A cross-country investigation of customer transactions from online to offline channels

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Abstract

Purpose – The purpose of this study is to investigate multichannel integration of hotels and online travel agencies (OTAs) and to compare consumer behavior between China and Indonesia in the context of online to offline (O2O) commerce. We examine how the services, brand and market share of OTAs influence behavioral intentions in both online and offline channels. SERVQUAL, theory of reasoned action and the halo effect are integrated to develop the research model.

Design/methodology/approach – To investigate Chinese and Indonesian customers' experiences and behavioral intention of OTAs and hotels, the customers who booked hotels using OTAs were invited to participate in the questionnaire survey. This study collected 336 and 305 data from China and Indonesia, respectively. A partial least squares structural equation modeling technique was used to test and compare the research hypotheses and model between China and Indonesia.

Findings – The results compare the similarities and differences of cross-country customer experiences and behavioral intentions of OTAs and hotels. The effect of website service quality on online satisfaction, the effect of online satisfaction on offline confirmation and the effects of offline confirmation and booking intention on patronage intention are significant and positive in both countries. Website service quality is positively associated with booking intention for Indonesia but not for China. The relationship between perceived size and booking intention is significant for China but not for Indonesia. The findings provide insights into the development of O2O commerce for global markets and multichannel strategies between OTAs and hotels.

Originality/value – With the development of O2O commerce, increasingly more hoteliers are opening up online and offline sales channels by cooperating with OTAs. Although several cross-country studies have investigated consumer behavior or behavioral intentions, behavioral settings are based on online or offline channels rather than the integration of both channels. Although some research has studied the integration or competition of OTAs and hotels, none of these studies have investigated the issues from the perspective of country comparison. This study provides the understanding of how customers in different countries and with different backgrounds react to the same e-commerce development, especially the cooperation of OTA and hotels.

Keywords Halo effect, Online travel agency, Multichannel, O2O commerce, Expectation confirmation theory, Website service quality

Paper type Research paper

1. Introduction

With the development of the internet, online to offline (O2O) commerce is emerging and is seen as a new e-commerce mode. O2O commerce refers to "the use of online and mobile to

drive offline local sales or redemption" (Fitzgerald, 2012). O2O commerce enables customers to make purchases online and then pickup products or services in physical locations. Some daily service industries, such as traveling, catering, house leasing and car rental, have applied O2O commerce to win customers and increase sales. As Jon Carder, the CEO of Empyr states, O2O commerce is a trillion-dollar opportunity. The iResearch Report (2017) also indicated that the market value of China's O2O market has increased from $ 335 million in 2015 to $ 626 million in 2018.

O2O commerce also contributes to the development of tourism. A report forecasts that tourism revenue will increase from $ 302.9 billion in 2017 to $ 436.9 billion by 2020 through O2O commerce (Statista, 2018). Increasingly more hoteliers cooperate with online travel agencies (OTAs), such as Hotel.com, Booking.com, and Airbnb.com, which offer online travel booking services. Hoteliers provide their own information to enrich OTA websites, while OTAs provide booking functions, price comparisons and guest reviews for customers (Guillet, 2020). Therefore, customers can book a hotel online through OTA websites and then patronize the booked hotel offline (Chang *et al.*, 2019; Sharma *et al.*, 2020).

Since OTAs have become the most popular sales channel for customers, the importance of customer booking intention on OTAs has attracted increasing attention (Sabioteortiz *et al.*, 2016; Sharma *et al.*, 2020). In O2O commerce, customers use online channels (OTA websites) and offline channels (hotels) when conducting hotel transactions (Ling *et al.*, 2014; Long and Shi, 2017). Customers' intention to patronize hotels may be influenced not only by OTAs but also by hotel services. That is, customers' experiences and behavioral intentions of OTA websites may affect their experiences and behavioral intentions of hotel services (Brun *et al.*, 2020). According to the halo effect, customers' perceptions and expectations of one channel may be influenced by their perceptions and expectations of the other channel (Jin *et al.*, 2010; Kwon and Lennon, 2009). Thus, the halo effect can be used to explain consumer behavior from OTA websites to hotel services.

In an increasingly global market, hoteliers and OTAs also face the challenge of serving customers from all over the world. Customers from different countries may have different evaluations of OTAs and hotels. Research has shown that country factors influence customers' evaluations of channels (Diallo and Siqueira, 2017; Jahandideh *et al.*, 2014; Moura *et al.*, 2015; Zhang *et al.*, 2015). In this study, China and Indonesia are selected to investigate and compare consumer behavior because they are located in Asia, have high populations and high economic growth over the past decade and tourism accounts for 10–15% of the gross domestic product (GDP) in both countries. The infrastructure of telecommunication and the number of Internet users exhibit sharp differences. China has the largest e-commerce market in the world. Although Indonesia is the largest economy in Southeast Asia, its e-commerce activities are less active. China has twice as many Internet users as Indonesia (53.2 and 25.4% of the population, respectively) (indexmudi.com, 2020). As a result, a comparison between the two countries can show the effect of e-commerce experiences on the factors determining OTA usage intention. Experienced e-commerce customers (Chinese) and in experienced customers (Indonesian) are affected differently by the same determinants. Another reason to compare the two countries is that China and Indonesia have very different cultural dimensions. According to Hofstede's cultural dimension, China has a high score of 87 on long-term orientation, while Indonesia has only a score of 62 on this dimension. China's score on uncertainty avoidance (30) is lower than that of Indonesia (48) (Hofstede, 2001). Customers who tend to take a long-term perspective should be more inclined to book hotels earlier than those who take a short-term perspective. Customers who like to avoid uncertainty should access OTA websites more carefully than those who are willing to take risks. As a result, cultural differences may also lead to different experiences and behavioral intentions.

Although several studies have investigated and compared customers' purchase intention in different countries (Jahandideh *et al.*, 2014; Sabioteortiz *et al.*, 2016; Zhang *et al.*, 2015),

behavioral settings are based on online or offline channels rather than the integration of both channels. Although some research has studied the integration or competition of OTAs and hotels (Chang *et al.*, 2018, 2019), none of these studies have investigated the issues from the perspective of country comparison. As a result, even though the world is gradually becoming integrated, the understanding of how customers in different countries and with different backgrounds react to the same e-commerce development, especially the cooperation of OTA and hotels, has not been systematically investigated.

The purpose of this study is to examine how the services, brand and market share of OTAs influence behavioral intentions in both online and offline channels. According to theory of reasoned action (TRA), customers' rational purchase motivations are based on their beliefs and judgments, such as the reputation and size of online stores (Abou-Shouk and Khalifa, 2017; Chang, 2015; Fu Tsang *et al.*, 2010; Priporas *et al.*, 2017). Website service quality is a critical factor in increasing customers' purchase intention because SERVQUAL determines their online shopping experiences (Devaraj *et al.*, 2002; Song *et al.*, 2012; Zhou *et al.*, 2009). Thus, SERVQUAL, TRA, expectation confirmation theory (ECT) and the halo effect are integrated to develop the research model. Specifically, the integrated model is used to: (1) investigate the factors affecting online satisfaction and booking intention in online channels; (2) examine how online satisfaction and booking intention toward OTAs can be directed to patronage intention toward offline hotels; and (3) compare and contrast the effects of these factors for Chinese and Indonesian customers.

To verify the differences in the path coefficients between Chinese and Indonesian models, this study utilizes multigroup analysis (MGA) of partial least squares structural equation modeling (PLS–SEM) analysis. The measurement invariance of composite models (MICOM) approach is adopted to evaluate the measurement invariance before conducting MGA. Furthermore, we employ non-parametric tests (i.e. permutations test and Henseler's MGA) to perform MGA. Therefore, we contribute PLS–SEM advanced methods to tourism issues. The results show that Chinese and Indonesian customers indeed exhibit different behavior patterns in terms of utilizing OTAs and patronizing hotels.

The remainder of the paper is organized as follows. The next section reviews the relevant literature. Then, the research model and hypotheses are developed based on the conceptual framework in Section 3. Section 4 describes the research methodology and data collection involving eight well-known hotel chains from China and Indonesia. Section 5 shows the research results across both countries, followed by a discussion of the results in Section 6. Section 7 presents theoretical and practical implications. Finally, the conclusions and limitations of this study are summarized in Section 8.

2. Literature review

This study aims to explain how good OTAs can entice customers to hotels. We employ and integrate the theories of SERVQUAL, TRA, ECT and the halo effect to explain how customers pass from online channels to offline channels. SERVQUAL explains the importance of website service quality, and TRA explains the utility of the brand and market share on OTAs. ECT explains how online satisfaction affects booking intention and how offline confirmation affects patronage intention. The halo effect explains how online satisfaction and booking intention can be transferred to offline confirmation and patronage intention.

2.1 Multichannel integration

O2O commerce integrates online and offline channels and can be viewed as multichannel integration. Customers are driven to purchase products offline by online promotion, such as banner advertisements or digital coupons (Phang *et al.*, 2014). In other words, purchases that

are made in the offline realm are propelled by the digital information of the online world (tmogroup.asia, 2015). O2O commerce has been widely applied in service industries, such as tourism, catering, house-rental and car-rental industries.

In the tourism industry, companies introduce new business models and integrate innovative information technologies to increase revenue and profits (Gretzel *et al.*, 2015; Werthner *et al.*, 2015). Hoteliers cooperate with OTAs to attract customers to their hotels. Customers can book a hotel through OTAs and then patronize the hotel to experience its offline service (Chang *et al.*, 2019). Based on previous research, cooperation between multiple channels (OTAs and hotels) can be explained by the halo effect (Chang *et al.*, 2018, 2019).

2.2 Halo effect

The halo effect refers to "an extrapolation from a general impression to unknown attributes" that unconsciously alter the individual's judgment (Nisbett and Wilson, 1977; Thorndike, 1920). The halo effect is a cognitive bias in which an observer's impression of a set attributes of an individual, company, brand or product can influence his/her perception of the characteristics of the entire entity. For example, a customer attracted by the neat and accurate information provided by the hotel may have the overall impression that the hotel is a tidy and clean one.

The halo effect has also been generalized to a wide range of categories, including brands, channels, organizations. For example, the success of Apple's iPod has helped increase sales of other consumer products, such as the Apple Watch, iPhone and iPad. The halo effect helps customers accept other new products related to the brand (Grant, 2020). For retailers, halo effect has used to describe the positive interaction between physical store channels and online channels. When retailers can leverage the halo effect to influence customers who make purchase in a physical store to purchase the same products or services through the store website (Jin *et al.*, 2010; Kwon and Lennon, 2009; Xing *et al.*, 2020).

OTAs cooperate with hotels to provide hotel booking services. If a customer likes the information provided by a hotel in online channel (OTAs), he/she will have a positive perception of the other channel (hotels). The positive perception can be extended to the entire hotel services and enhance the customer's behavioral intention. For this reason, this study uses the halo effect as a framework to explain the relationship from O2O channels.

2.3 Expectation confirmation theory

ECT proposed by Oliver (1980) proposes that customers' expectations and performance of services determine their post–purchase behavior. A customer initially forms an expectation of a particular service prior to purchase. When the customer experiences the service, he/she forms a perception of service performance. The customer then compares the perceived performance with his/her initial expectation and determines whether his/her expectation is confirmed. Finally, the customer's confirmation influences his/her satisfaction, which in turn influences his/her behavioral intention. Therefore, satisfaction and confirmation are important determinants of purchase intention.

ECT has been widely applied in the tourism context to examine how satisfaction and confirmation influence consumer intentions (Li and Liu, 2014; Parvin *et al.*, 2017; Sedera *et al.*, 2017). This study introduces ECT to investigate the relationships in both online and offline settings. With ECT, this study argues that online satisfaction can lead to booking intention and offline confirmation can lead to patronage intention. Online satisfaction in this study refers to customers' affect with (feelings about) an OTA website. Customers' satisfaction with OTAs will influence their intention to book hotels online. Offline confirmation in this study refers to a customer's perception of the congruence between the expectation of the hotel service and its actual performance. Higher confirmed performance leads to higher patronage intention.

2.4 SERVQUAL

Before patronizing a hotel, a customer may book a hotel via a collaborating OTA website. Only when the customer is satisfied with the OTA website, will he/she book a hotel on the website and then patronize the booked hotel. Thus, customer satisfaction is a critical issue for e-commerce websites, and the factors that influence satisfaction have attracted research attention (Mou et al., 2020; Zhou et al., 2009). Previous studies have widely used SERVQUAL to examine the relationship between service quality and satisfaction because the theory of SERVQUAL was developed to assess customers' feelings about e-commerce and information systems (Jeon and Jeong, 2017; Sun et al., 2020; Xing et al., 2020; Zhou et al., 2009).

Service quality has been studied extensively in online shopping (Parasuraman et al., 2005). Service quality for online shopping is defined as "the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery" (Zeithaml et al., 2000). The literature further reports that website service quality determines customer satisfaction in e-commerce (Devaraj et al., 2002; Song et al., 2012; Zhou et al., 2009). Recent evidence on multiple channels indicates that website service quality plays an important role in behavioral intentions of online and offline channels (Ahn et al., 2004; Bock et al., 2012; Fernández-Sabiote and Román, 2012; Verhagen and Van, 2009; Yang et al., 2011).

Because OTA websites are e-commerce platforms that allow customers to purchase travel products, this study uses SERVQUAL instruments to measure website service quality of OTAs. Website service quality in this study is defined as the extent to which an OTA website facilitates efficient and effective booking services and is measured using five indicators: tangible, reliability, responsiveness, assurance and empathy (Parasuraman et al., 1988). Tangible refers to the appearance of the website; reliability refers to the ability to perform services reliably and accurately; responsiveness refers to the willingness to help and provide timely services to customers; assurance refers to the ability to build customer trust and confidence; and empathy refers to the degree to which individualized attention is provided to customers.

In the tourism industry, website service quality can attract customers to book hotels via OTAs (Chang et al., 2019). When hoteliers cooperate with OTAs, website service quality helps increase customers' satisfaction with online channels, which in turn influences their intention to book hotels (Chang et al., 2018). Table 1 summarizes previous studies that investigated the effects of service quality on satisfaction and behavioral intentions in the tourism context. Given its popularity, SERVQUAL is included in this study.

Previous studies	Independent variable	Dependent variable	Research issue
Jeon and Jeong (2017)	Website service quality	Satisfaction, return intention, customer e-loyalty	Online travel services
Mou et al. (2020)	Website quality	Repurchase intention	e-commerce
Ongsakul et al. (2020)	Hotel website quality	Behavioral intentions	Online travel services
Sun et al. (2020)	Website functionality and usability	Satisfaction, repurchase intention	Online travel services
Xing et al. (2020)	Service quality	Satisfaction, intention of online consultation, intention of face-to-face consultation	Online health
Zhou et al. (2009)	Website design quality, service quality	Satisfaction, repurchase intention	Online shopping

Table 1.
Previous studies
investigating service
quality

2.5 Theory of reasoned action

Customer awareness is critical to the survival of OTAs since it serves as the point of contact for attracting customers. Without proper awareness, no customers will access OTAs. OTAs commonly develop customer awareness through reputation promotion and market share acquisition. As shown in Table 2, perceived reputation and perceived size have been identified as key factors in e-commerce.

Previous research has utilized TRA as a theoretical framework to investigate perceived reputation and perceived size (Jarvenpaa *et al.*, 1999). TRA posits that an individual's behavioral intention is driven by his/her attitude toward the behavior and subjective norms surrounding the performance of the behavior (Fishbein and Ajzen, 1980). Kim and Park (2013) proposed a model of social commerce based on TRA and found that company reputation and company size influence purchase intention. Agag and El-Masry (2017) also indicated that reputation and perceived website size are antecedents of consumers' intention to purchase travel online.

Perceived reputation in this study is defined as the degree to which a customer believes an OTA website to be honest and concerned about its customers. Because online stores lack person-to-person interaction, customers place emphasis on the honesty and care of online stores (Doney and Cannon, 1997). If an online store has a good reputation, its products and services are perceived positively by its customers. Perceived size in this study refers to customer perception of the market share of the OTA. Large online stores are believed to have more resources to invest in their business and maintain their services and products than small online stores. Therefore, Jarvenpaa *et al.* (1999) proposed that the reputation and size of online stores influence customers' willingness to patronize the stores.

Drawing upon TRA, satisfaction has been conceptualized as an attitude preceding behavioral intentions (Song *et al.*, 2012; Teo *et al.*, 2008). Perceived reputation and perceived size have been operationalized as individual beliefs that influence behavioral intentions (Agag and El-Masry, 2017; Chu *et al.*, 2005; Lee and Cho, 2017). Therefore, this study posits that online satisfaction with OTAs as well as perceived reputation and perceived size of OTAs will influence the intention to book hotels.

3. Research hypotheses and model

When customers must interact with a website during the booking phase, the OTA enables them to easily and effectively book a hotel through the website. Customers' benefits from

Previous studies	Independent variable	Dependent variable	Research issue
Agag and El-Masry (2016)	Reputation of website, perceived size of website, website quality	Attitude, intention to purchase	Online travel website
Chang (2015)	Reputation of a travel agency	Customer recommendation behaviors	Online travel services
Diallo and Siqueira (2017)	Store brands	Purchase intention	Retails
Hsu *et al.* (2014)	Perceived reputation of website, perceived size of website, perceived reputation of sellers, perceived size of sellers	Repurchase intention	Online shopping
Kim and Park (2013)	Reputation, size	Purchase intention, word-of-mouth intention	Social commerce
Lee and Cho (2017)	Size, reputation	Intention to play, intention to purchase	Online game

Table 2.
Previous studies investigating perceived reputation and perceived size

OTA service support may influence their satisfaction and purchase intention. In several previous studies, Website service quality influences not only satisfaction but also purchase intention (Jeon and Jeong, 2017; Sun *et al.*, 2020; Xing *et al.*, 2020; Zhou *et al.*, 2009). Booking intention in this study refers to the strength of a customer's willingness to book the hotel through the OTA website. Thus, this study expects that when the website service quality provided by OTAs meets customer expectations, satisfied customers will be likely to book hotels through OTAs. Consequently, we hypothesize the following:

H1. Website service quality positively influences online satisfaction.

H2. Website service quality positively influences booking intention.

Customers must select an OTA website to book a hotel before patronizing the hotel. Based on TRA, customers tend to trust OTA websites with a positive reputation and large market share when booking hotels (Brun *et al.*, 2020). Thus, OTA websites with a good reputation and larger size are trustworthy and can increase customers' intention to book hotels (Agag and El-Masry, 2017). In a multichannel environment, perceived reputation and perceived size are important factors that affect customer purchase decisions (Bock *et al.*, 2012; Doong *et al.*, 2011; Kwon and Lennon, 2009; Jin *et al.*, 2010). Consequently, this study hypothesizes the following:

H3. Perceived reputation positively influences booking intention.

H4. Perceived size positively influences booking intention.

In a multichannel environment, hotel transactions can be divided into two phases: hotel booking and hotel patronage. Purchase intention is a subjective measure of customer outcome or performance. Thus, customers' purchase intention is determined by their satisfaction with a website (Cronin and Taylor, 1992; Oliver, 1980). During the hotel booking phase, we expect that customers who are satisfied with OTA websites will be inclined to book hotels.

A customer forms his/her initial expectation for the hotel service when booking a hotel through OTAs. After the customer obtains the expected benefits through his/her experience of the hotel service, the customer compares the perceived performance with his/her initial expectation. If the customer's expectation for the hotel service cannot be confirmed, he/she will switch to a replacement hotel. Previous studies have found that the higher the degree of customer confirmation, the higher the customer's purchase intention (Larsen *et al.*, 2009; Lee, 2010; Li and Liu, 2014; Liao *et al.*, 2007; Lin *et al.*, 2005; Thong *et al.*, 2006). Patronage intention in this study refers to the strength of a customer's willingness to patronize the hotel. During the hotel patronage phase, we expect that customers with a high level of offline confirmation will tend to patronize hotels. Consequently, this study hypothesizes the following:

H5. Online satisfaction positively influences booking intention.

H6. Offline confirmation positively influences patronage intention.

In the studied multichannel context, online and offline services are offered by different companies, yet together, they offer a complete customer shopping experience (Chang *et al.*, 2019). OTAs and hotels share common interests and cooperate to serve the same customers and hope that the customers will return to shopping in the future. When a customer books a hotel through an OTA website, he/she views the OTA booking service as part of the hotel shopping experience. Since the customer has a favorable experience with the OTA website in the online channel, he/she tends to develop a favorable perception of the offline channel. In multichannel tourism research, Chang *et al.* (2018) also proposed that customers' satisfaction with OTA websites can positively affect their experiences with hotel services. Therefore, the more positive the online experience is, the more favorable the offline evaluation will be.

Customers who are satisfied with the OTA website must contend with the timely information provided by the OTA. With the timely and accurate information, customers can develop the right expectations for hotel offline services (Guillet, 2020). As a result, the right expectations can enhance customer confirmation of hotel services, since confirmation is the difference between expectation and utility (Bhattacherjee, 2001). Consequently, this study hypothesizes:

H7. Online satisfaction positively influences offline confirmation.

On the other hand, the OTA is a sales channel that sells the accessibility of hotel rooms. To facilitate the sales process, the hotel must provide pictures, descriptions and service terms to the OTA. The information must be organized in the way that is attractive to potential customers by the OTA. Only when the interest is aroused and a positive perception is cognized by the customer, will he/she place a reservation in the OTA. Even though the positive perception comes only from the attractive information, according to the halo effect (Chang *et al.*, 2018, 2019), the customer will generalize the impression to the entire hotel. As a result, the intention to patronize the hotel is enhanced. Consequently, this study hypothesizes:

H8. Booking intention positively influences patronage intention.

Differences in telecommunication development and Internet usage may significantly influence customer experiences and behaviors in the two countries. Customers with more e-commerce experiences have more website access experiences, and they are more willing to book hotels via OTA websites than inexperienced customers. Previous studies have indicated that technology and Internet usage experiences are moderators between customer perceptions and behavioral intentions (Castañeda *et al.*, 2007; Lu *et al.*, 2011). Thus, telecommunication development and Internet usage may result in differences between China and Indonesia.

Additionally, several prior studies have investigated whether the antecedents of user experiences and behavioral intentions are influenced by culture (Jahandideh *et al.*, 2014; Sabioteortiz *et al.*, 2016; Zhang *et al.*, 2015). In the tourism context, websites and store brands have been attributed different levels of influence based on culture (Diallo and Siqueira, 2017; Moura *et al.*, 2015). Thus, the relationships between experiences and behavioral intentions may vary due to cultural differences.

Hofstede (1980) defines culture as "the collective programming of the mind which distinguishes the members of one human group from another". According to the research of Hofstede and Bond (1988), people with different cultural backgrounds may behave differently in terms of power distance, individualism, masculinity, uncertainty and long-term orientation. In both countries, China and Indonesia have similar country scores on the dimensions of power distance (80 and 78) and collectivism (20 and 14) but have salient differences on the dimensions of masculinity/femininity (66 and 46), uncertainty avoidance (30 and 48) and long-term orientation (87 and 62) (Hofstede, 2001).

Masculinity represents a society's preference for achievement, heroism, decisiveness and material rewards for success (Hofstede, 1980). Masculine customers set higher priority in pursuing their goals than feminine counterparts (Srite and Karahanna, 2006; Yoon, 2009). Since high website service quality provides timely and accurate information to meet customers' goals of selecting appropriate hotels, masculine customers should react to this construct more vividly than others. Besides, confirmation is the result of contrasting the expected and actual utility of service providers. Masculine customers should also be affected more significantly by this factor than feminine customers. According to country scores, Chinese is more masculine than Indonesian. Consequently, this study hypothesizes the following:

H9a. Website service quality influences online satisfaction more strongly for China than for Indonesia.

H9b. Website service quality influences booking intention more strongly for China than for Indonesia.

H9c. Offline confirmation influences patronage intention more strongly for China than for Indonesia.

Long-term orientation refers to the degree to which members of a society encourage frugality and modern education efforts to prepare for the future (Hofstede and Bond, 1988). To take the financial advantage of booking via OTAs, customers need to place the orders at least one week before patronizing the hotels. Therefore, customers with a long-term perspective tend to opt for OTA booking than the short-term planners. According to country scores, Chinese has a higher long-term orientation than Indonesian. Consequently, this study hypothesizes the following:

H9d. Booking intention influences patronage intention more strongly for China than for Indonesia.

In summary, the model examines the factors affecting online satisfaction and booking intention and the effects of the two constructs on offline confirmation and patronage intention, albeit the offline operations are owned by business entities different from OTAs. In the online environment, Website service quality, perceived reputation and perceived size of OTAs influence customers' online satisfaction and booking intention. The research model is shown in Figure 1.

The model also includes demographic variables (i.e. gender, age, education, monthly income and hotel brands visited). Prior research has confirmed that control variables are likely to influence consumer intentions (Chang *et al.*, 2018). Therefore, we further evaluate whether the control variables have the covariance with the proposed model.

4. Methodology
4.1 Instrument
The questionnaire was developed based on previous studies to ensure the content validity. The website service quality variable was adapted from DeLone and McLean (2003). The items
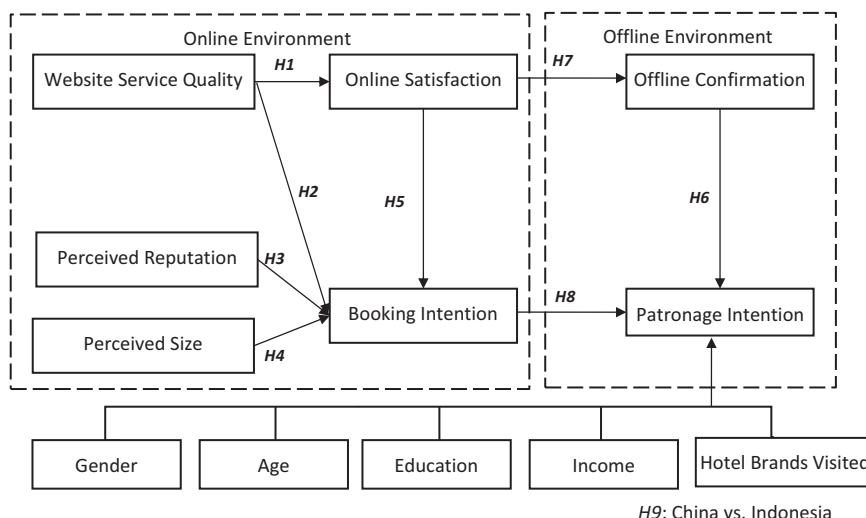

Figure 1.
Research model

for perceived reputation and perceived size were adapted from Jarvenpaa *et al.* (1999). The items for offline confirmation and online satisfaction were adapted from Bhattacherjee (2001). The items for booking intention and patronage intention were adapted from Moon and Kim (2001). All items were measured on a seven-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7). Twenty-two items for the study variables were used in this study (see Appendix 1 for full measurement items). The survey instrument also included the demographic characteristics of the respondents, such as their gender, age, education, monthly income and hotel brands visited. The initial questionnaire was developed in English based on past research. To investigate customers from China and Indonesia, we used the transaction/back-translation method to develop Chinese and Indonesian questionnaires (Brislin, 1970). We also invited ten customers from each country who booked hotels through OTA websites to conduct a pilot test. Based on their suggestions, the wording, length and format of the items in the questionnaire were modified.

4.2 Samples

Data for this study were collected from two countries: China and Indonesia. To collect the data, this study selected one OTA and four hotel chains for each country.Ctrip.com and Traveloka.com were chosen because the two OTAs have an approximately 60% market share in their respective countries. Not only are they the most famous and largest OTAs, but they also cooperate with well-known hotel chains to provide hotel booking services to millions of customers worldwide.

In the past five years, due to China's large population and rapid economic development, China's hotel industry has maintained a growth of 6.7% (IBISWORLD, 2019). Among the top 30 hotel chains in China, Homeinns, 7daysinn, Motel168 and Podinns ranked as the first, third, ninth and eleventh largest hotel chains, respectively, with a branch ratio of 4:4:1:1 (Inntie, 2019). Of the four hotel chains, Homeinns and 7daysinn each have more than 2,000 hotels and 20,000 rooms. On the other hand, Indonesia's hospitality industry has attracted customers from all over the world because the country has numerous tourist attractions and tourism resources. In the hotel market, from 2020 to 2023, annual revenue growth is expected to be 4.25% (Statista, 2020). According to the ranking by size, Accor, Archipelago International, Santika Indonesia and Tauzia Hotels ranked as the first, second, third and fifth largest hotel chains respectively, with a branch ratio of 2:2:2:1 Their hotels and rooms account for 60% of the market share of the top ten hotel chains (horwathhtl.com, 2018). Therefore, four well-known hotel chains were selected in each country and were invited to participate in this study on a proportional basis.

4.3 Data collection

Despite generalizability concerns, this study used a purposive sampling approach, which has commonly been used in consumer behavior surveys (Munir *et al.*, 2019) and comparative studies between countries (Mendelsohn *et al.*, 2014; Noh *et al.*, 2013). We recruited respondents who met the following sampling criteria: (1) respondents from both countries should use Ctrip.com and Traveloka.com to book hotels, but not other channels because the survey investigated the services, brand and market share of specific OTAs; (2) to avoid bias, the respondents should patronize the hotel chains selected in this study because the selected hotel chains are more consistent in brand and market share. The electronic questionnaire was delivered to the respondents via managers of hotel chains. After the respondents patronized the hotels through specific OTAs, they could directly evaluate the experiences and behavioral intentions of OTAs and hotels. Since previous research has considered the behavioral intention to be a direct predictor of actual behavior (Ajzen, 1991; Fishbein and Ajzen, 1980), this study uses booking intention to measure a customer's willingness to book the hotel

through the OTA website, and uses patronage intention to measure a customer's willingness to patronize the hotel.

G*Power was used to calculate the sample size based on statistical power (Faul *et al.*, 2009). A sample size of 138 is the minimum requirement for an effect size of 0.15 and a statistical power of 0.95. The power value exceeds 0.95, which is higher than 0.8 suggested by social and behavioral science research. We collected 336 and 305 data from China and Indonesia, respectively. In the Chinese sample, 62.8% were male respondents, the majority of the respondents (52.1%) were between 26 and 35 years old, a large number of respondents (75.3%) had a bachelor's degree and 30.4% of the respondents had monthly income between $ 500 and $ 750. In the Indonesian sample, 66.2% were female, 59.7% were between 18 and 25 years of age, most of the respondents (65.6%) had a bachelor's degree and 48.5% earned less than $ 250 per month. Appendix 2 lists the demographic characteristics of the respondents.

4.4 Data analysis
In this study, SPSS software was used to evaluate the demographic information of the respondents, and SmartPLS 3.2.9 was used to conduct a PLS–SEM analysis. Compared to covariance-based structural equation modeling (CB–SEM), PLS–SEM is suitable for complex models with many latent and measured variables as well as applications and predictions (Hair *et al.*, 2019; Henseler *et al.*, 2016; Henseler, 2017; Hwang *et al.*, 2020). Additionally, PLS–SEM has fewer limitations on data distribution when analyzing non-normal distributions and small sample sizes (Chin, 1998). Our research model consists of a set of dependent and independent variables. The use of PLS–SEM can verify the theories and predict the relationships between variables. Therefore, this study conducted PLS–SEM to assess the measurement and structural models. Bootstrapping with 5,000 sub-samples and *t*-statistic was used to estimate the significance of path coefficients (Hair *et al.*, 2019). Reliability, convergent validity and discriminant validity were assessed in the measurement model, while the significance of the path coefficient and *t*-test for each hypothesis and explained variances were evaluated in the structural model (Khan *et al.*, 2019; Shiau and Chau, 2016).

5. Results
5.1 Common method bias
This study used Harman's Single Factor technique to assess common method variance (CMV) (Podsakoff and Organ, 1986). The results of the principal component analysis show that the total variances of the first and largest factor are 45.49% in China and 29.97% in Indonesia, which is less than 50%. In addition, we also conducted the marker variable method to test for common method bias in Chinese and Indonesian models (Chin *et al.*, 2012; Shiau *et al.*, 2020). The results show that the marker variables have no significant effect on online satisfaction, booking intention, offline confirmation and patronage intention. Therefore, common method bias is not a major issue in this study.

5.2 Measurement model
Measurement models for China and Indonesia were tested using PLS software. A confirmatory composite analysis procedure was conducted to evaluate the convergent and discriminant validity (Hair *et al.*, 2020). The convergent validity was assessed using factor loading, average variance extracted (AVE), composite reliability (CR), Cronbach's alpha and Dijkstra–Henseler's rho (rhoA) (Fornell and Larcker, 1981; Hair *et al.*, 2019). Table 3 shows that the item loadings for each construct of the two samples are higher than 0.708. As shown in Table 4, the AVE of each construct is greater than 0.5, and Cronbach's alpha, rhoA and CR of each construct are higher than 0.7. In addition, the Fornell–Larcker Criterion and

Construct	Item	China	Indonesia
Website service quality (WSQ)	WSQ1	0.93	0.88
	WSQ2	0.95	0.89
	WSQ3	0.94	0.91
Perceived reputation (PR)	PR1	0.89	0.85
	PR2	0.92	0.82
	PR3	0.93	0.88
	PR4	0.91	0.87
Perceived size (PS)	PS1	0.95	0.90
	PS2	0.97	0.91
	PS3	0.95	0.92
Satisfaction (SAT)	SAT1	0.95	0.91
	SAT2	0.95	0.90
	SAT3	0.95	0.93
Booking intention (BI)	BI1	0.96	0.89
	BI2	0.95	0.84
	BI3	0.94	0.91
Confirmation (CON)	CON1	0.91	0.90
	CON2	0.94	0.94
	CON3	0.95	0.87
Patronage intention (PI)	PI1	0.88	0.83
	PI2	0.93	0.90
	PI3	0.91	0.89

Table 3.
Convergent validity

| Construct | China | | | | Indonesia | | | |
	Cronbach's α	rho	CR	AVE	Cronbach's α	rho	CR	AVE
WSQ	0.93	0.93	0.96	0.88	0.87	0.88	0.92	0.80
PR	0.93	0.93	0.95	0.83	0.88	0.92	0.92	0.73
PS	0.95	0.96	0.97	0.91	0.90	0.90	0.93	0.83
SAT	0.95	0.95	0.96	0.90	0.90	0.90	0.94	0.84
BI	0.94	0.95	0.96	0.90	0.86	0.86	0.91	0.78
CON	0.93	0.93	0.95	0.87	0.89	0.91	0.93	0.82
PI	0.89	0.89	0.93	0.82	0.84	0.85	0.91	0.76

Table 4.
Reliability

heterotrait–monotrait (HTMT) technique were used to analyze the discriminant validity. Table 5 shows that the square root of the AVE for each construct is above 0.75 and greater than its correlations with other constructs (Hair *et al.*, 2019). Table 6 shows that the HTMT values are less than 0.9 (Henseler *et al.*, 2015). Therefore, the above PLS indicators support the convergent and discriminant validity of the measurement models.

5.3 Structural model
A structural equation modeling (SEM) analysis was conducted to test the hypothesized relationships between all constructs of the Chinese and Indonesian models. Figure 2 shows the results for the Chinese sample. Website service quality ($\beta = 0.796$, t-value $= 26.266$, $p < 0.001$) significantly influences online satisfaction. The construct explains 63.3% of the variance in online satisfaction. Perceived size ($\beta = 0.201$, t-value $= 3.184$, $p < 0.01$) significantly influences booking intention, but website service quality ($\beta = 0.088$, t-value $= 0.880$, $p > 0.05$), perceived reputation ($\beta = 0.154$, t-value $= 1.578$, $p > 0.05$) and

Construct	Country	WSQ	PR	PS	SAT	BI	CON	PI
WSQ	China	*0.94*						
	Indonesia	*0.89*						
PR	China	0.79	*0.91*					
	Indonesia	0.67	*0.86*					
PS	China	0.58	0.59	*0.96*				
	Indonesia	0.53	0.36	*0.91*				
SAT	China	0.80	0.81	0.56	*0.95*			
	Indonesia	0.71	0.61	0.54	*0.91*			
BI	China	0.45	0.47	0.43	0.47	*0.95*		
	Indonesia	0.07	−0.08	0.08	−0.02	*0.88*		
CON	China	0.61	0.63	0.60	0.58	0.44	*0.93*	
	Indonesia	0.44	0.45	0.45	0.39	0.05	*0.91*	
PI	China	0.50	0.51	0.49	0.46	0.48	0.69	*0.90*
	Indonesia	0.14	0.03	0.20	0.05	0.36	0.21	*0.87*

Table 5.
Fornell–Larcker criterion

| Construct	Country	WSQ	PR	PS	SAT	BI	CON	PI
WSQ	China							
	Indonesia							
PR	China	0.85						
	Indonesia	0.76						
PS	China	0.61	0.63					
	Indonesia	0.60	0.42					
SAT	China	0.85	0.87	0.59				
	Indonesia	0.80	0.68	0.60				
BI	China	0.48	0.50	0.45	0.49			
	Indonesia	0.09	0.08	0.09	0.04			
CON	China	0.66	0.68	0.64	0.62	0.47		
	Indonesia	0.49	0.51	0.50	0.43	0.06		
PI	China	0.55	0.56	0.53	0.51	0.52	0.76	
	Indonesia	0.16	0.10	0.23	0.10	0.42	0.24	

Table 6.
Heterotrait–monotrait ratio (HTMT)

online satisfaction ($\beta = 0.157$, t-value $= 1.554$, $p > 0.05$) do not. These paths explain 27.2% of the variance in booking intention. Online satisfaction ($\beta = 0.584$, t-value $= 14.267$, $p < 0.001$) significantly influences offline confirmation. The path accounts for 34.1% of the variance in offline confirmation. Offline confirmation ($\beta = 0.580$, t-value $= 8.126$, $p < 0.001$) and booking intention ($\beta = 0.229$, t-value $= 2.898$, $p < 0.01$) significantly influence patronage intention. The model explains 51.8% of the variance in patronage intention.

Figure 3 shows the results for the Indonesian sample. Website service quality ($\beta = 0.711$, t-value $= 20.069$, $p < 0.001$) significantly influences online satisfaction. The construct explains 50.6% of the variance in online satisfaction. Website service quality ($\beta = 0.237$, t-value $= 2.595$, $p < 0.05$) significantly influences booking intention. Unexpectedly, perceived reputation ($\beta = -0.202$, t-value $= 1.906$, $p > 0.05$), perceived size ($\beta = 0.089$, t-value $= 1.212$, $p > 0.05$), and online satisfaction ($\beta = -0.110$, t-value $= 1.184$, $p > 0.05$) have no direct effect on booking intention. Online satisfaction ($\beta = 0.386$, t-value $= 6.719$, $p < 0.001$) significantly influences offline confirmation. The path accounts for 14.9% of the variance in offline confirmation. Offline confirmation ($\beta = 0.190$, t-value $= 3.253$, $p < 0.001$) and booking intention ($\beta = 0.354$, t-value $= 5.969$, $p < 0.001$) significantly influence patronage intention. The model explains 17.3% of the variance in patronage intention. Table 7 summarizes the results for China and Indonesia.
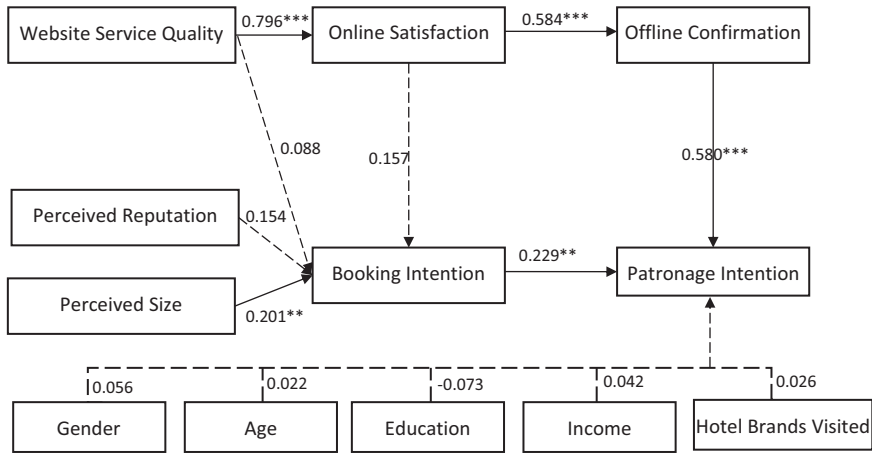
Figure 2.
Results for China

Note(s): *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$
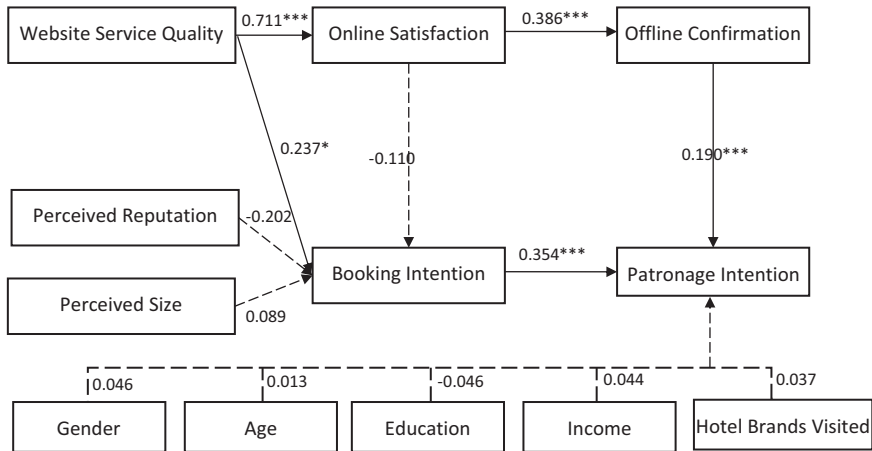
Figure 3.
Results for Indonesia

Note(s): *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Among the control variables, gender, age, education, monthly income and hotel brands visited are not found to significantly affect patronage intention in China ($\beta = 0.056$, 0.022, −0.073, 0.042, 0.026) and Indonesia ($\beta = 0.046$, 0.013, −0.046, 0.044, 0.037). When the control variables are further removed from the model, the variance in patronage intention decreases from 51.8% to 50.8% in China and from 17.3% to 16.7% in Indonesia. Including the control variables does not significantly increase the explained variance. Therefore, the results are unrelated to the covariation of the control variables.

As shown in Table 8, this study used the PLS predict technique to estimate the predictive quality of the model (Shmueli *et al.*, 2019). The Q^2 predict values for all the indicators of patronage intention are greater than 0 in China but not in Indonesia. We further compared the

Hypothesis	Coefficient	China S.D.	*t*-value	Coefficient	Indonesia S.D.	*t*-value
H1: WSQ→SAT	0.796	0.030	26.266***	0.711	0.035	20.069***
H2: WSQ→BI	0.088	0.100	0.880	0.237	0.091	2.595*
H3: PR→BI	0.154	0.097	1.578	−0.202	0.106	1.906
H4: PS→BI	0.201	0.063	3.184**	0.089	0.073	1.212
H5: SAT→BI	0.157	0.101	1.554	−0.110	0.093	1.184
H6: CON→PI	0.580	0.071	8.126***	0.190	0.058	3.253***
H7: SAT→CON	0.584	0.041	14.267***	0.386	0.057	6.719***
H8: BI→PI	0.229	0.079	2.898**	0.354	0.059	5.969***

Note(s): *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 7.
Results of direct relationships

Indicator	Q^2 predict	China PLS–SEM RMSE	LM RMSE	Q^2 predict	Indonesia PLS–SEM RMSE	LM RMSE
PI1	0.196	1.057	1.033	0.006	1.625	1.642
PI2	0.212	1.067	1.068	−0.002	1.714	1.722
PI3	0.205	1.059	1.063	−0.003	1.705	1.710

Table 8.
Results of PLSpredict

RMSE values of PLS–SEM and the linear model (LM) benchmark. Most indicators of the LM benchmark are higher than PLS–SEM in the two countries. In addition, we conducted an importance-performance map analysis (IPMA) to assess which construct is the determinant of patronage intention (Ringle and Sarstedt, 2016). In the two countries, the results show that values for offline confirmation are 74.134 and 72.169, which are higher than other constructs.

5.4 Multigroup analysis
The purpose of H9 is to confirm whether there are differences in the hypothesized relationships between China and Indonesia. PLS–Multigroup Analysis (PLS–MGA) was used to examine the significant differences between the two samples (Huang and Shiau, 2017). Before conducting PLS–MGA, the MICOM approach was used to assess the measurement invariance (Hair *et al.*, 2019). The MICOM procedure includes three steps: configural invariance, compositional invariance and the equality of composite mean values and variances (Henseler *et al.*, 2016).

First, this study confirms configural invariance because the data assessed in the measurement and structural models in both countries are the same. Second, we used a permutation test to assess compositional invariance. If the *c* value is equal to or greater than the 5% quantile, then compositional invariance is established. Table 9 shows that the *c* values span between the upper and lower bounds of the 95% confidence interval, thereby establishing compositional invariance. Third, differences of composite's mean values and variances should fall between the 2.5 and 97.5% bounds. The results indicate partial measurement invariance because only some criteria about mean original differences are met.

According to the MICOM approach, we further conducted MGA after confirming compositional invariance. Table 10 reports the differences in the relationships between models of two countries. The effect of website service quality on online satisfaction is more significant for the Chinese sample ($\beta = 0.796$) than for the Indonesian sample ($\beta = 0.711$); thus, H9a is supported. The effect of offline confirmation on patronage intention is greater for the Chinese sample ($\beta = 0.580$) than for the Indonesian sample ($\beta = 0.190$), supporting H9c.

Composite	c value (=1)	95% confidence interval	Compositional invariance
WSQ	1.000	[1.000; 1.000]	Yes
PR	0.995	[0.980; 1.000]	Yes
PS	1.000	[0.996; 1.000]	Yes
SAT	1.000	[1.000; 1.000]	Yes
BI	0.999	[0.999; 1.000]	Yes
CON	1.000	[1.000; 1.000]	Yes
PI	1.000	[0.999; 1.000]	Yes

Composite	Difference of the composite's mean value (=0)	95% confidence interval	Equal mean values
WSQ	−0.129	[−0.132; 0.129]	YES
PR	−0.264	[−0.128; 0.132]	NO
PS	−0.234	[−0.128; 0.136]	NO
SAT	−0.132	[−0.132; 0.135]	YES
BI	0.694	[−0.128; 0.133]	NO
CON	0.111	[−0.124; 0.141]	YES
PI	0.628	[−0.125; 0.120]	NO

Composite	Difference of the composite's variance ratio (=0)	95% confidence interval	Equal variances
WSQ	0.308	[−0.165; 0.188]	NO
PR	0.246	[−0.181; 0.170]	NO
PS	0.318	[0.004; −0.171]	NO
SAT	0.239	[−0.171; 0.168]	NO
BI	−0.569	[−0.184; 0.171]	NO
CON	0.265	[−0.179; 0.179]	NO
PI	−0.622	[−0.197; 0.198]	NO

Table 9.
Measurement
invariance test
using MICOM

Path	Path coefficients-difference	Henseler's MGA	Permutation test	Supported
WSQ → SAT	0.084	0.034*	0.032*	Yes/Yes
WSQ → BI	0.149	0.865	0.143	No/No
PR → BI	0.355	0.019*	0.000***	No/No
PS → BI	0.112	0.118	0.120	No/No
SAT → BI	0.267	0.026*	0.030*	No/No
CON → PI	0.390	0.000***	0.000***	Yes/Yes
SAT → CON	0.198	0.002**	0.004**	Yes/Yes
BI → PI	0.125	0.897	0.103	No/No

Note(s): *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 10.
Comparative results
between China and
Indonesia

6. Discussion

Five of the eight hypothesized relationships are found to be significant in China, but only five of the eight hypotheses are found to be significant in Indonesia. The effect of website service quality on online satisfaction, the effect of satisfaction on offline confirmation and the effects of offline confirmation and booking intention on patronage intention are significant and positive in both countries. The effect of perceived size on booking intention is significant in China, while the effect of website service quality on booking intention is significant in Indonesia.

The results show that website service quality significantly influences online satisfaction in China and Indonesia. This finding is consistent with those of many studies related to

service quality (Kettinger and Lee, 2005; Parasuraman *et al.*, 2005; Zeithaml *et al.*, 2000). The relationship between website service quality and booking intention is significant for Indonesia but not for China. Indonesia scores lower in masculinity (i.e. high score in femininity) than China. Because feminine customers place much emphasis on relationships and cooperation with others, their decisions are susceptible to the opinions of others and the external environments (McCoy *et al.*, 2005). Since OTAs contain many review comments, website service quality can directly influence booking intention, which is consistent with findings of most studies (Chang *et al.*, 2018, 2019). On the other hand, Chinese customers are strongly goal- and achievement-oriented, and their decisions are not easily influenced by the suggestions and needs of others. In other words, they can make their own booking decisions. As a result, OTA services play a significant role in determining booking intention in Indonesia but not in China.

Although TRA posits that behavioral intentions are determined by individual beliefs (Fishbein and Ajzen, 1980), the insignificant relationship between perceived reputation and booking intentions in the two countries seems to contradict the findings of most existing research (Bock *et al.*, 2012; Doong *et al.*, 2011; Kwon and Lennon, 2009; Jin *et al.*, 2010). The possible reason is that in this case, the brand and booking intention apply to two business entities. The OTA brands may earn customer loyalty but the hotel services may not attract customers to patronize again. As a result, customers with higher OTA brand recognition may not wish to reserve the same hotel chains through OTAs.

The hypothesized relationship between perceived size and booking intention is significant for China but not for Indonesia. Since Indonesians have a stronger uncertainty avoidance tendency than Chinese, the size of OTAs seems to be more important in Indonesia than in China. However, the analysis of empirical results shows that the facts are the opposite. A possible reason is that since OTAs which utilize Internet technology and e-commerce are still new to many Indonesians, Indonesian customers who desire to avoid uncertainty may still opt the contact hotels directly. The finding echoes the research result that individuals in an uncertainty avoiding country are unwilling to try new services and technologies (Yoon *et al.*, 2009).

The findings reveal that the effect of booking intention on patronage intention is significant and positive in both countries. In accordance with the halo effect (Chang *et al.*, 2018; Jin *et al.*, 2010; Kwon and Lennon, 2009), we confirm that the experience of online channels reinforces the experience of offline channels. The results provide support for the relationship between offline confirmation and patronage intention in the two countries. This finding is consistent with ECT, which recognizes the difference between expectation and utility as the major factor of confirmation and offline confirmation as the determinant of behavioral intentions (Bhattacherjee, 2001). The direct path between online satisfaction and booking intention is insignificant in the two countries. If customer expectations are not met, customers will not book hotels on the OTA website. The insignificant relationship shows that Chinese and Indonesian customers are not satisfied with OTA websites.

7. Implications for theory and practice
7.1 Implications for theory
This study investigates consumer behavior in a multichannel environment using PLS techniques, including permutation test, MICOM, PLS–MGA, PLS Predict and IPMA. The results show that some hypotheses are indeed moderated by country differences. In China, website service quality has a significantly stronger effect on online satisfaction than in Indonesia. The possible reason may involve customers' Internet and e-commerce experiences. China has twice the population ratio that actively participates in e-commerce (indexmudi.com, 2020). As a result, Chinese customers are more likely to know what to

expect from website information. This finding may indirectly reinforce the conclusion of prior research that experience moderates the relationships between the determinants of usage intention (Castañeda *et al.*, 2007; Lu *et al.*, 2011). Further research is needed to confirm the findings in different country settings.

In China, offline confirmation has a significantly stronger effect on patronage intention than in Indonesia. The possible reason may be that Chinese customers are more masculine than Indonesian customers (Hofstede, 2001). Masculine customers tend to focus more on performance than feminine customers do (Hofstede, 1980). Offline confirmation of hotel services means that the hotel has met customer expectations for utility. As a result, Chinese customers will be more likely to show patronage intention than their Indonesian counterparts. This study is the first to show that customers with diverse cultural backgrounds may react differently to offline confirmation of hotel services. Further research is encouraged to conduct more investigations to confirm the findings.

7.2 Implications for practice

This study provides multichannel strategies between OTAs and hoteliers. Our results show that Chinese and Indonesian customers with higher online satisfaction can increase their intention to patronize hotels through offline confirmation of hotel services. Increased customers' intention to book hotels can enhance customers' intention to patronize hotels. Therefore, online satisfaction and booking intention are important determinants of patronage intention. We suggest that OTAs should improve customers' online satisfaction and booking intentions by improving OTA services and emphasizing the market share of OTAs.

The results show that good website service quality, including assurance, empathy and responsiveness, can foster Chinese and Indonesian customers' online satisfaction with OTAs and Indonesian customers' intention to book hotels in Indonesia. Thus, hoteliers should also cooperate with OTAs to attract customers because OTA website service quality can increase customer reachability. Good website service quality can also improve customer satisfaction. Therefore, we suggest that OTAs strive to provide promised, timely and assured services to their customers.

Our findings suggest that perceived size is another important factor that increases Chinese customers' purchase intentions on the Internet. Customers seek OTAs with a large size because customers may think that the services of large companies are more trustworthy than the services of small ones. Perceived size, including the company scale and market share of OTAs, may be useful for customer purchase decisions. Therefore, OTAs need to pay careful attention to the indicators of perceived size to attract more customers to book hotels through OTAs.

Customers' booking intention is shown to be a significant determinant of their patronage intention in both countries. Therefore, increasing Chinese and Indonesian customers' intention to book hotels should increase their intention to patronize hotels. Because customers' offline confirmation of hotel services has a positive impact on their intention to patronize hotels, hoteliers should match the quality of hotel services with customer expectations. We recommend that hoteliers provide accurate and timely information, such as room prices and photos, and avoid exaggerating the information provided to OTA websites. In addition, hoteliers should maintain the quality of hotel services, including cleanliness, comfort, facilities and personnel, to fulfill their commitments and meet customer expectations.

8. Conclusions and limitations

With the development of O2O commerce, hoteliers and OTAs cooperate to win customers and increase sales. The purpose of this study is to investigate multichannel integration of OTAs

and hotels and to compare consumer behavior between China and Indonesia. In the first phase of O2O commerce, we explore factors that affect customers' online satisfaction and intention to book hotels. The results show that there is a difference in the effect of website service quality on online satisfaction between the two countries. In the second phase of O2O commerce, the findings indicate that customer behavioral mechanisms significantly differ across both countries. The PLS–MGA results show that website service quality has a greater impact on satisfaction in China than in Indonesia; offline confirmation also more strongly leads to patronage intention for Chinese customers. The findings provide useful management insights for better marketing strategies in O2O commerce.

This study has some limitations. First, our research was cross-sectional. Second, we measured behavioral intentions rather than continuance intentions. Future research can use the items of continuance intentions to examine customers' post–purchase behavior. Third, the sample may be biased because all respondents voluntarily participated in this study. Fourth, the generalizability of the results may be limited because this study was conducted in the context of the hospitality industry. Future research can examine other services on OTAs, such as restaurants, travel, airline tickets, etc. Finally, we only used Chinese and Indonesian samples. Since the results may differ by cultural influences, the findings should be made with caution. Future research can be conducted in other countries.

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Further reading

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Appendix 1

Construct	Measurement items	Sources
Website service quality	(1) The call center of OTA provides assured services (2) The OTA provides services with empathy (3) The OTA provides responsive services	DeLone and McLean (2003)
Perceived reputation	(1) The OTA is well known (2) The OTA has a good reputation (3) The OTA has a reputation for being honest (4) The OTA is known to be concerned about customers	Jarvenpaa *et al.* (1999)
Perceived size	(1) The OTA is a very large company (2) The OTA is a big player in the market (3) The OTA is the industry's biggest agent on the web	Jarvenpaa *et al.* (1999)
Online satisfaction	(1) Using the OTA website makes me feel satisfied (2) Using the OTA website makes me feel pleased (3) Using the OTA website makes me feel contented	Bhattacherjee *et al.* (2001)
Booking intention	(1) I intend use the OTA website to book hotels (2) I will frequently use the OTA website to book hotels in the future (3) I will strongly recommend others to use the OTA website to book hotels	Moon and Kim (2001)
Offline confirmation	(1) My experience of patronizing the hotel was better than what I expected (2) The service level provided by the hotel was better than what I expected (3) Overall, the hotel confirmed most of my expectations	Bhattacherjee *et al.* (2001)
Patronage intention	(1) I intend to patronize the hotel (2) I will frequently patronize the hotel in the future (3) I will strongly recommend others to patronize the hotel	Moon and Kim (2001)

Table A1.
Measurement items
of constructs

Appendix 2

Measure	Items	China		Indonesia	
		Frequency	Percent	Frequency	Percent
Gender	Male	211	62.8	103	33.8
	Female	125	37.2	202	66.2
Age	18–25 years	62	18.5	182	59.7
	26–35 years	175	52.1	75	24.6
	36–45 years	67	19.9	18	5.9
	46–55 years	20	6.0	21	6.9
	56–65 years	9	2.7	9	3.0
	Over 65 years	3	0.9	0	0
Education	Senior high school	49	14.6	25	8.2
	University	253	75.3	200	65.6
	Master	29	8.6	77	25.2
	Doctor	5	1.5	3	1.0

(*continued*)

Table A2.
Profile of respondents

Measure	Items	China Frequency	Percent	Indonesia Frequency	Percent
Monthly income	Less than 250	6	1.8	148	48.5
	251–500	47	14.0	90	29.5
	501–750	102	30.4	37	12.1
	751–1,000	66	19.6	30	9.8
	1,001–1,250	26	7.7	0	0
	1,251–1,500	33	9.8	0	0
	More than 1,500	47	13.9	0	0
	Unknown	9	2.7	0	0
Hotel brands visited	Homeinns	131	39	–	–
	7daysinn	133	39.6	–	–
	Motel 168	35	10.4	–	–
	Podinns	37	11	–	–
	Accor	–	–	89	29.4
	Archipelago International	–	–	86	28.4
	Santika Indonesia	–	–	88	29.0
	Tauzia Hotels	–	–	42	13.9

Table A2.

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