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Factors influencing behavioural intention to patronise restaurants using iPad as a menu card

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Recently, several restaurants have launched mobile technology-based self-services by replacing their printed menus with iPads. To assess the perceived value of the iPad menu from the customers’ perspective, this study proposed and tested a new research model which includes both functional and emotional aspects of customers’ attitudes. The aim was based on the supposition that an overall value judgement in regard to using the iPad menu to promote dining experience will influence customers’ behavioural intention to patronise restaurants that use the new technology; 332 usable data gathered from cyberspace were tested against the research model. The results demonstrated the importance of perceived value. All functional factors (i.e. perceived control, perceived usefulness and perceived ease of use) and emotional factors (i.e. perceived enjoyment and perceived novelty) were significantly affecting perceived value. For managers interested in investing in these mobile self-service technologies, the findings provided them with sound advice based on empirical research.

Keywords: iPad; restaurant menu; mobile technology-based self-service; perceived value

1. Introduction

Recently, the emergence of the iPad from Apple has taken the world by storm. Basically, the iPad is a tablet computer. It offers a much more readable screen, making it better suited for surfing the Internet, doing research online and light word processing; in addition, it can be utilised as a movie player, picture viewer and e-Book reader (Jeffrey 2010). Apple released the first iPad in April 2010 and sold three million of the devices within 80 days (Report from Apple Inc. 2010). Proven sales and positive user feedback now present an array of very real business and product opportunities. The iPad has the potential to revolutionise the entertainment, publishing, music, person computer, information and technology industries, etc. (Entertainment Business Newsweekly 2010). Meanwhile, many in the restaurant industry are eager to investigate how the iPad could improve the efficiency of their hospitality services for customers (Smith 2011).

Several restaurants have replaced their printed menus with Apple’s touch screen iPad computer, including an Australian restaurant in North Sydney (Report from news.com.au 2010), a US restaurant in Chicago (Report from TGBUS.com 2010), a mainland China restaurant in Shenzhen (Report from sina.com 2010) and the chain of fast food restaurants called Stacked (Report from Iphone Active 2011), but also to access photos of every dish and even inform chefs of how they want their steaks cooked (Report from news.com.au 2010). In addition, there are pop-up boxes that recommend wines to match meals (Report from TGBUS.com 2010). The convenience and flexibility offered by iPad, combined with the available technology like mobile Internet, enable restaurant managers to deliver more versatile services for clients.

The iPad is a mobile device with a touch screen as its primary user interface. By synthesising some points of the Report from iSkysoft (2010) and Mozdzyn (2010), we argue that, compared to traditional touch screen technology, Apple’s iPad possesses some restaurant-friendly features, such that it may have the potential to reform the dining and hospitality industry. First, the iPad is a portable, movable device, which is efficient for ordering meals. Customers and staff no longer have to walk to a tableside mounted touch screen system to get things done. Second, while traditional touch screen computers give people instant access by finger ‘touch’ only, the iPad allows customers to ‘write’ information directly into it through built-in finger writing recognition. This makes it easy for restaurants to collect customers’ responses and comments. Third, the iPad provides a zoomable screen that allows diners to conveniently browse the virtual pages of a restaurant’s menu as they wish. Finally, different from a traditional touch screen interface (i.e. a single-touch interface), the iPad supports a multi-touch screen able to process, interpret and track the position of multiple, simultaneous touches on the screen.
for navigating and flipping pages. This allows diners to flip menu pages more intuitively.

It is unsurprising, then, that the convenience of these devices is influencing usage, even as etiquette related to mobile device usage at social places is being hotly debated and constantly redefined. Despite the public controversy, restaurants are beginning to embrace new mobile technologies, such as adopting the iPad as a menu, to enhance their customers’ dining experience (Report from news.com.au 2010, Report from TGBUS.com 2010, Report from Iphone Active 2011). However, the acceptance of the iPad menu (henceforth, MenuPad) by potential customers is crucial to its successful adoption in restaurants. If customers do not feel that the MenuPad is interesting and useful, then there is no need for restaurants to promote its usage.

To gain an understanding of customer acceptance of technology-mediated services, prior research has often embraced the theory of planned behaviour (Ajzen 1991), the theory of reasoned action (Fishbein and Ajzen 1975), the technology acceptance model (TAM) (Davis 1989) or the unified theory of acceptance and use of technology model (Venkatesh et al. 2003). However, these theories have deficiencies: (1) traditional models do not fully reflect the variety of different contexts (Kleijnen et al. 2007); (2) most adopters and users of traditional technologies are employees in an organisational environment where they use the technology (e.g. desktop computers) for the purpose of work (Venkatesh et al. 2003); and (3) consistent with contemporary theorising on consumer burying behaviour, value may be a driver of consumer behavioural intentions (Kleijnen et al. 2007). Pedersen and Ling (2003) suggested that the traditional theories in information technology (IT) may be altered and extended to study the acceptance of new technology (e.g. MenuPad). With regard to MenuPad, customers’ use of the technology can be viewed as a kind of self-service behaviour directed towards mobile technology-based products. The evaluations from customers in terms of their perceptions regarding the mobile self-service system are critical to their patronage intention. Hence, additional factors should be considered in order to understand customer acceptance of MenuPad.

Excluding factors such as: food quality, ambience, environment and so on, the focus of this study is on the acceptance of the MenuPad (mobile self-service technology (SST)), based on the supposition that an overall value judgement about using the MenuPad to promote the dining experience in the pre-purchase stage will influence the customer’s patronage intention. Some studies indicated that technology acceptance in different contexts needs to consider consumers’ perceptions of value, such as shopping in an e-commerce setting (Chen and Dubinsky 2003), utilising the Internet as a retailing platform (Cheng et al. 2009) and visiting a specific website (Soltani and Gharbi 2008). Therefore, from the consumers’ viewpoint, there is an inclination to choose behaviour on the basis of maximising value. Such evaluations, which involve both functional and emotional components, centre on the process of service delivery and the outcome of the service (Benkenstein et al. 2003). Although some researchers investigated iPad-related issues (Struempler et al. 2012, Gerpott et al. 2013, Kagohara et al. 2013) and some focused on self-service and the use of technology in service delivery (Cunningham et al. 2008, Shamdasani et al. 2008), limited efforts have been made to explore the role of MenuPad’s perceived value in the customer evaluation of mobile technology-based self-service options. Moreover, the findings of such studies could provide those who are ready to invest in these mobile self-service technologies with sound advice based on empirical research. Therefore, the aim of this study was to propose and examine a new research model that addresses perceived value by focusing on the functional and emotional factors which influence the behavioural intention to patronise restaurants that use the MenuPad technology.

The remainder of this paper is organised as follows. Section 2 contains a review of the important literature related to this study. This is followed by a description of the proposed research model and a presentation of hypotheses. The methodology is then described, followed by the results of the data analysis and hypotheses testing. Finally, the theoretical and practical implications of the study are discussed along with directions for future research.

2. Theoretical foundations

2.1. Definition and scope of SST

SST has been defined as a technological interface that allows customers to produce a service independent of direct service employee involvement (Meuter et al. 2000). The rapid development of SST significantly influences service firms by providing new opportunities for the delivery of services and options for customers. Examples of SSTs involve ATMs, pay-at-the-pump gas stations, banking by telephone, services over the Internet (e.g. online purchases, Federal Express package tracking and online brokerage services) and a variety of other applications (e.g. photo kiosks and DVD rental units) (Zeithaml and Bitner 2006, Kasavana 2008). The hospitality industry has also embraced the transformation from customer service to self-service. As SSTs have become more user-friendly, they have also become capable of handling more complicated tasks. Kasavana (2008) indicated that accommodation providers, fast food operators, private clubs, fine dining restaurants, casino operations, etc. are replacing human-to-human contact with human–machine interaction at a variety of unattended points of sale.

2.2. Research on SSTs

In the past decade, several academic researchers have recognised the critical influence of technology on the delivery of services (Cunningham et al. 2008, Shamdasani et al. 2008). To differentiate themselves from their competitors, hotels
have been taking advantage of the great opportunities generated by the Internet to allow customers to use the Internet as a reservation method (i.e. online hotel reservation). A growing body of literature has explored factors influencing potential hotel customers’ e-purchase intentions (e.g. Kim and Kim 2004, Wong and Law 2005, Kim et al. 2006). The use of the Internet and IT provides the hospitality corporations with a favourable distribution channel for conducting online promotions by allowing customers worldwide to reserve hotel rooms. More recently, the development of mobile computing technology has provided hospitality and tourism organisations with new opportunities to further interact with their customers through mobile devices and wireless Internet. Wang and Liao (2008) studied customer intention to use mobile booking services, and their findings showed that perceived financial resources, perceived usefulness and perceived compatibility significantly influence customers’ usage intention. Similarly, an advanced study by Wang and Wang (2010) related to mobile hotel reservation adoption showed that participants’ perceptions of information quality, system quality, fee and technological effort spent are critical components significantly influencing their behavioural intention through the effects of these factors on perceived value. While the conceptions underlying these studies may be excellent, they fail to take into account the influence of customers’ emotional perspectives.

Online banking is a technological innovation offered by almost all banks. If consumers are greatly satisfied with the quality of this service and intend to use it on a regular basis, the need for bank branches and other physical infrastructure could be reduced over time. Shamdasani et al. (2003) proposed that traditional technology theories may not fully explain the user’s behaviour towards newly emerging IT, such as Internet banking. So, they utilised TAM as a theoretical framework by introducing perceived credibility as a new factor that reflects security and privacy concerns related to Internet banking. The findings showed that their collected data strongly supported the applicability of the TAM in predicting the intention of users to adopt Internet banking. Although mobile banking services are still in their infancy, Luarn and Lin (2005) tried to understand users’ acceptance of mobile banking and to identify the factors affecting clients’ usage intentions. Their study extended the applicability of the TAM in a mobile banking context by adding one trust-based construct (i.e. perceived credibility) and two resource-based constructs (i.e. perceived self-efficacy and perceived financial cost) to the model. The extended model has been supported in predicting users’ intentions to adopt mobile banking. This study, along with the previous studies mentioned, provides online/mobile banking practitioners with useful suggestions on how to increase their customers’ intent to use the system.

Several other researchers determined how attitudes towards SSTs may affect the degree to which customers interact with technology-based services (Meuter et al. 2000, Bobbitt and Dabholkar 2001, Curran et al. 2003, Yen 2005). To determine how customers evaluate technology-based services, Bobbitt and Dabholkar (2001) proposed a comprehensive conceptual framework that incorporated several well-known attitudinal theories to explain the role of attitudes in influencing intentions and behaviour related to technology-based self-service. However, they did not conduct empirical testing of the proposed conceptual framework. Likewise, Chen (2005) provided insights into the relationship between service quality and customer satisfaction based on technology-based service encounters. He indicated that at a very basic level, the criteria for evaluation appear to differ between employee-dependent and technology-dependent service deliveries. One issue that emerges from these earlier studies is that the intention to use SST options may be driven by multiple, hierarchical attitudes. This is shown by the study of Curran et al. (2003), who aimed to better understand consumers’ intentions to use SSTs, by developing and testing three nested structural models that include a hierarchy of consumer attitudes towards both the interpersonal and the technological aspects of the encounter.

Based on the above, any change in the service delivery process, such as the incorporation of an SST, must be implemented according to the customers’ needs, and the providers must consider their potential reactions to the change. Hospitality marketers should take the lead in pursuing this line of enquiry.

2.3. Perceived value

Marketing and economics at both the academic and practitioner levels have paid much attention to consumers’ value perceptions since they play a vital role in predicting purchase behaviour and achieving sustainable competitive advantage (Cronin et al. 2000). In recent years, academics of IT have highlighted perceived value in order to understand consumers’ adoption of emerging technology associated with the Internet or mobile Internet. The results suggest that perceived value is decisive in attracting consumers (Chi et al. 2008, Soltani and Gharbi 2008, Cheng et al. 2009).

In view of its importance, marketing researchers have been trying to study perceived value in greater depth. Two major approaches to its conceptualisation have been identified. On the one hand, perceived value can be conceptualised as a construct configured by two portions: the benefits obtained (e.g. economic, social and relationship) and sacrifices made (e.g. price, effort, time, convenience and risk) by the customer (Cronin et al. 2000). On the other hand,
an approach based on the conception of perceived value as a multidimensional construct has been gaining ground (Sheth et al. 1991b, Grönroos 1997, Sweeney and Soutar 2001). For example, Grönroos (1997) regarded perceived value in terms of its cognitive and emotional dimensions. Sweeney and Soutar (2001) proposed three dimensions of perceived value: functional, emotional and social. Sheth et al. (1991b) approached perceived value through diverse perspectives: functional, emotional, social, epistemic and conditional. Among the different dimensions of value, those most usually mentioned in recent marketing literature are functional and emotional values (Sheth et al. 1991b, Sweeney and Soutar 2001, Park 2004). The functional dimension refers to practical, effective and utilitarian valuations (e.g. quality and functionality) made by consumers, while the emotional dimension refers to the affective arousal a product/service evokes (e.g. pleasure, fun and excitement) (Sweeney and Soutar 2001). In addition, Park (2004) indicated that diners’ perception of value can be developed through considering functional and emotional factors, while they are dining in a restaurant.

Thus, with regard to MenuPad, this study defines perceived value as ‘a potential customer’s overall perception of MenuPad based on an evaluation of the functional and emotional factors involved in its usage when experiencing dining in a restaurant’. In the material below, the research model is described and the hypotheses that follow from this definition are presented.

2.4. Research model and hypotheses

Taking into consideration our definition of perceived value, this study argues that customers assess MenuPad’s value by considering both functional and emotional factors. In order to cover some important features that can specify most of the variance in the use of MenuPad, we proposed and examined a new research model, as shown in Figure 1. In this model, we selected behavioural intention, a person’s subjective likelihood to perform a specified behaviour, as the dependent variable for theoretical and practical reasons. According to prior studies (Taylor and Todd 1995, Venkatesh and Davis 2000), intention has a significant influence on actual behaviour. Also, even though iPads are now more commonly used, very few restaurants have implemented the system of MenuPad, as it is still in its early infant stage. Thus, the choice of intention rather than actual behaviour as a dependent variable was more suitable for this study. We anticipated that this parsimonious model could be favourable in providing a better understanding of potential customers’ assessment of the implementation of MenuPad.

Values represent important and desirable end goals. The nature of dining experiences in restaurants suggests that restaurant managers should consider the customer’s perception of value throughout the dining experience (Park 2004). According to Park (2004) and Ha and Jang (2010), customers not only perceive value while dining in a restaurant, but their perceptions of value are formed on the basis of their evaluation of functional or emotional benefits. Curran et al. (2003) indicated that an important consideration for service providers when introducing technology to the service encounter is whether the technology is perceived as an attractive experience for customers. In addition, from the ‘customer choice’ standpoint, some researchers in the field of IT have pointed out that perceived value could be a key predictor of behavioural outcomes (Turel et al. 2007, Chi et al. 2008, Cheng et al. 2009). Therefore, with regard to MenuPad, we infer that a high evaluation of perceived value regarding the ability of MenuPad to enhance dining experience will increase the intention to patronise restaurants that use this technology. The following hypothesis was thus examined:

\[ H_1 \] The overall perceived value of MenuPad in enhancing the dining experience has a positive effect on the customers’ patronage intention.
According to Batra and Ahtola (1990), customers’ consumption behaviour is based on two important reasons: (1) consummatory affective (emotional) gratification (from sensory attributes) and (2) instrumental, functional or utilitarian reasons. Both functional and emotional factors have been found to affect perceived value in the acceptance of new information technologies, such as wireless short messaging (Turel et al. 2007) and hedonic digital artefacts (Turel et al. 2010). Research has also indicated that customers’ evaluation of products/services includes both utilitarian (functional) and affective perspectives (Ha and Jang 2010). Consequently, this study proposes that perceived usefulness, perceived ease of use and perceived control comprise the major functional components of perceived value.

Davis (1989) defined perceived usefulness as the degree to which a person believes that using a particular system will improve his/her job performance. This study defines the perceived usefulness of MenuPad as the extent to which utilising MenuPad can make ordering meals more convenient by providing customers with good functionalities, complete information (e.g. meal choices and prices), a zoomable graphical interface and fast response. The usefulness concept has been used extensively in information systems and technology research (Del Bosque and Crespo 2011, Zhou 2011, Yeh and Teng 2012) and has strong empirical support as an important predictor of SST acceptance (Curran and Meuter 2005) and mobile service use (Pihlström 2008). Furthermore, the construct of usefulness is akin to the marketing concept of a product’s utilitarian benefits. Nysveen et al. (2005) mentioned that task-focused mobile services can be viewed as goal-directed services insofar as customers who need to accomplish a specific task are motivated by utilitarian benefits such as goal fulfilment, rewards, or both; hence, perceived value may be driven particularly by the user’s utilitarian benefits (i.e. perceived usefulness). Similarly, Kim et al. (2007) pointed out that the value of mobile-enabled technology is determined by customers’ perceptions of its usefulness. Therefore, the following hypothesis was tested:

**H2** With regard to MenuPad, perceived usefulness has a positive effect on perceived value.

Ease of use has been widely utilised as an element of technicality. Based on the study of Davis (1989), this study defines perceived ease of use as the degree to which a potential customer believes that using MenuPad will be free of physical and mental effort. In general, most mobile devices today have been improved by the addition of smarter functions and more powerful data processing ability and by providing instant connection with wireless Internet to help users quickly start to use them (Chi et al. 2008, Wang and Wang 2010). Since consumers expect this ease of use, potential MenuPad users hope that MenuPad can offer simple and easy application system interfaces to make ordering things more convenient for them. Prior studies suggest that perceived ease of use (i.e. technological effort spent) is expected to be more significant in the early stages of an innovative behaviour, such as: the acceptance of mobile Internet (Kim et al. 2007), mobile banking (Luarn and Lin 2005), mobile learning (Wang et al. 2009) and mobile hotel reservation (Wang and Wang 2010). The more that customers perceive the technology as easy to use, the more likely it is that they will have a high-value perception of it. Thus, this study examined the following hypothesis:

**H3** With regard to the MenuPad, perceived ease of use has a positive effect on perceived value.

Perceived control in the self-service context has been clarified as the amount of control that an individual feels he/she has over the service process or outcome (Bateson and Hui 1987). In this study, perceived control refers to the extent to which using MenuPad can give a customer control over the process of ordering meals. Prior study has found that control is one of the most influential factors in the evaluations of SSTs (Dabholkar 1996). Rust and Kannan (2003) showed that an electronic service interface (e.g. a website) can positively influence consumers via their sense of increased control. One early study demonstrated that a higher level of perceived control encourages the adoption process of a technology-based self-service (Lee and Allaway 2002). Dabholkar (1996) also indicated that enhancing expected control relatively augments the expected value of the service perceived by the customer. In a setting of mobile brokerage services, Kleijnen et al. (2007) found that user control has a strong impact on mobile channel value perceptions, which in turn influence the user’s behavioural intentions. Therefore, the following hypothesis is proposed:

**H4** With regard to MenuPad, perceived control has a positive effect on perceived value.

Emotional factors involve affective responses, such as love, hate, joy, boredom, anger, disgust, ecstasy, elation, shame and so on (Hirschman and Holbrook 1982). Prior work identified perceived enjoyment as a significant facilitator of mobile Internet adoption (Kim et al. 2007). Also, the novelty and technology specific features of mobile services have an influence on customers’ value perceptions (Komulainen et al. 2004). Hence, this study proposes that perceived enjoyment and perceived novelty are the main emotional components of the perceived value of MenuPad.

Saade and Bahli (2005) suggested extending the TAM by including an individual’s emotional response, such as perceived enjoyment. Based on the work of Davis et al. (1992), this study defines perceived enjoyment as the extent to which a customer thinks that the activity of using MenuPad is perceived to be enjoyable in the process of ordering
meals. Langeard et al. (1981) indicated that some individuals enjoy playing with machines and therefore may like self-service alternatives that enable them to do so. Similarly, Davis et al. (1992) investigated the use of computer technology and asserted that customers value the pleasure involved in using such products. Dabholkar (1996) found research subjects to be more likely to use a technology-based self-service alternative if it appeared to be pleasurable. Recently, Kim et al. (2007) also demonstrated that individuals who experience immediate joy from using mobile technology are more likely to perceive the technology as valuable and to adopt it. With regard to MenuPad, we anticipate that the more enjoyment potential customers feel in relation to the technology, the more likely it is that they will highly value it. Thus, this study tested the following hypothesis:

\[ H5 \] With regard to MenuPad, perceived enjoyment has a positive effect on perceived value.

Perceived novelty in this study refers to the degree to which using MenuPad for ordering meals makes customers feel surprised and excited, as if they are doing something new and different. Berlyne (1950) was one of the first scholars to introduce the concept of novelty-seeking in psychology. As Berlyne suggested, novelty (e.g. change from routine, curiosity, surprise and excitement) may hold the key to our understanding of some of the complex levels of human motivation. According to earlier literature, the primary trigger of purchase behaviour may be the curiosity the consumer has towards the new product (Sheth et al. 1991a). Also, it has been contended that perceived novelty directly influences customers’ perceived value in the process of service delivery (Duman and Mattila 2005), and that explorative, novelty-seeking behaviour seems to drive the acceptance of new technology (Richard 2005). With regard to MenuPad, we therefore expect that higher novelty perceptions are related to higher value perceptions. Accordingly, the following hypothesis is proposed:

\[ H6 \] With regard to MenuPad, perceived novelty has a positive effect on perceived value.

3. Research methodology

3.1. Measures

To ensure the content validity of the scales, we selected items that represent the concepts to which the generalisations refer. Therefore, the items pertaining to perceived ease of use, perceived control, perceived enjoyment, perceived novelty and behavioural intention were directly adapted from previous studies (Davis 1989, Duman and Mattila 2005, Shamdasani et al. 2008, Yen 2005). Only very limited items, such as perceived usefulness and perceived value, were developed by this study with reference to previous studies (Davis 1989, Kwun and Oh 2004).

This study initially developed a 30-item questionnaire. In order to confirm the content validity of the questionnaire, a discussion was performed from the 20 to the 24 September 2010 with three professionals and three graduate students specialised in hospitality and tourism management field. They were asked whether the items were appropriate for the questionnaire. As a result, 28 items were retained to constitute a complete scale for the study. Consistent with prior research on social and human behaviour, the questionnaire also contained demographic questions. Likert scales (1 ~ 7), with anchors ranging from ’strongly disagree’ (1) to ’strongly agree’ (7), were used for all construct items. Although the original question items were in English, a bilingual expert was invited to translate them into Chinese to ensure the validity of the questionnaire. The final list of items for each construct is provided in the appendix.

3.2. Data collection

To make the results generalisable, we gathered data via an Internet survey between October 2010 and December 2010. A questionnaire was designed and placed on a website for 10 weeks. To increase the response rate of potential respondents, survey messages were put on several popular online communities in Taiwan (including Yahoo-Kimo, Yam, Wratch, Sina, PChome Online and campus bulletin board systems such as PTT and Formosa) to invite online potential customers to fill out the questionnaire. At any time during the 10 weeks, potential participants could respond to the online questionnaire by clicking the uniform resource locator (URL) provided on the message, which accomplished the following. First, it summarised the purpose of this study. Second, it linked a short news video posted in Chinese by Taiwan’s media called Next Media Animation Company. The video showed a North Sydney restaurant becoming the first in Australia to replace their printed menus with Apple’s iPad and allowing customers to browse the virtual pages of the menu with a sweep of their finger. Third, it required the participants to have experiences in using touch screen smart phones and also to use them on a daily basis. Fourth, it illustrated that there were 50 NT$100 gift coupons as reward for respondents in a drawing at the completion of this survey. Fifth, clicking the URL provided by the survey message brought up a web address to access the electronic survey form. The respondents were instructed to answer the questions based on their personal perceptions of the restaurant’s usage of MenuPad. For each question, the respondents were asked to circle the response that best described their degree of agreement.

4. Data analysis and results

During the 10-week period, a total of 399 responses were received. To reduce bias, only those who had at least one time of experience in using iPad were retained in the sample. Of the 399 responses, 67 questionnaires...
were invalid or repeated (duplicate IP addresses), leaving 332 usable responses, for a valid response rate of 83.2%. Among these responses, a total of 54.5% of the respondents were female. The respondents had an average of 10.68 years of computer experience (standard deviation \[SD = 4.66\]) and 9.00 years of Internet experience (\[SD = 3.97\]). Also, 71.6% of the respondents had a basic or advanced university degree. To provide evidence of non-response bias, we compared the gender and marital status distribution of our respondents to the population gender and marital status distribution and found no significant differences (\(p = 0.245; p = 0.85\)). The characteristics of the respondents are given in Table 1. Noteworthy, the survey result showed students to be the largest portion of our participants; in fact, most of the participants had university/college educational background. Prior studies indicated that age makes university/college students more open to new IT (Lighter et al. 2002). In addition, based on a review of prior investigations on technology acceptance, we found that students at different levels had been recruited by much earlier research as research subjects, including undergraduate students (Yang 2005), MBA students (Agarwal and Prasad 1998), undergraduate and MBA students (Taylor and Todd 1995), undergraduate and graduate students (Kim et al. 2007) and so on. Therefore, we welcomed highly educated students as appropriate for participating in research about assessing the value of MenuPad as they are potential customers who are most likely to order meals through MenuPad in the near future.

Table 1. Demographic attributes of the respondents.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>151</td>
<td>45.5</td>
<td>45.5</td>
</tr>
<tr>
<td>Female</td>
<td>181</td>
<td>54.5</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>134</td>
<td>40.4</td>
<td>40.4</td>
</tr>
<tr>
<td>Single</td>
<td>198</td>
<td>59.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\leq 20)</td>
<td>81</td>
<td>24.4</td>
<td>24.4</td>
</tr>
<tr>
<td>21–30</td>
<td>109</td>
<td>32.8</td>
<td>57.2</td>
</tr>
<tr>
<td>31–40</td>
<td>57</td>
<td>17.2</td>
<td>74.4</td>
</tr>
<tr>
<td>41–50</td>
<td>47</td>
<td>14.2</td>
<td>88.6</td>
</tr>
<tr>
<td>(\geq 51)</td>
<td>38</td>
<td>11.4</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior high school</td>
<td>33</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>Some college</td>
<td>61</td>
<td>18.4</td>
<td>28.3</td>
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<tr>
<td>University</td>
<td>200</td>
<td>60.2</td>
<td>88.6</td>
</tr>
<tr>
<td>Graduate (or above)</td>
<td>38</td>
<td>11.4</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Industry</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Student</td>
<td>124</td>
<td>37.3</td>
<td>37.3</td>
</tr>
<tr>
<td>Service</td>
<td>130</td>
<td>39.2</td>
<td>76.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>17</td>
<td>5.1</td>
<td>81.6</td>
</tr>
<tr>
<td>Government agencies</td>
<td>19</td>
<td>5.7</td>
<td>87.3</td>
</tr>
<tr>
<td>Self-employed</td>
<td>13</td>
<td>3.9</td>
<td>91.3</td>
</tr>
<tr>
<td>Others</td>
<td>29</td>
<td>8.7</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Average monthly income (NT) (1USD equals about 30 NT)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\leq 20,000)</td>
<td>136</td>
<td>41.0</td>
<td>41.0</td>
</tr>
<tr>
<td>20,001–30,000</td>
<td>53</td>
<td>16.0</td>
<td>56.9</td>
</tr>
<tr>
<td>30,001–40,000</td>
<td>60</td>
<td>18.1</td>
<td>75.0</td>
</tr>
<tr>
<td>40,001–50,000</td>
<td>37</td>
<td>11.1</td>
<td>86.1</td>
</tr>
<tr>
<td>50,001–60,000</td>
<td>23</td>
<td>6.9</td>
<td>93.1</td>
</tr>
<tr>
<td>(\geq 60,001)</td>
<td>23</td>
<td>6.9</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Experience in using smart phones</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 3 months</td>
<td>42</td>
<td>12.7</td>
<td>12.7</td>
</tr>
<tr>
<td>3 months to 6 months</td>
<td>33</td>
<td>9.9</td>
<td>22.6</td>
</tr>
<tr>
<td>6 months to 1 year</td>
<td>64</td>
<td>19.3</td>
<td>41.9</td>
</tr>
<tr>
<td>1 year to 2 years</td>
<td>71</td>
<td>21.4</td>
<td>63.3</td>
</tr>
<tr>
<td>Over 2 years</td>
<td>122</td>
<td>36.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.1. Assessment of the measurement model

Chin (1998, xii) proposed that ‘structural equation modeling (SEM) analysis works best in a confirmatory mode’. While some researchers use a ‘two-step process of filtering items through an initial set of exploratory factor analyses before submitting the remaining items to a confirmatory analysis’, Chin maintains that ‘such a process should never be construed as confirmatory’ (1998, xii). Following this advice, we directly carried out a confirmatory factor analysis via AMOS 17.0 to test the measurement model. Six general model-fit measures were used to measure the model’s overall appropriateness of fit: the ratio of χ² to degrees-of-freedom (df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normalised fit index (NFI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). Each questionnaire item was loaded on only one factor in the beginning. Model-fit measures were then obtained to assess how well the proposed model captured the covariance between all the items on the test. If the fit was poor, this indicated that some items might be measuring multiple factors. To get to a better model fitness, five items: 1, 2, 17, 20 and 25 (appendix) were eliminated. Before the deletion of those items, the values of GFI and AGFI were 0.803 and 0.762, respectively. The model fitness got a significant improvement after deleting the items. As given in Table 2, all the model-fit indices surpassed the respective benchmark suggested by previous research, thus demonstrating that the measurement model exhibited a fairly good fit with the data gathered. Moreover, we examined common method variance bias by Harman’s single-factor test (Aulakh and Gencturk 2000) and found the value for explainable variance was 31.6% (i.e. not over 50%) such that there was no common method variance bias. This study could therefore proceed to assess the psychometric properties of the measurement model in terms of reliability, convergent validity and discriminant validity.

The reliability and convergent validity of the factors were figured out through composite reliability and the average variance extracted (Table 3). The composite reliabilities were computed as follows: (square of the summation of the factor loadings)/(square of the summation of error variables)) + (summation of error variables)). The interpretation of the resultant coefficient is analogous to that of Cronbach’s alpha. Composite reliability for all of the factors in the measurement model exceeded 0.86. The average extracted variances were all above the advised 0.50 level (Hair et al. 1998, Thompson 2004), which implied that more than one-half of the variances observed in the items were explained by their hypothesised factors. Convergent validity was also estimated by observing the factor loadings from the confirmatory factor analysis (Table 4). Based on Hair et al.’s suggestion (1998), factor loadings greater than 0.50 were regarded as very significant; all factor loadings of the items in the research model were greater than 0.73. Therefore, all factors in the measurement model had suitable reliability and convergent validity.

To examine discriminant validity, this study compared the average variance extracted from the individual factors with the shared variance between factors. This analysis revealed that the shared variances between factors were lower than the average variance extracted from the individual factors, therefore confirming discriminant validity (Table 3). In conclusion, the measurement model presented suitable reliability, convergent validity and discriminant validity.

<table>
<thead>
<tr>
<th>Factor</th>
<th>CR</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived usefulness</td>
<td>0.863</td>
<td>0.679</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived ease of use</td>
<td>0.890</td>
<td>0.530</td>
<td>0.670</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived control</td>
<td>0.887</td>
<td>0.399</td>
<td>0.426</td>
<td>0.664</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perceived enjoyment</td>
<td>0.900</td>
<td>0.297</td>
<td>0.360</td>
<td>0.272</td>
<td>0.751</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Perceived novelty</td>
<td>0.898</td>
<td>0.362</td>
<td>0.274</td>
<td>0.258</td>
<td>0.593</td>
<td>0.746</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Perceived value</td>
<td>0.910</td>
<td>0.412</td>
<td>0.403</td>
<td>0.341</td>
<td>0.483</td>
<td>0.507</td>
<td>0.771</td>
<td></td>
</tr>
<tr>
<td>7. Behavioural intention</td>
<td>0.884</td>
<td>0.353</td>
<td>0.270</td>
<td>0.262</td>
<td>0.234</td>
<td>0.307</td>
<td>0.444</td>
<td>0.718</td>
</tr>
</tbody>
</table>

CR, Composite Reliability. Diagonal elements are the average variance extracted. Off-diagonal elements are the shared variance.

4.2. Structural model estimation and hypotheses testing

A similar set of model-fit indices was used to examine the structural model (Table 2). The six general model-fit measures of the structural model also surpassed their respective
Table 4. Factor loadings and squared multiple correlations of items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loadings</th>
<th>Squared multiple correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived usefulness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU3</td>
<td>0.810</td>
<td>0.656</td>
</tr>
<tr>
<td>PU4</td>
<td>0.881</td>
<td>0.776</td>
</tr>
<tr>
<td>PU5</td>
<td>0.777</td>
<td>0.604</td>
</tr>
<tr>
<td><strong>Perceived ease of use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOU1</td>
<td>0.798</td>
<td>0.637</td>
</tr>
<tr>
<td>PEOU2</td>
<td>0.815</td>
<td>0.664</td>
</tr>
<tr>
<td>PEOU3</td>
<td>0.863</td>
<td>0.745</td>
</tr>
<tr>
<td>PEOU4</td>
<td>0.797</td>
<td>0.635</td>
</tr>
<tr>
<td><strong>Perceived control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC1</td>
<td>0.823</td>
<td>0.677</td>
</tr>
<tr>
<td>PC2</td>
<td>0.857</td>
<td>0.735</td>
</tr>
<tr>
<td>PC3</td>
<td>0.840</td>
<td>0.706</td>
</tr>
<tr>
<td>PC4</td>
<td>0.733</td>
<td>0.537</td>
</tr>
<tr>
<td><strong>Perceived enjoyment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE1</td>
<td>0.854</td>
<td>0.729</td>
</tr>
<tr>
<td>PE2</td>
<td>0.931</td>
<td>0.866</td>
</tr>
<tr>
<td>PE3</td>
<td>0.811</td>
<td>0.657</td>
</tr>
<tr>
<td><strong>Perceived novelty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN1</td>
<td>0.879</td>
<td>0.772</td>
</tr>
<tr>
<td>PN2</td>
<td>0.899</td>
<td>0.809</td>
</tr>
<tr>
<td>PN4</td>
<td>0.811</td>
<td>0.657</td>
</tr>
<tr>
<td><strong>Perceived value</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV1</td>
<td>0.858</td>
<td>0.737</td>
</tr>
<tr>
<td>PV2</td>
<td>0.915</td>
<td>0.838</td>
</tr>
<tr>
<td>PV3</td>
<td>0.860</td>
<td>0.740</td>
</tr>
<tr>
<td><strong>Behavioural intention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI1</td>
<td>0.843</td>
<td>0.711</td>
</tr>
<tr>
<td>BI2</td>
<td>0.869</td>
<td>0.755</td>
</tr>
<tr>
<td>BI3</td>
<td>0.829</td>
<td>0.687</td>
</tr>
</tbody>
</table>

PU, perceived usefulness; PEOU, perceived ease of use; PC, perceived control; PE, perceived enjoyment; PN, perceived novelty; PV, perceived value; BI, behavioural intention.

Figure 2. Results of structural modelling analysis.

5. Discussion

This study developed a research model asserting that the behavioural intention to patronise a restaurant that uses MenuPad is determined by the perceived value of MenuPad in enhancing the dining experience. Moreover, perceived value is determined by the constructs of perceived usefulness, ease of use, control, enjoyment and novelty. The results provide support for all six hypotheses. Also, the results suggest that perceived value is related not only to functional evaluation, but also to emotional evaluation. In fact, emotional elements (perceived enjoyment and novelty) seem to have a greater impact than do functional elements (perceived usefulness, ease of use and control) on perceived value. The findings of this study provide several important implications for hospitality research and practice.

When discussing the effect of functional elements of evaluation, we found that two constructs derived from TAM (perceived usefulness and perceived ease of use) have a significant, positive influence on perceived value. Previous studies support the concept that perceived usefulness plays benchmark suggested by previous research; this provided solid evidence of a good model-data fit. Thus, we could proceed to investigate the path relationships hypothesised by this study. Figure 2 presents the significant structural relationships among the research variables and the standardised path coefficients. As expected, all of the hypotheses are supported. First, perceived value ($\beta = 0.686, p < 0.001$) is significantly related to the customers’ patronage intention ($R^2 = 0.47$). Thus, $H1$ is supported. Next, the following five antecedents were found to be significantly related to perceived value ($R^2 = 0.66$): perceived usefulness ($\gamma = 0.162, p < 0.05$), perceived ease of use ($\gamma = 0.159, p < 0.05$), perceived control ($\gamma = 0.119, p < 0.05$), perceived enjoyment ($\gamma = 0.207, p < 0.01$) and perceived novelty ($\gamma = 0.321, p < 0.001$). Table 5 summarises the results of hypotheses testing.
a dominant role in predicting the acceptance of SSTs (Curran and Meuter 2005), mobile service (Pihlström 2008) and mobile-enabled technology (Kim et al. 2007); thus, we infer that when significant feelings of usefulness are associated with MenuPad, customers are more likely to perceive its value as high.

Also, in line with prior research on mobile banking (Luarn and Lin 2005), mobile learning (Wang et al. 2009), mobile Internet (Kim et al. 2007) and mobile hotel reservations (Wang and Wang 2010), the results revealed that perceived ease of use has a significant influence on individual value perception, indicating that most potential customers are concerned about whether or not utilising MenuPad can make ordering meals more convenient and free of physical and mental effort. Actually, compared to traditional printed menus, the friendly nature of MenuPad introduces several possibilities that have the potential to make dining easier and more convenient. For instance: (1) MenuPad is a touch screen device with strong ease-of-use display; (2) through MenuPad’s paperless and interactive menu, customers can go through every dish of the menu; (3) zoomable pictures and taste notes presented on MenuPad can help customers to select the dishes of their choice; (4) MenuPad can suggest to customers the best wine choice in accordance with their meal and best food pairings; (5) MenuPad may maintain stock levels, eliminating sold-out items from the on-screen menu; and (6) customers can send their orders directly to the kitchen by means of wireless service.

Given these advantages, we propose that in addition to a few MenuPad pioneers, other restaurants may be eager to investigate how MenuPad can improve their operations, margins, or efficiencies in the back or front of the house. We further suggest that restaurant managers request that their MenuPad solution providers add all of the above-mentioned functions in their systems. If this can be accomplished, MenuPad may soon prove to be a portable order-taking device that directly influences customers’ perceived value and indirectly influences their patronage intention.

Similar to the foregoing results regarding perceived usefulness and perceived ease of use, perceived control was found to have a significant, positive effect in predicting customers’ value perceptions. This finding is in accordance with the previous research on new technology-based self-service (Dabholkar 1996, Lee and Allaway 2002), e-service (Rust and Kannan 2003) and mobile brokerage services (Kleijnen et al. 2007). Customers like to feel that they are in control of self-service transactions; this feeling strengthens their acceptance of SSTs (Lee and Allaway 2002). Meuter et al. (2003) pointed out that using SSTs provides customers with the important intrinsic benefit of feelings of independence. Also, customers view service value as higher when using SSTs because an SST provides more control over the entire process than traditional technology which is dependent on a physical person. Furthermore, user control leads customers to believe they are in charge of their goal attainment process; this increases their confidence about the outcome (Kleijnen et al. 2007). Through MenuPad, menus can be changed without the cost of printing new menus and a bigger photo of the dish can be displayed. Thus, instead of having to interrogate the staff about what ingredients are in a particular dish, customers using MenuPad can select each menu item by observing the display and add chosen items to their order. Apart from facilitating the process of ordering meals, restaurant firms can also enable customers to complete their credit card payment transactions via MenuPad to enhance their perceptions of being in control. By providing customers with real-time, on-demand access to services, restaurants can enhance their perceived value, which will lead to increased patronage.

From the customers’ emotional point of view, two constructs (i.e. perceived enjoyment and perceived novelty) presented stronger effects than others did in the analysis of the survey data. The absolute magnitude of the estimated standardised path coefficients demonstrated that perceived novelty had the greatest impact on perceived value in regard to MenuPad. The second was perceived enjoyment. Previous studies support the concept that perceived novelty plays an important role in triggering customers’ value perceptions during the process of service delivery (Duman and Mattila 2005, Richard 2005). Also, in line with prior research on SST (Dabholkar 1996) and mobile technology (Kim et al. 2007), the results revealed that perceived enjoyment has a significant influence on individual value perceptions. Thus, it is believed that MenuPad will have a high perceived value if it has high levels of perceived novelty and enjoyment.
In a novel technology-intensive service setting, the service process typically means that the role of the customer is expanded and that part of the service can, in fact, be self-service (Dabhokar 1996, Komulainen et al. 2006). This makes the role of the customer integral to the success of the service process. In view of this role, the designers of MenuPad can make efforts to design applications that make the customer dining experience even better. For example, MenuPad might be designed to provide a variety of information on dishes, mimic the chaotic, brightly coloured and cluttered aesthetics of the print version, and show an overview of everything customers have ordered. By utilising a flexible MenuPad, restaurants might even allow customers to log in with Facebook and Twitter, so they can see what they ordered last time. Additionally, firms might show the status of the most popular food today, this week and this month and provide people with the opportunity to log in at home to leave a review that appears in MenuPad. All of this will make customers perceive more enjoyment and novelty, which contribute to value creation. In the same way, changing conditions also contribute to value creation. With the rapid growth of new technologies, technology-intensive service is continuously being developed and updated with new features, and many services are in a state of flux (Curran and Meuter 2005). As a result, the value perceptions of customers may change quite radically over time. Innovative, ambitious restaurant managers should think, therefore, about how to switch their food menu to MenuPad as early as possible to give diners a better dining experience, which in turn will increase their restaurant sales.

6. Limitations and conclusions

This study has some limitations that could be addressed in future studies. First and foremost, a sample bias exists since the respondents included a large portion of students and respondents had at least one time of experience in using iPad; thus, the results may not be generalisable. In particular, lifestyle and culture may differ among countries. Therefore, a cross-cultural validation using another large sample gathered elsewhere is necessary for further generalisation of this study’s findings. Second, the model is cross-sectional, since it measures perceptions and intentions at a single point in time. However, perceptions change over time as individuals obtain more experience (Light 2006, Mandryk et al. 2006, Petre et al. 2006). Third, to keep the model parsimonious, we did not include any moderating variables in this study. When the acceptance of MenuPad becomes more popular, researchers interested in the usage of advanced IT will be able to investigate this issue more thoroughly by adding some moderating variables (e.g. gender, age, prior experience, perceived compatibility and so on) into the model to evaluate the validity of our findings. Fourth, since this study was conducted with a snapshot research approach, longitudinal research efforts are needed to evaluate the validity of the proposed model and the findings. Thus, conducting a longitudinal observation of the usage of MenuPad inside the restaurants is a good way to enhance our understanding of causality among the variables that are important to improving customers’ intention to patronise.

By merging viewpoints from both marketing and SST perspectives, this research has tried to expand our understanding of potential customers’ evaluations of mobile technology-based self-service alternatives. There are four primary contributions of this study. First, this study, inspired by a notable and current trend in the restaurant industry, should be a pioneer to investigate the perceptions of potential customers towards the MenuPad technology. Second, by reviewing several SST-, IT-related and marketing theories, this study proposes a research model including both functional and emotional factors that seem to be quite related to potential customers’ perceptions of MenuPad. Although the constructs in the research model are mainly derived from relevant literature, the model is the first one to integrate them together in the proposed manner. The proposed model is original and there is no existing article that presents a model with the same constructs and relationships among constructs as those which have been demonstrated herein. Third, the findings demonstrate the importance of perceived value; this implies that the existing marketing literature may be broadened to the investigation of mobile SSTs. According to the findings, both functional and emotional factors have a strong impact on customer value perceptions, and we have suggested several ways that managers can strengthen these value creations. In addition to some specific service enhancements, firms should consider more general promotional initiatives, such as those that producers of mobile devices have launched, to familiarise consumers with mobile self-service delivery. This may create more customer awareness on the impact of mobility. Fourth, from the functional perspective, perceptions of usefulness, ease of use and control are found to be critical components significantly affecting perceived value. On the emotional side, the influences of perceived enjoyment and novelty on perceived value are significant. Emotional factors showed stronger effects than did functional factors. We conclude that restaurant companies should devote their attention to offering an enjoyable and novel way for customers to use mobile self-service.

For making dining a more enjoyable and novel experience, examples of concrete measures for the implementation of MenuPad in a restaurant include: (1) letting customers choose ingredients for their sandwiches through the MenuPad, (2) encouraging customers to add their creations to the menu, then sharing them with friends on social networks like Facebook and Twitter, (3) entertaining customers with fun video games and promoting them to dine or drink longer, (4) providing guests with streaming news and even popular social media apps, (5) encouraging immediate and direct interaction with customers via
social media and (6) giving guests reasons to connect with your restaurant on social media with fun contests and by incentivising them to check-in on Facebook and so forth. Moreover, to promote and facilitate the adoption of MenuPad, several useful mobile apps could be developed. It is followed by some examples: (1) a mobile ordering app that allows customers to view and access a menu system from the restaurant’s website or the mobile app itself without having to wait in line; (2) a mobile payment app that enables customers to place orders, pay for their orders and even choose to split the check and decide on how much to tip; (3) a wine list app that allows customers to access the full database of wines, including information such as its origin, age and recommended food pairings and (4) a digital rewards app that enables customers to earn points every time they check in; after a certain number of points, customers earn rewards customisable by the restaurant owner; thus, the owner could monitor and reward return customers.

As indicated by the foregoing summary, the findings of this study can be useful in helping MenuPad practitioners to obtain a better understanding of the perceptions of potential customers. They also provide insights into research on the influence of mobile SSTs on the hospitality industry.

References


Appendix The final items list used in the study

**Perceived Usefulness**

1. PU1: You think the iPad provides complete information, such as meal choices and prices, which is helpful in ordering meals.
2. PU2: You think the iPad provides a zoomable graphical interface that enables you to see each dish more clearly.
3. PU3: You think the iPad provides good functionality that enables you to browse the menu more conveniently.
4. PU4: You think the iPad provides fast response, which is useful in the process of ordering meals.
5. PU5: Compared to a paper printed menu, you think the iPad’s features would make it more convenient to order meals.

**Perceived Ease of Use**

6. PEOU1: You think the iPad provides an easy navigation interface.
7. PEOU2: Learning to operate the iPad for ordering meals would be easy for you.
8. PEOU3: You would find it easy to get the iPad to do what you want it to do.
9. PEOU4: It would be easy for you to become skillful at using the iPad to browse the menu.
10. PEOU5: It is easy to use the iPad. (*)

**Perceived Control**

11. PC1: Using the iPad means that ordered meals can be prepared just the way you want.
12. PC2: Using the iPad gives you control over the process of ordering meals.
13. PC3: You would feel more in control using the iPad to order meals.
14. PC4: By using the iPad to order meals, you would feel that you got just what you ordered.

**Perceived Enjoyment**

15. PE1: You would have fun interacting with the iPad.
16. PE2: Using the iPad for ordering meals would provide you with a lot of enjoyment.
17. PE3: You would enjoy using the iPad for ordering meals.
18. PE4: Using the iPad to order meals would bring you pleasure.

**Perceived Novelty**

19. PN1: Using the iPad for ordering meals would make you feel like you are doing something new and different.
20. PN2: Using the iPad for ordering meals would make you feel surprised.
21. PN3: Using the iPad for ordering meals would make you feel excited.
22. PN4: Using the iPad for ordering meals would provide you with a different dining experience.

**Perceived Value**

23. PV1: You think that dining in a restaurant that adopts the iPad as a menu card would deliver you good value by enhancing your dining experience.
24. PV2: You think that dining in a restaurant that adopts the iPad as a menu card would be worthwhile by enhancing your dining experience.
25. PV3: Compared to the other restaurants, those that adopt the iPad as a menu card promote the holistic experience of dining.
26. PV4: Overall, you think that dining in a restaurant that adopts the iPad as a menu card would deliver you good value by allowing you to experience special services.
Behavioural Intention

27. BI1: You intend to patronise a restaurant in the future that uses the iPad as a menu card.
28. BI2: You predict you will patronise a restaurant in the future that uses the iPad as a menu card.
29. BI3: You expect to patronise a restaurant in the future that uses the iPad as a menu card.
30. BI4: You plan to visit a restaurant in the next six months that uses the iPad as a menu card.

(*) Denotes the deleted items during the discussion prior to main survey.