แบบจำลองของการซื้อแบบฉับพลันทางออนไลน์และความต่อเนื่องของผู้บริโภค
Model of Online Consumers’ Impulse Purchasing Process and Continuance

กรวินท์ เขมะพันธุ์มนัส* 1 วุฒิชัย สิทธิมาลากร 1 และวรรณี แกมเกตุ 2
1 วิทยาลัยพาณิชยศาสตร์ มหาวิทยาลัยบูรพา
2 คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

Korawin Kemapanmanas* 1 Wuthichai Sittimalakorn 1 และ Wannee Kaemkate 2
1 Graduate School of Commerce, Burapha University
2 Faculty of Education, Chulalongkorn University

บทคัดย่อ
การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อพัฒนาแบบจำลองของการซื้อสินค้าแบบฉับพลันทางออนไลน์และความต่อเนื่องของการซื้อผลิตภัณฑ์ทางการท่องเที่ยวของผู้บริโภคชาวไทยในระหว่างการซื้อสินค้าในตลาดออนไลน์ เครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูลเป็นแบบสอบถามออนไลน์ โดยใช้วิธีสุ่มตัวอย่างตามสะดวกจากผู้บริโภค 780 คน และวิเคราะห์ข้อมูลด้วยโมเดลการโครงสร้างแบบกำลังสองน้อยที่สุดบางส่วน (PLS-SEM) โดยใช้โปรแกรม WarpPLS 4.0 ผลการศึกษาที่สำคัญสรุปได้ว่าแบบจำลองของการซื้อสินค้าแบบฉับพลันทางออนไลน์และความต่อเนื่องของการซื้อผลิตภัณฑ์ทางการท่องเที่ยวประกอบด้วย 3 ขั้นคือ ขั้นก่อนการซื้อ ขั้นทำการซื้อ และขั้นหลังการซื้อ ซึ่งสามารถอธิบายพฤติกรรมการซื้อผลิตภัณฑ์ทางการท่องเที่ยวของผู้บริโภคได้อย่างครอบคลุม โดยในขั้นก่อนการซื้อ ผู้บริโภคได้รับอิทธิพลจากบรรยากาศของร้านค้าออนไลน์ ประกอบด้วยการออกแบบร้านค้าออนไลน์ และข้อมูลที่แสดงบนร้านค้าออนไลน์ ซึ่งส่งผลต่อระดับอารมณ์ของผู้บริโภคและส่งผ่านไปยังความตั้งใจซื้อของผู้บริโภคต่อไป โดยระดับอารมณ์แบ่งเป็น ความปิติยินดี และความตื่นเต้น โดยความปิติยินดีจะได้รับอิทธิพลจากการออกแบบและข้อมูลของร้านค้าออนไลน์ ในขณะที่ความตื่นเต้นจะได้รับอิทธิพลจากการออกแบบเพียงปัจจัยเดียว ในขั้นทำการซื้อ ผู้บริโภคได้รับอิทธิพลจากความตั้งใจซื้อส่งผลต่อจำนวนครั้งในการซื้อ และในขั้นหลังการซื้อความพึงพอใจที่มีต่อร้านค้าออนไลน์เป็นปัจจัยที่มีอิทธิพลสำคัญที่ทำให้ผู้บริโภคตั้งใจซื้อสินค้าซ้ำต่อเนื่องไปในอนาคต

คำสำคัญ: การซื้อสินค้าแบบฉับพลันทางออนไลน์ บรรยากาศ การซื้อซ้ำ ผลิตภัณฑ์ทางการท่องเที่ยว

* ผู้ประสานงานหลัก (Corresponding Author)
e-mail: korawin@outlook.com
Abstract

The purpose of this study is to develop a model of impulse purchasing process to explain consumer’s purchasing procedure of travel products during online transactions. An online survey questionnaire was used to collect data from 780 Thai people using convenience sampling, and the data was analyzed by using Partial Least Squares Structural Equation Modeling (PLS-SEM) then by using the WarpPLS 4.0 software. The major finding indicated that the model of online consumers’ impulse purchasing consists of three stages; Afore purchase, Actual purchase, and After purchase which can be used to thoroughly explain the entire process of Thai online consumer’s behavior that purchase travel products online. In afore purchase stage, the consumers’ pleasure is caused by online store atmospherics, online store design and online reservation store content; online store design influences consumers’ arousal. In the actual purchase stage, the amount of purchase from an online store is the actual consumer’s purchase and is influenced by their intention. In the after purchase stage, the important factor that influences consumers’ continuance to purchase from an online store is satisfaction and significantly affects their future intention to repurchase online.

Keywords: online impulse purchasing, atmospherics, repurchase, travel products

Introduction

The growth of Internet technologies in the past decade has affected social communities in the virtual world and is expanding rapidly. In 2014, 40% of the world’s population used the Internet; compare this to the 16% in 2005 (International Telecommunication Union, 2014). Current e-commerce statistics state that the worldwide average daily time spent online by Internet users is 6.09 hours per day (Statista, 2014). Furthermore, 43% of worldwide Internet users have purchased product or service online via desktop or mobile device (Statista, 2015).

Similar to other countries, Thailand’s e-commerce is rapidly increasing. Thai Internet users spend an average of 7.2 hours per day online; 92% of them access Internet via mobile phone to communicate with his/her community, search information, play entertainment media, purchase goods or services, etc. (Electronic Transactions
Development Agency (Public Organization), 2014). This indicates that Thai people spend most of their time on online activities. This phenomenon has been causing a new market platform. Retail trade has changed from traditional stores, which sell goods and services from physical properties, to the online stores through e-commerce. The research conducted by the National Electronics and Computer Technology Center (2013) showed that among e-commerce, traveling seems to be one of the largest growing industries; flight, tour, and accommodations are the most rapidly growing online purchases. The percentage of Thailand e-commerce business travel market increased from 13.8% in 2010 to 24.0% in 2013. Chuanchom & Popichit (2014) stated that Internet was an important distribution channel for success in Thailand’s tourism business management. This indicates that the Internet is an extremely powerful tool that companies can use to remain competitive and successful in tourism marketing. Internet technology facilitated this growth by offering consumers access to various travel services such as product information, tariffs, availability and online reservation service without contacting travel agents.

According of LivePerson (2013), 86% of worldwide online consumers were “impulse purchasing” where customers purchase more items than originally planned. This impulsive purchasing behavior is an important phenomenon in the context of online retail marketing (PwC, 2015; Verplanken & Sato, 2011). As a result of the popularity of the Internet-intensive lifestyle, the study of online impulse purchasing behavior of travel products is one of the most important research issues. However, most studies have focused on impulse factors that affect online intentions to purchase. During the last few years, based on modified stimulus-organism-response theory (S-O-R), researchers have demonstrated the significance of the impact of online store atmosphere cues on impulse purchasing behavior in the context of online retailing (Cheng, Wu & Yen, 2009; Floh & Madlberger, 2013; Hunter & Mukerji, 2011; Katlun, 2014). Hence, atmospherics of online stores should be considered as important factors that will influence consumers’ intentions to purchase goods or services from that online store.

Nonetheless, Cheung, Chan & Limayem (2005) suggested that the online purchasing process should consist of intention, adoption, and continuance. The business goal is to keep loyal customers in order to sustain long-term profits, as such, businesses needs to better understand the online consumer purchasing process and the continuance
to shop from their online stores. Therefore, understanding the three stages (intention, adoption, and continuance) of the online impulse purchasing process is important to businesses. To achieve a more comprehensive understanding of the online impulse purchasing process, the relationship between online impulse stages should be considered (Cheung et al., 2005). Nevertheless, to our knowledge, there has yet been a study that investigates the entire process of online impulsive purchasing behavior. Therefore, the goal of this paper is to fill this gap in the impulse purchasing knowledge by integrating the “stimulus-organism-response” (S-O-R) framework and the model of intention, adoption, and continuance (MIAC) into one. Consequently, the result of this study should help tourism marketers understand the entire process of online impulse purchase behavior of consumers in Thailand. This will help in creation of online stores that increase consumer purchasing and continuance.

Objectives

The objective of this study are.

1. To develop an online impulse purchasing process and continuance model that integrates the modified stimulus-organism-response model and the model of intention, adoption, and continuance (MIAC)
2. To investigate the factors affecting online consumer continuance to purchase from online stores.

Conceptual framework

Online impulse purchasing and S-O-R framework

Research scholars have expressed intense interest exposed in impulse purchasing for the past sixty years (Muruganantham & Bhakat, 2013). Several researchers have proposed varying conceptual definitions of impulse purchasing. For example Rook (1987) defined it as an unplanned purchase which occurs when a consumer experiences positive affect when exposed to a stimulus. Piron (1991) conducted a review of these definitions and concluded that none of them fully described this interesting and complex phenomenon. He identified thirteen dimensions which were common across these various definitions of impulse purchasing proposed by different researchers. Piron (1991: 512)
integrated these dimensions and proposed a comprehensive definition of impulse purchasing, which is as follows:

“Impulse buying is a purchase that is unplanned, the result of an exposure to a stimulus, and decided on-the-spot. After the purchase, the consumer experiences emotional and/or cognitive reactions”

From this definition, the first characteristic of an impulse purchasing is that it is an unplanned purchase. The consumer decides to purchase the object in the spur of the moment, not in response to a previously recognized problem or an intention that was formed prior to being in the purchasing environment (Piron, 1991). The second characteristic of impulse purchasing is the exposure to the stimulus. Thus, the stimulus can be considered as the catalyst which makes the consumer be impulsive. The retail environment influences consumers’ positive emotional responses which, in turn, affects impulse purchasing behavior (Chang, Eckman & Yan, 2011). The third characteristic of impulse purchasing is the immediate nature of the behavior (Piron, 1991). Finally, the consumer experiences emotional and/or cognitive reactions, which can include guilt or disregard for future consequences.

The stimulus-organism response (S-O-R) framework (Mehrabian & Russell, 1974) has been widely applied to explain impulse purchasing both offline (Chang et al., 2011) and online (Shen & Khalifa, 2012). It is an important theoretical framework that has been used to study the effects of atmospherics on an individual’s behavior. Among researchers, Donovan & Rossiter (1982) were the first to apply this framework to study the effects of retail atmosphere on consumers’ behaviors where the atmospheric cues of the retail store were assigned as the stimulus(S); the consumers’ emotional responses as the organism (O); and approach behaviors as the response(R). Store atmospherics are the primary sources of information about the retailer (such as the store image, merchandise quality, service quality, pricing etc.) utilized by customers to form an opinion about the store. It follows, then, that the store’s atmospherics have the ability to stimulate consumers’ affective and cognitive internal states, which in turn influence their subsequent behavior toward the store. Also, Donovan & Rossiter (1994) examined the effects of atmospherics on emotions before and after the purchasing experience. The study found that the effects of pleasure and arousal were a part of the cognitive processes and partly determined the future purchasing behavior of customers. Manganari, Siomkos & Vrechopoulos (2009), in their
review of the atmospherics literature, identified over 43 published empirical studies that found significant relationships between store atmospheres and consumer behavior. Thus a key outcome of atmospheric cues is the impulse purchase and marketing research deliver ample evidence of the high level of relevance of atmospherics and impulse purchasing.

**The MIAC model**

The model of intention, adoption, and continuance (MIAC), was proposed by Cheung et al. (2005). The MIAC model is a cohesive model integrating the three main processes of online purchasing that are afore purchase (intention), actual purchase (adoption), and after purchase (continuance). This is a comprehensive model linking three key concepts and being a guide for investigating the online purchasing process as a whole. Many researcher adopted this model to explore online consumer behaviors by integrating theories and this model to explain and predict consumers’ online purchasing and continuance behaviors effectively (Kumar, Rejikumar & Ravindran, 2012; Yang, He & Xuecheng, 2010).

**Afore purchase**

Consistent with impulse purchasing definitions of Rook (1987) and Piron (1991: 512), purchasing impulse will happen after consumer is in store. In online context, store refers to website or online stores. The S–O–R framework is grounded in environmental psychology and provides the theoretical basis for the proposed effect of the online store atmosphere on consumer behavior (Floh & Madlberger, 2013; Parboteeah, 2005). Eroglu, Machleit & Davis (2001) introduced S-O-R paradigm to the online purchasing environment, and proposed a conceptual model of the web store environment under the S-O-R paradigm to test the potential impact of web store environmental stimuli. Parboteeah (2005) investigated the comprehensive stimulus–organism–response (S–O–R) model of Mehrabian and Russell (1974) which is one of the key theories on environmental cues and store atmosphere in marketing research. In the context of the research at hand, the S–O–R model was recently applied successfully to research impulse purchasing behavior in bricks and mortar retailing (Chang et al., 2011) as well as in management information system (MIS) research on general online purchasing behavior (Animesh, Pinsonneault, Sung-Byung & Wonseok, 2011; Floh & Madlberger, 2013; Graa & Dani-elKebir, 2012; Liu, Li & Hu, 2013; Parboteeah, Valacich & Wells, 2009).
In the online context, following Eroğlu et al. (2001) and Richard (2005), Floh & Madlberger (2013) indicated that the online store atmosphere consists of highly task-relevant and less task-relevant cues. Highly task-relevant cues provide relevant information or content such as product descriptions and pictures to assist the online consumer’s purchasing as well as provide directions for easier navigation. A study of Salo (2013) elucidated navigation as a factor of perceived ease of use of website. Therefore this study stress only online content in online store atmospheric cue. In contrast, less task-relevant cues are unrelated to the actual shopping goals and contain elements such as visual appearance, colors, animations, and music (Floh & Madlberger, 2013). Following these studies, we investigated the two types of atmospheric cues in online stores, namely, online store content (highly task-relevant cues) and online store design (less task-relevant cue). As stated by Floh & Madlberger (2013), online store design refers to the degree to which a consumer believes that the online store has a visual appearance that is attractive to the customer; online store content represents to the degree to which a consumer considers the availability of material communicated on an online store.

Derived from the S-O-R paradigm, this model classifies two typical responses to stimuli – approach or avoidance – and proposes that three basic emotional states (acronym PAD) mediate the responses to the stimuli in retailing environments: pleasure-displeasure; arousal-non arousal; and dominance-submissiveness (Mehrabian, 1996). Likewise, Russell & Pratt (1980) have proposed a modification of M-R Theory that removes the dominance dimension and found that pleasure and arousal were adequate to represent people’s emotional or effective response to a wide range of environments. Shen & Khalifa (2012) define pleasure refers as the degree to which a person feels happy or satisfied in a place; arousal concerns the degree of stimulation caused by an atmosphere. Hence this study further modifies

M-R Theory (Russell & Pratt, 1980) to include emotional states in the model. In the modified S–O–R framework, Donovan & Rossiter (1982) studied time and money spent, returning of the customer to the same store, and store exploration as their approach behaviors. According to Bloemer & Kasper (1995), the user’s disposition in terms of intention plays a crucial role in determining behavioral loyalty. Therefore, in this study, intention is selected as the target approach behavior. Intention in the current study refers to a consumer’s predisposition towards using an online store in the future.
Actual purchase

In the modified S–O–R framework, Donovan & Rossiter (1982) studied the actual purchase based on time and money spent, returning of the customer to the same store, and store exploration as their approach behaviors. In the online context, previous studies defined online actual purchasing behavior in different ways. Most studies considered only purchasing behavior. On the other hand, some studies treated both buying and information gathering as online purchasing behavior (Pavlou & Fygenson, 2006). Similar to the study of DeLone & McLean (2004), which measured e-commerce successes like other previous research (Escobar-Rodriguez & Carvajal-Trujillo, 2013; Pavlou & Fygenson, 2006; Petter, Delone & McLean, 2008), this study defines actual purchase as the amount of purchasing from an online store over a fixed unit of time.

After purchase

In the actual purchase stage, consumers will have their own perception about the online store as well as products or service. Their opinion and satisfaction level will further decide their evaluation of the actual purchase. At the after purchase stage, it is the online store along with products or service characteristics, that influence the satisfaction level. In this case, if the service is in accordance with the expectation, satisfaction is achieved and the result of this stage will directly affect the evaluation of consumers in the next stage.

Satisfaction to online stores refers to the contentment of the consumer with regard to his or her prior purchase experience with an online store (Gao & Bai, 2014). Accordingly, customer satisfaction refers to “the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer’s prior feelings about the consumption experience” (Oliver, 1981). As described by Oliver (1980) and Bhattacharjee (2001a, 2001b), confirmation and satisfaction are the primary determinants of the intention to repurchase. Empirical evidence on online consumer behavior continuance supports that there is a significant positive relationship between customer satisfaction and repurchase intention (Kim, Galliers, Shin, Ryoo & Kim, 2012; Zhang et al., 2011).

Online repurchase intention

Researchers have studied online customer retention in different contexts, such as “online repurchase intention” (Khalifa & Liu, 2007), “customer intention to return”
(Koufaris, 2002), and “continued information systems/IT intention” (Bhattacherjee, 2001b; Hong, Thong & Tam, 2006). Both IT continuance intention and repurchase intention are influenced by the initial use/purchase experience. IT continuance intention in an online shopping context is slightly different from online repurchase intention. IT continuance emphasizes the continued usage of e-commercial websites to shop instead of the use of physical stores. However, online repurchase underlines consumer behavior. Online repurchase intention is a construct combining IS theory and marketing theory. In this construct, the customer is not only an e-commercial website user, but is also a consumer. Therefore repurchase intention expresses a consumer’s willingness to make another purchase from the same online, based on his or her previous experiences (Kim et al., 2012; Wen, Prybutok & Xu, 2011).

To test the relationship of variables based on the above discussion show in Figure 1, the hypotheses are as follow:

H1a : Online reservation store content positively influences pleasure with the online reservation store.
H1b : Online reservation store content positively influences arousal with the online reservation store.
H2a : Online reservation store design positively influences pleasure with the online reservation store.
H2b : Online reservation store design positively influences arousal with the online reservation store.
H3 : Pleasure positively influences purchase intention in online purchasing.
H4 : Arousal positively influences purchase intention in online purchasing.
H5 : Intention to purchase positively influences purchase behavior in online purchasing.
H6 : Actual purchase behavior is significantly related to purchase satisfaction.
H7 : Satisfaction positively influences the intention to repurchase in online purchasing.
Research Methodology

This study was conducted at a telecommunication operator firm which has approximately 60,000 registered users. The sample was recruited from the database of the firm and the e-mail invitation to participate in online questionnaire was sent. The main criteria for selecting participants for the sample are online consumers who have had at least six months of experience in shopping for airline tickets, hotel rooms, or a combination of the two on online reservation stores, and at least one online reservation purchase within that period.

The questionnaire was developed to include all the items from the information system use of S-O-R model and continuance to purchase constructs, based on the partial least squared structure equation modeling (PLS-SEM) criteria. The questionnaire in atmospherics and emotional construct was modified from previously established measures (Eroglu, Machleit & Davis, 2003; Floh & Madlberger, 2013; Koo & Ju, 2010; Parboteeah et al., 2009; Shen & Khalifa, 2012) as well as purchasing intentions and actual purchase constructs (Escobar-Rodriguez & Carvajal-Trujillo, 2013; Lee & Chen, 2010; Pavlou & Fygenson, 2006); satisfaction and the continuance process was adapted from (Bhattacherjee, 2001a, 2001b) and Atchariyachanchanich, Okada & Sonehara (2007)’s study.

Each construct in the model is conceptualized as latent and measured using multiple indicators, following the research model and related hypothesis discussed in the previous part; the questionnaire adopts the self-report method to measure the agreement or disagreement and all measurements used 7-point Likert scales (Churchill, 1979; Likert, 1932) except for actual purchase which used frequencies question.
In order to test the quantitative proposed model, this study utilized the online survey to collect data following the guidelines from Sue & Ritter (2007). As the survey was conduct in Thailand, a Thai version of the questionnaire was administered. Because of the original theories and measurements in past literatures were written in English. Therefore the questionnaire, originally written in English, was translated into Thai by professional translators who are experts in the area of English-Thai translations. Then back translation of the Thai questionnaire was conducted by a second professional translator from Thai into English. The back translated questionnaire was compared to the original English version to ensure survey integrity. There were no significant differences identified between the translations.

The reliability was tested by using SPSS software in the pilot study prior to the study. The accepted value for composite reliability is 0.70 or higher. Cronbach Alpha’s for individual constructs used in this study are listed in Table 1. The results of the pilot study suggested that all the measures in this study, which ranged from 0.755 to 0.937, were reliable as recommended by Kline (2011) and the overall Cronbach Alpha was 0.960. The questionnaire construct validity was assessed by five specialists using index of item-object congruence (IOC). IOC values between 0.500 to 1.000 can be used; IOC values is below 0.5 will be considered for revision or excluded.

Table 1  Reliability Statistics

<table>
<thead>
<tr>
<th>Construct Measure</th>
<th>Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reservation store Content</td>
<td>3</td>
<td>0.933</td>
</tr>
<tr>
<td>Online reservation store Design</td>
<td>3</td>
<td>0.755</td>
</tr>
<tr>
<td>Pleasure</td>
<td>5</td>
<td>0.921</td>
</tr>
<tr>
<td>Arousal</td>
<td>4</td>
<td>0.868</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>3</td>
<td>0.852</td>
</tr>
<tr>
<td>Satisfaction to Online reservation store</td>
<td>3</td>
<td>0.937</td>
</tr>
<tr>
<td>Repurchase Intention</td>
<td>3</td>
<td>0.902</td>
</tr>
<tr>
<td>Overall</td>
<td>24</td>
<td>0.960</td>
</tr>
</tbody>
</table>
The invitation email was sent to the customers of the Internet service provider. The email contained a short description about the study and the respondents were asked to click the web URL link provided in an invitation e-mail message, which linked to an online survey questionnaire. The response rates for online surveys are relatively low; therefore, a large number of the initial e-mail invitations were required to ensure a sizable enough number of online survey responses. Moreover, to increase response rate, the respondents were offered incentives in the form of a 10,000 Baht lucky draw and the report of the summary of the study result.

Partial least squares structural equation modelling (PLS-SEM), using the WarpPLS 4.0 program was used for the data analysis. The data were collected by using online questionnaire which contained 28 questions. There were valid returned 780 questionnaires.

Research findings

1. Demographic profile

A demographic profile of survey participants is summarized in Table 2. A total of 780 online participants in this study were composed of 52.05% males and 47.95% females, and the most represented age group was 30-39 years old with 44.87% of total of participants, and the most represented highest proportion income group was 40,000 baht per month or greater, with 40.26% of total participants.

Table 2 Demographic profile of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>406</td>
<td>52.05</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>374</td>
<td>47.95</td>
</tr>
<tr>
<td>Age (Years)</td>
<td>below 30 years old</td>
<td>179</td>
<td>22.95</td>
</tr>
<tr>
<td></td>
<td>30-39 years old</td>
<td>350</td>
<td>44.87</td>
</tr>
<tr>
<td></td>
<td>40-49 years old</td>
<td>171</td>
<td>21.92</td>
</tr>
<tr>
<td></td>
<td>50 years old or over</td>
<td>80</td>
<td>10.26</td>
</tr>
<tr>
<td>Income per month</td>
<td>Below 20,000 baht</td>
<td>163</td>
<td>20.90</td>
</tr>
<tr>
<td></td>
<td>20,000 – 39,999 baht</td>
<td>303</td>
<td>38.85</td>
</tr>
<tr>
<td></td>
<td>40,000 baht or over</td>
<td>314</td>
<td>40.26</td>
</tr>
</tbody>
</table>
2. Hypotheses test

The model includes 25 items which describe eight latent constructs: Online store design, Online store content, Pleasure, Arousal, Purchase intention, Actual purchase, Satisfaction, and Repurchase intention. The Partial least squared structural equation modeling (PLS-SEM) using the WarpPLS 4.0 software was employed that applied the partial least squared (PLS) technique (Kock, 2013). The measurement model test illustrated a goodness of fit between the data and the model proposition. To assess the model fit with the data, it is recommended the p-value for both the average path coefficient (APC=0.355, P<0.001) and the average R2 (ARS = 0.285, P<0.001) are both lower than 0.05. In addition, it is recommended that the average variance inflation factor (AVIF=1.641) is lower than 5. According to Table 3, the model has a good fit to the data. The statistics are shown in Table 4.

Table 3  Model evaluation overall fit measurement

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
<th>P-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average path coefficient (APC) (&lt;.05)</td>
<td>0.355</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>Average R2 (ARS) (&lt;.05)</td>
<td>0.289</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>Average variance inflation factor (AVIF)</td>
<td>1.641</td>
<td>acceptable if &lt;= 5</td>
</tr>
</tbody>
</table>

Convergent validity was evaluated to validate the measurement model through investigation of composited reliability and average variance extracted (AVE). Table 5 illustrates that all composited reliability and average variance extracted values meet the recommended threshold values. Composited reliability values are recommended to exceed 0.70 (Chin, Marcolin & Newsted, 2003) and average variance extracted, suggested by Fornell & Larcker (1981), should be at least 0.50. As shown in Table 5, the discriminant validity of the scales is assessed by comparing the square root of the average variance extracted with the correlations among the eight constructs. The square root of the average variance extracted for each variable is greater than the correlations between the variables and all other variables in the model, signifying that these variables have discriminant validity (Fornell & Larcker, 1981). Variance inflation factors (VIFs) were evaluated to check...
for the existence of collinearity. It is recommended that Variance inflation factors lower than 5 propose no collinearity (Hair, 2010; Kline, 2011). As shown in Table 5, all variance inflation factors meet the recommended threshold values. Based on this result, this study demonstrates that the proposed model exhibits adequate reliability, construct validity and collinearity.

Table 4 Composite reliability, VIF, AVE, and correlation of constructs values

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite reliability</th>
<th>VIFs</th>
<th>AVE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reservation store content</td>
<td>0.941</td>
<td>1.886</td>
<td>0.843</td>
<td>0.918</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online reservation store design</td>
<td>0.907</td>
<td>1.992</td>
<td>0.764</td>
<td>0.620</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasure</td>
<td>0.933</td>
<td>2.824</td>
<td>0.737</td>
<td>0.551</td>
<td>0.570</td>
<td>0.859</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arousal</td>
<td>0.949</td>
<td>1.846</td>
<td>0.824</td>
<td>0.298</td>
<td>0.476</td>
<td>0.624</td>
<td>0.908</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intention</td>
<td>0.959</td>
<td>2.112</td>
<td>0.886</td>
<td>0.328</td>
<td>0.364</td>
<td>0.508</td>
<td>0.449</td>
<td>0.941</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual purchase</td>
<td>1.000</td>
<td>1.196</td>
<td>1.000</td>
<td>0.088</td>
<td>0.082</td>
<td>0.149</td>
<td>0.129</td>
<td>0.396</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.950</td>
<td>3.431</td>
<td>0.863</td>
<td>0.484</td>
<td>0.523</td>
<td>0.720</td>
<td>0.558</td>
<td>0.642</td>
<td>0.209</td>
<td>0.929</td>
<td></td>
</tr>
<tr>
<td>Repurchase intention</td>
<td>0.916</td>
<td>2.793</td>
<td>0.784</td>
<td>0.464</td>
<td>0.486</td>
<td>0.634</td>
<td>0.506</td>
<td>0.635</td>
<td>0.236</td>
<td>0.768</td>
<td>0.885</td>
</tr>
</tbody>
</table>

Note: Square roots of the AVE are the bolded diagonal values

Figure 2 presented the empirical results for the study. The hypotheses (H1a, H2a, H2b, H3, H4, H5, H6, and H7) were supported at p<0.001, but H1b was not supported. The results indicate that the atmospherics cues effected emotional state, that online reservation store content had a significant effect on pleasure to purchase from this online reservation store (H1a: $\beta = 0.341$, P<0.001). Online reservation store design had a significant effect on pleasure and arousal to purchase from the online reservation store.
(H2a: $\beta =0.362$, $P<0.001$ and H2b: $\beta =0.479$, $P<0.001$). The data also showed that emotional state had a significant influence on the intention to purchase from the online reservation store (H3: $\beta =0.374$, $P<0.001$ and H4: $\beta =0.220$, $P<0.001$). For hypothesis five, the intention to purchase from this online reservation store had a significant direct effect on the actual purchase (H5: $\beta =0.406$, $P<0.001$). For Hypothesis six there was a significant relationship between frequencies of purchase from the online reservation store and satisfaction (H6: $\beta =0.223$, $P<0.001$) and for the continuance to purchase it was found that there was a direct effect of satisfaction to purchase from this online store on intention to repurchase from this online store in the future. (H7: $\beta =0.771$, $P<0.001$) This meant that the user’s satisfaction was an important cause of online continuance to purchase from the same online reservation store after they were influenced by impulse factors. This result indicates that satisfaction with purchase experience affected online consumers in Thailand to retain continued shopping at an online reservation store.

![Figure 2](image-url)  
**Figure 2** The empirical results for online impulse purchasing and continuance
Discussion

The purpose of this study was to develop a model of impulse purchasing process explaining a Thai consumer’s purchasing behavior while making a purchase in the online marketplace. For this purpose, a model integrating a modified S-O-R framework (Donovan & Rossiter, 1994) and an updated D&M model (DeLone & McLean, 2003) based on the MIAC model (Cheung et al., 2005) was constructed. The results show that: firstly, consumer intention to repurchase from the same online reservation store is strongly influenced by their satisfaction with this online reservation store. This finding supports a number of prior studies (Bhattacherjee, 2001a, 2001b; Kim et al., 2012). Secondly, the results show that online consumer satisfaction to online reservation stores has a significant relationship with the frequencies to purchase from this online reservation store. Satisfaction influences the continuance of purchasing in online shopping. However this result does not conform to Chen & Cheng (2009) that presented that there is no direct causal relation consumer satisfaction with actual purchase. This result argued Koppius, Speelman, Stulp, Verhoef & Heck (2005) which concluded that actual purchase has no significant direct effect to the intention to continue purchasing airlines ticket on the Internet. A possible explanation of this finding is that satisfaction is the necessary factor that is related to actual purchase before the consumer continues to purchase from the online reservation store, conforming to the prior study by (DeLone & McLean (2003); Petter & McLean (2009)). Oliver (1999) concluded that satisfaction is a necessary step in loyalty formation. This indicates that online retailers should make consumers satisfied with their purchase from an online reservation store to keep them loyal and generate more net benefit. Finally, the result shows that online reservation store design has significant effect on consumer pleasure and arousal more than online content. The results agree with Floh & Madlberger (2013) that explained that online reservation store design positively influenced the positive emotion, and online reservation store content positively influence only the pleasure emotion of consumer. The emotion directly affects the online consumer purchase intention. The model results reveal that online impulse purchasing process is intention, adoption, and continuance which supports the prior studies (Atchariyachanvanich et al., 2007; Cheung et al., 2005). The finding implies that customers influenced by impulse factors will continue their intention to purchase from unchanged online reservation store as they are being satisfied.
Accordingly, business can influence Internet users who rarely or never shop online to have an intention to shop by designing favorable website atmospherics.

Suggestions

1. Based on the model, the e-commerce retailers in tourism industries can use this model as a tool to improve online services and thus increase consumers’ satisfaction and loyalty which, as a result, will improve their selling performance. According to the results shown that the most crucial factor is online store design had a positive influence on consumer emotion by lifting pleasure and arousal level. Therefore, it is advisable that e-commerce retailers should be attentive to designs that suit consumer taste and preference and accommodates every platform of devices such as desktop computer, notebook computers, and smart phones as well as suitable for all operating systems; this will influence consumer arousal to purchase online. Moreover, the results found satisfaction with experience to purchase from an online store is the major factor affecting consumers’ repurchase intention. Therefore online vendors should pay more attention to provide all information in the online store to make consumers receipt a good experience and foster the intention to purchase from the same online store in the future.

2. In conclusion, this study provides a valuable research model and empirical results in the area. Meanwhile, it exposes some limitations of the research method and some variables. Overcoming these limitations in future research will open new research avenues for the study of online consumer behavior. First, this research focuses on the service sector, specifically airline ticket and accommodation room reservation only. The findings might be different if the study is conducted for physical products. Extending data collection to physical products will not only enhance the precision in describing online consumer behavior but also cover all range of products in the markets where understanding consumer behavior is beneficial to marketing. Second, as this model can explain the online purchasing process of the consumers who have experience with online shopping, studies should be use respondents who had no experience in online shopping in future. Finally, even though the satisfaction is a necessary step to influence online consumer loyalty, there are other factors that influence online consumer loyalty such as trust, and relationship to retailer. Thus, future studies should extend this model by examining these factors.
References


Authors

Mrs. Korawin Kemapanmanas
Graduate School of Commerce, Burapha University
169 Long-Hard Bangsaen Road, Saen Sook Sub-district, Mueang District,
Chonburi 20131
e-mail: korawin.s@gmail.com

Dr. Wuthichai Sittimalakorn
Graduate School of Commerce, Burapha University
169 Long-Hard Bangsaen Road, Saen Sook Sub-district, Mueang District,
Chonburi 20131
e-mail: dr.wuthichai@gmail.com

Associate professor Dr. Wannee Kaemkate
Faculty of Education, Chulalongkorn University
254 Phyathai Road, Patumwan, Bangkok 10330
e-mail: wannee.k@gmail.com