second, due to the growth of social media platforms in this era, Facebook is the most popular social network worldwide as of April 2020 with 1 billion registered accounts and almost 2.5 billion monthly dynamic users. The next research could study the Facebook platforms and components that influence online customer engagement. The result of the study can help the small and medium enterprises to apply their marketing and selling channels on their Facebook platform.

Third, according to this study, there are online customer service construct and online customer experience construct in the model for analysis. However, the existing researches in this context, there is some research combining online customer service and experience called “online service experience” (Kautish & Sharma, 2019; Ribeiro & Prayag, 2019; Tsou, Chen, Yunhsin Chou, & Chen, 2019; Zhang et al., 2020). So, future research could analyze using online service experience to be one construct.

Finally, as customer engagement make repurchase, and benefits company (Harmeling et al., 2016). The researcher recommends that the next research could analyze the SEM model that links the relations between online customer engagement and the range of revenue that customer purchases. The results can support the company for analazing and implementing the factors that impact revenue directly.

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APPENDIX: A
QUESTIONNAIRE

QUESTIONNAIRE

Introduction: This questionnaire is part of the research undertaken in a doctoral degree study in the doctoral program in integrated tourism management at the National Institute of Development Administration (NIDA).

The purpose of this research study is to find out the decision-making factors of online customer service, online customer experience, online room reservation website and online customer engagement on online room reservation for understanding opinion, behavior and perception of customer. This research project gives significant implication to business both large/small/medium companies for business competitive advantage and academics for developing the new knowledge.

Instructions:

Please answer all questions and be assured that your responses are strictly confidential, only aggregate reports are reported.

Thank you for your effort in contributing to this study.

Have you ever been booked on online room reservation with online travel agent (OTA) or/and room reservation website before?

□ Yes …please specify the name of Online travel agent (OTA)……
or/and Hotel website …….
(please answer following questions)

□ No (no more answer next questions)

Part I: Respondent's General Information

1. Gender: □ Male □ Female

2. Marital status:

□ Single □ Marriage (joint) □ Marriage (separate)

□ Divorced □Widowed

3. Generation:

□ Gen. M (Born 1995-2015) □ Gen. Y (Born 1980-1994)

□ Gen. X (Born 1965-1979) □ Baby Boomer (Born 1944-1964)above

4. Education:

□ Junior High School or below □ High School or Voc. Cert.

□ Dip./High Voc. Cert. or Diploma □ Bachelor's Degree

□ Master's Degree or above

5. Average revenue per month

□ 10,000 baht below □ 10,001 - 20,000 baht □ 20,001 - 30,000 baht

□ 30,001 - 40,000 baht □ 40,001 - 50,000 baht □ 50,000 baht above

Part II: Opinion and behavior

1. Average duration of your online room reservation per time:

□ 1-2 days □ 3-4 days □ More than 4 days

2. Accompanying person

□ Alone □ Friend(s) / colleague(s)

□ Families □ Others (please specify) .....

3.You purchase online room reservation for hotel located in:

□ Thailand only □ Foreign country only

□ Both Thailand and Foreign-country

4.Including you, how many people in your group of your online room reservation latest:

□ 1-2 people □ 3-4 people □ More than 4 people

5. How often do you purchase with online room reservation within a year?

□ 1-2 times □ 3-4 times □ More than 4 times

6. Average purchasing cost for your online room reservation per time:

□ less than 3,000 baht □ 3,001-5,000 baht □ 5,001-10,000 baht

□ 10,001-20,000 baht □ 20,0001-30,000 baht □ more than 30,000 baht

7. Which online channel is most often for your purchasing online room reservation?

□ Direct hotel website □ Airline website □ Agoda

□ Hotels.com □ Trivago □ Booking

□ Tripadvisor □ Expedia □ Airbnb

□ Traveloka □ Others please specify……...

For each of the questions below, please choose your level of important. Please rate the level of importance in the questionnaire with the following statements with a scale 1-5 (1= “Not at all important”, 2= “Slightly Important”, 3= “Important”, 4= “Fairly Important”, and 5= “Very Important”)

Part III: Online customer service

Question	Level of important				
	Very ----------> Not at all				
	5	4	3	2	1
Reliability					
-Accuracy of customer records keeping					
-Keeping promise of company					
Capability					
-Prompt service delivery					
-Prompt responses by e-mail, chat, or other means					
-Problems resolving quickly					
-Informing important information promptly					
-Providing real-time information					
-Online service with a good performance					
-Content with a good performance					
-Knowing status of transaction					
-Understanding customer information					
-Clear answer					

Part IV: Online customer experience

Question	Level of important				
	Very ----------> Not at all				
	5	4	3	2	1
Emotional feature & Social interaction					
-Enjoyable of online booking					
-Email alerts of special offers					
-Beautiful images on the website					
-Member of a website's community					
-Reviewing of places to visit on social channels					
Utilitarian feature					
-Ease of use					
-Economic value for money of online booking					
-Convenience of online booking					
-Finding the required room					
-Time saving					
-Product price information					
-Easy information assessment					
-Finding required information					
-Information completion					
-Customer care service information					

Part V: Online room reservation website

Question	Level of important				
	Very ----------> Not at all				
	5	4	3	2	1
Information quality					
-Up-to-date information of accommodation					
-In-depth descriptions of accommodation and its services (e.g., room amenities, facility information, location, surrounding area information)					
-Good source of information					
Privacy risk					
-Privacy of personal information during a transaction					
-No unauthorized person accessing personal information					
-No personal information for other purposes					
-Safe to use credit cards					
Aesthetic					
-Proper Colors					
-Proper Graphics					
-Attractive of images					
-Proper multimedia features					

Part VI: Online customer engagement

Question	Level of important				
	Very ----------> Not at all				
	5	4	3	2	1
Repurchase & Word-of-mouth					
-Possibility for repurchase in the near future					
-I rely on the reviews with very high or very low ratings for the hotel					
-Previous reviews on the hotel affect my willingness to make a reservation					
-Often read other tourists' online reviews					
-Choose to book by gather information from tourists' online reviews					
Sharing					
-Share my direct experience to others					
-Share my opinion, suggestion, and comment to others					

Part VII: Suggestion

Please provide your good or/and bad experience on online room reservation

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Please suggest your opinion for improving room reservation website

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BIOGRAPHY

NAME	PISIT PIPATPHOKAKUL
ACADEMIC BACKGROUND	Master of Industrial Management Engineering, King Mongkut's University North Bangkok
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