Understanding Customer Experiences and Continuance Intention in Mobile Shopping

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Abstract**.** Advancement of wireless communications has increased the number of people using mobile devices and has accelerated the growth of mobile shopping. This paper synthesizes [1] proposed constructs: social-facilitation, application usability, customer satisfaction and continuance intention; and value, intrinsic enjoyment, and mobility from [2] to hypothesize a theoretical model to explain and predict the users' satisfaction using mobile shopping and then have intentions to continuance. This study aims to provide a conceptual framework to examine consumers' mobile shopping continuance usage intention. The hypothesized model is validated empirically using the data was collected from 206 consumers who had prior experience using m-commerce. The results demonstrate that satisfaction has significant effect on users' continuance intention, followed by application usability, value, intrinsic enjoyment, and mobility as significant predictors. Based on the findings, this mobile channel study provides theoretical and practical implications for researchers and marketers, respectively.
Keywords: Mobile Shopping, Customer Experience social-facilitation, application usability, customer satisfaction,

1 Introduction

The number of mobile users have grown exponentially globally in the last decade. In particular, the retail and entertainment industries have seen significant changes to their business models and strategies as a result of e-commerce. According to Counterpoint (2017)[1], there are over one billion five hundred million smartphone users in 2017. Smartphone are increasingly replacing traditional personal computers for most of the online transactions. Emergence of mobile commerce, especially catching the attention of new generation consumers to purchase products or services through mobile devices such as smartphones and tablets via a wireless network [3]. Smartphone commerce transactions increased 13% in North America, 37% in Latin America, 21% in Europe in 2017 respectively. According to PwC nearly 90% of Chinese consumers have used mobile phones to shop, which was driven by Alibaba. Mobile commerce growth keeps increasing and 67% of transactions on mobile devices are from within the US. Shopping in the US is more active on mobile than ever with 44% using an app, 23% mobile web and 33% desktop. A bigger share of purchases are taking place on phones, especially apps (Critero, 2017)[2]. Those in Latin America are savvy app-users, contributing to app conversion rates that are 3 times higher than on mobile web (Critero, 2017) [2]. According to Nielsen (2017)[3], consumers are browsing and buying across mobile devices more than desktop in Taiwan in 2017.

Researchers in the past have defined m-commerce as an extension of e-commerce [4-6]. Mobile shopping is the buying and selling of goods and services through wireless handheld devices. Compared with e- commerce, mobile shopping has advantages over e-commerce as users are not bound by the geographical constraints of e-commerce [6] and [7]. Mobile shopping allows users to conduct transactions on the internet anywhere, anytime. Two unique aspects of the mobile environment are ubiquitous access (access anywhere) and universal access (the ability to stay connected), which allow users to access information at any time and any place [8]. The challenge is the high rate of discontinuation from m-commerce users [9] and, in the m-commerce business environment, it is essential for providers to ensure that there are long term relationships between the provider and the consumer [9]. Many companies have invested significantly in order to improve the hardware and software platforms for m-commerce [10]. As a result, it is important for these companies to not only attract new customers, but to retain their old customers as well [11]. For m-commerce providers, it is also less costly for them to retain existing customers than to seek new customers [12]. As such, it is the goal of m-commerce providers to ensure that consumers continue to use their services in order for them to expand their market growth. It is important to understand how consumers are satisfied and

have further continuance usage intentions. M-commerce users are irregular in their actions, and they may not return to the activity once they leave [13]. Thus, attracting users and maintaining their satisfaction is vital for the success of m-commerce. Previous studies have studied examined users' IS continuance intentions. Perceived application usability, value, intrinsic enjoyment, and mobility is posited to be an antecedent to satisfaction with an IT, and intention to continue IT usage [14]. It can be concluded that both intention to use and intention to continue IT usage are equivalent constructs.

Specifically, most of the companies provide better pricing in mobile applications so they encourage customers to use mobile shopping. The online shopping landscape is becoming competitive with global players (e.g. amazon, ebay, Taobao) all strategically working towards grabbing the market share since mobile commerce actually dominates retail sales. The players have also launched their mobile apps with specific players aiming at critical customers with aggressive marketing strategy of these retailers at mobile app channels. Combining intent data lets the players see more shopping dollars per shopper, as the behavioural outcome of leaving items in a mobile shopping cart without completing a purchase session as it provides a better understanding of their shopping journey. This research studies these objectives of customer satisfaction and continuance intention of mobile shopping. The popularity of mobile shopping triggers scholars' interest in users' intention to shop and continuance intention. The justification of this study is possible from current market developments and academic findings.

Research questions addressed in this paper are: (1) what are the individual salient motivations that influence continuance intention in mobile shopping? (2) how do these motivations influence continuance intention? To answer the research questions, this study proposes models to synthesize [1] model and [2] model and empirically validate the model using data from an online survey of mobile shopping. The primary contributions of this paper are its examination of influence change of variables, to assess theoretical differences between [1] model and [2] model in explaining continued mobile shopping usage, to validate potential value of an integrated model by combining these two models to answer the questions and explain mobile shopping continuance behaviour. This paper examines cognitive beliefs and affects influencing one's intention to continue using mobile shopping. Overall, the results suggest that users' continuance intention is determined by their satisfaction with IS usage. After successfully attracting new customers, the more important thing is the continued usage (user retention) because acquiring new customers is more expensive than retaining existing customers for online firms.

2 Theoretical review and hypothesis

2.1 Overview of mobile shopping

With mobile devices becoming an integral part of people's lives, research in the field of customer adoption has explored drivers of adoption through varied lenses [1]. However, consumers shopping on mobile devices satisfy different motives and perceive outcome values differently in different contexts, therefore, resulting in different effects on retailers' outcome value [1]. Consistent with the drivers of the adoption of any technological innovation, researchers have used various theories to explore adoption of mobile devices and services. Internet retailing led to reduced search costs for the consumers, an increase in variety of products and lower prices, which led to empowerment to make better choices for themselves [1]. Consumers can use the mobile devices to do a variety of activities relating to mobile shopping, including creating shopping lists, product comparison, product and price search, making purchases, and several post-purchase activities [15]. To satisfy the needs of such customers, retailers are adopting mobile marketing activities that include creation of mobile websites, mobile advertising, messaging and emailing on mobile platforms, mobile couponing, and mobile customer service [1]. While customers have various motivations, mobile devices usage intentions can be driven by perceived experience of the mobile device, enjoyment perceptions, value and usability. In some situations, customers may perceive mobile channels as delivering time and location convenience [16]. Mobile channels may be preferred by consumers in certain shopping situations that create higher emotional values such as filling spare time while commuting [17]. Mobile services increase the value for consumers from being accessible independent of time and place, to being customized based on time, location and personal profile [18]. Value may be delivered in situations where retailers offer special pricing or coupons for mobile channel exclusively [1].

2.2 Definition of constructs

The research model was developed based on results of [1] and [2] study. In our proposed model, intrinsic enjoyment is an individuals' perceived motivation which drives satisfaction and continuance use of mobile shopping. Satisfaction would have impact on perceived social-facilitation and application usability. The other constructs of interests are user value, intrinsic enjoyment and mobility, the extended part of the model. When people get more involved in an activity for enjoyment and pleasure, their intrinsic motive is likely to increase the likelihood to revisit the mobile shopping in the future. Our basic assumption is that user satisfaction, impacted perceived social-facilitation, application usability, value, intrinsic enjoyment and mobility affects individuals' satisfaction in using mobile shopping and their intention to reuse them.

2.2.1 Social-facilitation

Social facilitation, the theory, originated out of the field of experimental social psychology as a means of explaining individual's behaviour in social situations. Social facilitation is described as enhancing one's dominant response simply by being in the presence of others [19].Social facilitation becomes an interesting and useful tool in attempting to predict consumer behaviour, specifically, behaviour in particular buying situations and defined as facilitating human interaction and interaction in this study. According to [1], the use of smart phones allows users to enjoy happiness, feel pleasure, and increase social-facilitation. We thus propose hypothesis one:
H1: Social-facilitation has a positive effect on customer satisfaction in mobile shopping

2.2.2 Intrinsic enjoyment

Enjoyment is defined as the fun and pleasure derived from using a technology, adding hedonistic motivation as a predictor of consumers' behavioural intentions [20]. Intrinsic enjoyment can improve personal emotions and enjoy the activities in it. Few researchers have connected intrinsic motivation in terms of perceptions of pleasure and satisfaction with the act of shopping online using a mobile phone. Persaud and Azhar [21] point out that the latest smartphones have larger and higher resolution screens and offer consumers a wide array of features, thus providing consumers with a pleasant and enjoyable shopping experience at any moment. The increased capabilities of smartphones combined with the lower cost data plans is having a very positive impact on consumers' smartphone usage. Consumers use smart phones and feel a sense of participation, and is a hedonistic experience. Perceived enjoyment is the variable with the greatest effect on intention to play mobile games [22]. Consumers often use smartphones to communicate, listen to music, check information, trade, socialize, and schedule daily trips. Perceived enjoyment is the strongest factor in explaining adoption intentions as well as in explaining perceived usefulness in mobile data services [14].This assertion is supported by an empirical study [15], playfulness/enjoyment and satisfaction were found positively related. We therefore hypothesize that:
H2: Intrinsic Enjoyment has a positive effect on customer satisfaction in mobile shopping.

2.2.3 Value

Value in this study is defined as a good deal or a reasonable price; whether a particular purchase represents good value to a mobile shopper is an individual judgement made by each shopper. Value refers to a good deal or a reasonable price. [15] believe that consumers use smart phones to perform related shopping activities, including making shopping lists, searching for products and prices, comparing products, and placing orders for purchases. Strom et al. [18] pointed out that mobile shopping can enable consumers to reduce search costs, increase product items, lower purchase prices, and allow consumers to make more favourable choices. According to [14], users' perceptions of value are a very important determinant of mobile data services adoption. Accordingly, this study considers value as an important motivation for mobile shopping. These studies support that:
H3: Value has a positive effect on customer satisfaction in mobile shopping.

2.2.4 Mobility

Such devices grant consumers ubiquitous access to digital information at any time and any place; thus, these devices also allow marketers a great opportunity to reach consumers directly and constantly and to analyse their needs [23]. M-commerce allows users to conduct transactions on the internet anywhere, anytime. Nowadays consumers use their mobile phones to shop online. M-commerce has advantages over e-commerce as users are not bound by the geographical constraints of e-commerce as they are not limited by the distance of shopping. More importantly, the time spent on shopping will also be significantly reduced. Therefore, the efficiency of shopping can be improved. Thus, the following hypotheses are proposed:
H4: Mobility has a positive effect on customer satisfaction in mobile shopping.

2.2.5 Application usability

This study defines application usability on if it is an easy-to-use learning management system: Is the user interface, I.e., the mobile shopping browsing and transactions efficient and user-friendly. Rakhi Thakur [1] points out that the interface of mobile shopping makes it clear that it is easy and convenient for consumers to conduct transactions. This has an interaction with consumer satisfaction. Numerous studies examined that user's application usability perception influences significantly user's intrinsic motivation (enjoyment or playfulness) [24, 25]. Therefore, application usability is expected to have positive impact on customer's perception of enjoyment in mobile shopping context; collectively, these studies support that:
H5: Application usability has a positive effect on customer satisfaction in mobile shopping.

2.2.6 Satisfaction

Satisfaction is defined as a function of expectation and expectancy disconfirmation, which is believed to influence attitude change and purchase intention [26] . Satisfaction is defined as a post-choice evaluative judgement concerning a specific purpose decision [27] and is often used in research on the confirmation/dis-confirmation paradigm in consumer choice models [28]. Customer satisfaction is defined as an attribute critical to establishing longer-term client relationships and winning repeat business [29]. With specific focus on services,

satisfaction may be defined as an affective customer condition that results from a global evaluation of all the aspects that make up the customer relationship [30-32]. In the multi-attribute model of customer satisfaction, the satisfaction judgements of all attributes are combined to create an overall evaluation of satisfaction. Attribute satisfaction and dissatisfaction are significantly related to positive and negative affect in overall satisfaction for post-purchase evaluations [33]. Feelings of satisfaction arise when consumers compare their perceptions of the performance of a product or service with both their desires and expectations, and this comparison process also produces feelings of satisfaction with information. Spreng et al., and Fournier and Mick [34, 35] conducted a phenomenological and longitudinal investigation of satisfaction through consumers' ownership experiences with technology and found that consumer satisfaction is central to long-term success. Marketing scholars have extensively analysed satisfaction in brick-and-mortar, service and online retail environments [36-38]. So, satisfaction is a significant outcome variable in the mobile shopping context. User satisfaction is an important factor in understanding audience-media connections [39]. It is considered key to building and retaining a loyal base of long-term users [40]. User satisfaction with media is defined as a general feeling of fulfilment as a result of media consumption [39, 41, 42].

2.2.7 Continuance intention

IS success depends on continued use rather than first time use. After successfully attracting new customers, the more important thing is the continued usage (user retention) because acquiring new customers is more expensive than retaining existing customers for online firms [43]. Besides, companies benefit from the continued use of technology, due to the importance of continuance, vis-a-vis acceptance, is evident from the fact that acquiring new customers may cost as much as five times more than retaining existing ones [44], based on the costs of searching for new customers, setting up new accounts, and initiating new customers to the IS [43].The continued usage (user retention) has become an important factor for online information technology (IT) service firms to survive in the marketplace [40]. This research focuses on the overall satisfaction related to using or purchasing a product using a mobile shopping application that drives the satisfaction in using this technology. Hence the study is relevant, only to the users who have experience in using mobile shopping applications. Customer satisfaction is assessed after a specific purpose. Anderson et al., Bayus, and Homburg and Giering [30-32] believe that satisfaction can be defined as constructing relationships with customers, with special emphasis on service, and the customer's overall assessment of whether the service meets expectations. Furthermore, in [1, 45, 46] positive relationship between satisfaction and continuance intention are supported by empirical evidence. Thus we hypothesize that:

H6: Customer satisfaction has a positive effect on continuance intention in mobile shopping.

2.3 Conceptual model

Based on the relevant literature reviewed in this section, a conceptual framework is proposed (Fig. 1). The framework proposes constructs that are measured through customer experiences, which are social-facilitation, intrinsic enjoyment, value, mobility, and application usability, in addition to the traditional relational constructs of satisfaction, Edvardsson et al. [36] believe that the satisfaction is the customer's continuance intention to buy and repurchase the same brand of products and services with the same seller. As a result, Hypothesises are proposed as Figure 1:

Fig. 1. Conceptual framework

3 Methodology

3.1 Data collection and sample

Subjects are individuals who had experiences with mobile shopping from Taiwan where mobile shopping is burgeoning. Data was collected by mean of online mySurvey platform from October 1, 2017 to October 10, 2017. 218 questionnaires were recovered. Except for 12 invalid questionnaires, there were 206 valid questionnaires, among which 71 cases were males (34.5%), and 135 cases were females (65.5%).

Table 1 shows demographic information of respondents.

Table 1. Demographic information of respondents.

Measure	Items	Frequency	Percentage
Gender	Male	71	34.5
	Female	135	65.5
Annual income	Under NT$ 350,000	60	29.1
	350,000~600,000	71	34.5
	600,000~900,000	53	25.7
	Above 900,000	22	10.7
Time duration daily in browsing	Below 30 mins	133	64.6
	0.5-1 hour	54	26.2
	1-1.5hours	14	6.8
	More than 1.5 hours	5	2.4
Annual consumption amount	Below NT5,000	58	28.2
	5,000 ~ 10,000	73	35.4
	10,000~15,000	33	16
	More than 15,000	42	20.4

3.2 Measurement development

Seven constructs are measured by multiple-item scales which were adapted from [1] and [2]: social-facilitation, intrinsic enjoyment, value, mobility, application usability, customer satisfaction, and continuance intention. The applicability of the modified items was enhanced by literature reviews and a pilot test in order to ensure the content validity. All items were measured on a five-point Likert-type scale ranging from (1) “strongly disagree” to (5) “strongly agree”.

4 Empirical results

Among 206 usable responses, 71 (34.5%) were males and 135 (65.5%) were females.

Table 2-1. ANOVA analysis of annual consumption amount to intrinsic enjoyment, value and customer satisfaction.

Construct	Annual consumption amount	Mean	Standard deviation	ANOVA	
				F value	P value
IE	Below NT5,000	3.2760	0.8856	4.847	0.003
	5,000 ~ 10,000	3.5676	0.6427		
	10,000~15,000	3.7806	0.7068		
	More than 15,000	3.7933	0.8267		
V	Below NT5,000	3.1853	0.7203	6.272	0.000
	5,000 ~ 10,000	3.5236	0.5898		
	10,000~15,000	3.7266	0.5288		
	More than 15,000	3.5952	0.6761		
CS	Below NT5,000	3.4367	0.7805	4.747	0.003
	5,000 ~ 10,000	3.6078	0.5907		
	10,000~15,000	3.8653	0.5673		
	More than 15,000	3.8340	0.5005		

The results show that the P values of intrinsic enjoyment, value and customer satisfaction are 0.003，0.000 and 0.003 respectively, less than 0.05 from the analysis of annual consumption amount as Table 2-1. We further analyse them with Scheffe method. The Scheffe analysis shows that the intrinsic enjoyment in NTD10,000 ~15,000 of annual consumption amount is significant higher than the other groups as Table 2-2.; the value in NTD10,000~15,000 of annual consumption amount is significant higher than the other groups as Table 2-3, as well as the customer satisfaction in NTD10,000 ~15,000 of annual consumption amount is significant higher than the other groups and more than 15,000 of annual consumption amount is second significant higher than the other groups as Table 2-4.

Table 2-2. Intrinsic enjoyment to annual consumption amount with multiple comparison Scheffe method.

IV	(I)NUMBER	(J)NUMBER	Average deviation (I-J)	Standard deviation	Sig
IE	Below NT5,000	5,000 ~ 10,000	-.29153	.13425	.197
		10,000~15,000	-.50459*	.16857	.032
		More than 15,000	-.51730*	.15510	.013
	5,000 ~ 10,000	Below NT5,000	.29153	.13425	.197
		10,000~15,000	-.21306	.16196	.631
		More than 15,000	-.22577	.14789	.508
	10,000~ 15,000	Below NT5,000	.50459*	.16857	.032
		5,000 ~ 10,000	.21306	.16196	.631
		More than 15,000	-.01271	.17962	1.000
	More than 15,000	Below NT5,000	.51730*	.15510	.013
		5,000 ~ 10,000	.22577	.14789	.508
		10,000~15,000	.01271	.17962	1.000

Table 2-3 Value to annual consumption amount with multiple comparison Scheffe method.

IV	(I)NUMBER	(J)NUMBER	Average deviation (I-J)	Standard deviation	Sig
V	Below NT5,000	5,000 ~ 10,000	-.33830*	.11199	.030
		10,000~15,000	-.54122*	.14063	.002
		More than 15,000	-.40989*	.12939	.020
	5,000 ~ 10,000	Below NT5,000	.33830*	.11199	.030
		10,000~15,000	-.20291	.13511	.522
		More than 15,000	-.07159	.12337	.953
	10,000~ 15,000	Below NT5,000	.54122*	.14063	.002
		5,000 ~ 10,000	.20291	.13511	.522
		More than 15,000	.13132	.14985	.857
	More than 15,000	Below NT5,000	.40989*	.12939	.020
		5,000 ~ 10,000	.07159	.12337	.953
		10,000~15,000	-.13132	.14985	.857

Table 2-4 Customer satisfaction to annual consumption amount with multiple comparison Scheffe method.

IV	(I)NUMBER	(J)NUMBER	Average deviation (I-J)	Standard deviation	Sig
CS	Below NT5,000	5,000 ~ 10,000	-.17111	.11068	.497
		10,000~15,000	-.42859*	.13897	.025
		More than 15,000	-.39732*	.12787	.024
	5,000 ~ 10,000	Below NT5,000	.17111	.11068	.497
		5,000 ~ 10,000	-.25747	.13352	.296
		10,000~15,000	-.22621	.12192	.331
	10,000~15,000	Below NT5,000	.42859*	.13897	.025
		5,000 ~ 10,000	.25747	.13352	.296
		More than 15,000	.03126	.14808	.998
	More than 15,000	Below NT5,000	.39732*	.12787	.024
		5,000 ~ 10,000	.22621	.12192	.331
		10,000~15,000	-.03126	.14808	.998

* The average deviation is significant at 0.05 levels.

The results show that the P values of intrinsic enjoyment, value and customer satisfaction are 0.000, 0.038 and 0.048 respectively, less than 0.05 from the analysis of time duration daily in browsing as Table 3-1. We further analysed them with Scheffe method. The

Scheffe analysis shows the P value of intrinsic enjoyment is less than 0.05 of time duration daily in browsing is significant. The Scheffe analysis also shows that the 0.5-1 hour and 1-1.5hours of time duration daily in browsing are more significant than below 30 minutes in intrinsic enjoyment as Table 3-2

Table 3-1. ANOVA analysis of annual consumption amount to intrinsic enjoyment, value and customer satisfaction.

Construct	Time duration daily in browsing	Mean	Standard deviation	ANOVA	
				F Value	P Value
IE	Below 30 mins	3.3935	0.8019	7.876	0.000
	0.5-1 hour	3.7837	0.6577		
	1-1.5hours	4.2379	0.5138		
	More than 1.5 hours	3.8660	0.7680		
Value	Below 30 mins	3.3853	0.6689	2.856	0.038
	0.5-1 hour	3.5833	0.5828		
	1-1.5hours	3.7500	0.6202		
	More than 1.5 hours	3.9000	1.0398		
CS	Below 30 mins	3.5540	.67453	2.676	0.048
	0.5-1 hour	3.7902	.54716		
	1-1.5hours	3.8579	.56565		
	More than 1.5 hours	3.9340	.82872		

Table 3-2 Customer satisfaction to time duration daily in browsing with multiple comparison Scheffe method.

IV	(I)NUMBER	(J)NUMBER	Average deviation (I-J)	Standard deviation	Sig
IE	Below 30 mins	0.5-1 hour	-.39025*	0.1210	0.017
		1-1.5hours	-.84440*	0.2107	0.001
		More than 1.5 hours	-0.4725	0.3416	0.592
	0.5-1 hour	Below 30 mins	.39025*	0.1210	0.017
		1-1.5hours	-0.4542	0.2249	0.256
		More than 1.5 hours	-0.0823	0.3506	0.997
	1-1.5hours	Below 30 mins	.84440*	0.2107	0.001
		0.5-1 hour	0.4542	0.2249	0.256
		More than 1.5 hours	0.3719	0.3907	0.824
	More than 1.5 hours	Below 30 mins	0.4725	0.3416	0.592
		0.5-1 hour	0.0823	0.3506	0.997
		1-1.5hours	-0.3719	0.3907	0.824

Table 4-1. Descriptive correlation matrix of the constructs.

.	Variable	Mean	1	2	3	4	5	6
1	Social-facilitation	3.66	1					
2	Intrinsic Enjoyment	3.57	.481**	1				
3	Value	3.47	.398**	.471**	1			
4	Mobility	3.96	.367**	.358**	.390**	1		
5	Application Usability	3.82	.318**	.457**	.434**	.405**	1	
6	Customer Satisfaction	3.65	.401**	.505**	.642**	.511**	.513**	1

Note：* p < .05; ** p < .01 N=206

With the relevance of customer satisfaction as a dependent variable, four of five dependent variables are moderately related, one of which is low related, in which the moderately related facets are most connected to "value", and the rest from high to low is application usability, mobility, intrinsic enjoyment, another low correlation dimension is social-facilitation. With the relevance of customer satisfaction as a dependent variable, four of five dependent variables are moderately related, one of which is low related, in which the moderately related facets are most connected to "value", and the rest from high to low is application usability, mobility, intrinsic enjoyment, another low correlation dimension is social-facilitation.

Table 4-2 Descriptive correlation matrix of satisfaction and continuance intention.

Variable	Mean	Customer Satisfaction	Continuance Intention
Customer Satisfaction	3.65	1	.658**
Continuance Intention	4.5	.658**	1

Note: * p < .05; ** p < .01 N=206

Table 5. The multiple regression analysis

Model	Beta allocation	t value	Significant
(constant)		0.394	0.694
Social-facilitation	0.035	0.597	0.551
Intrinsic enjoyment	0.139	2.128	0.035
Value	0.403	6.705	0.000
Mobility	0.226	3.598	0.000
Application usability	0.177	2.898	0.004
Satisfaction	0.658	12.491	0.000

From the Table 5, the results are in the validation of the variable customer satisfaction, the normalized coefficient beta = 0.139, P = 0.035 for intrinsic enjoyment; the normalized coefficient beta = 0.403，P ＝ 0.000 for value; the normalized coefficient beta =0.226 ，P＝0.000 for mobility and the normalized coefficient ＝0.177，P＝0.004 for application usability respectively, reaching a significant level (P < 0.05), as well as social-facilitation used to verify the results of the variable customer satisfaction, the normalized coefficient beta = 0.35, P = 0.551, and no significant level (P >0.05).

The results of customer satisfaction is verified by the variable continuance intention, the normalized

coefficient beta = 0.658, P = 0, reaching a significant level (P < 0.05).

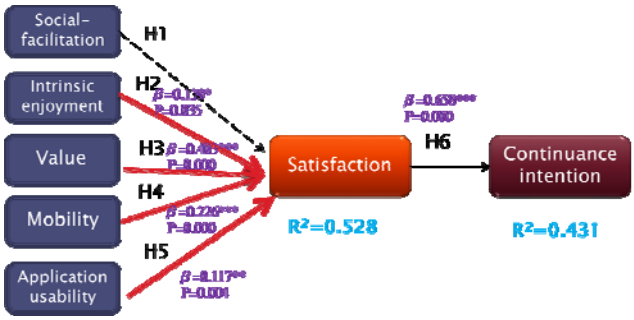

Figure 2 The influence of each construct on customer satisfaction and continuance intention.

We find that mobility and value recognition contribute to positive attitude of customer satisfaction and then fuel continued use, while intrinsic enjoyment and application usability directly contribute to customer satisfaction and then reach continuance Intention.

5 Discussion and Contribution

This study is based on the consumer perspective of mobile shopping to explore what factors affect consumer satisfaction. In addition to consumer satisfaction, whether there will be a willingness to continuance to use mobile shopping. Our results based on user experiences from an online survey of mobile shopping and empirically validate the model using data to support our proposed framework. This study proposes a model to answer what and how the individual salient motivations that influence continuance intention in mobile shopping. The primary contributions of this paper are its examination of influence change of variables in explaining continued mobile shopping usage, to validate potential value answer the question and explain mobile shopping continuance behaviour. The results suggest that users' continuance intention is determined by their satisfaction with IS use.

5.1 Theoretical implications

The result illustrates the impact of mobile shopping on the relationships of intrinsic enjoyment, value, mobility, and application usability to customer satisfaction. The effect of willingness to continue to use, and then make suggestions according to the conclusion and research.

First, “intrinsic enjoyment” has a positive and direct effect on customer satisfaction. This depicted that consumer’s conduct mobile shopping during their leisure time for entertainment in daily life. Mobile shopping can bring enjoyment from the whole process of browsing the web as a mode of entertainment. Consumers have high connect while using mobile devices for product or service exploration [33].

Second, “value” enables consumers to check prices of products of interest at various portals and evaluation, buy more cost-effective products or services, and make better choices before coming to a final decision. Perceived value in active shopping positively affects customer satisfaction [47]. There is a significant positive correlation between "value" and "customer satisfaction".

Third, the mobile device usage for shopping context for “mobility” given the ubiquity of mobile devices. These findings highlight that mobile shopping experiences have very strong emotional significance for customers. Mobility is found important in influencing usage intention of mobile services [48, 49]. Consumers can browse the Internet store in any place and any time. In other studies, there has been a positive relationship between mobility and satisfaction [48, 49]. Both our study and the literature show that mobility is a significant positive correlation to "customer satisfaction"

Fourth, the service and website of mobile shopping, convenient, quick, intuitive and easy to use interface, “application usability” establishes friendly relationship with the mobile shopper. It lets mobile shopper easily browse the page, help the shopper to search, browse, compare, or buy goods on the spot. If the process of comparison or transaction is too complicated, it will hinder the consumer and have a negative impact on mobile shopping. Rakhi Thakur [1] points out that the interface between mobile shopping is clear and easy and convenient for consumers to purchase, which is interacted with the satisfaction of consumers. This study and literature show that application usability is positively correlated with customer satisfaction.

Finally, the antecedents of loyalty are satisfaction, and satisfaction has statistically significant impact on loyalty statistics [1]. This study and literature show that "customer satisfaction" is positively correlated with "continuance intention".

This study investigates the impact of motivations (value, enjoyment, mobility and application usability) on consumer satisfaction in the mobile shopping context. This study provides a framework for devising matrices to track experiences and customer satisfaction in mobile shopping.

5.2 Managerial implications

Our findings suggest several avenues by which consumers would have intention to use mobile shopping online. First, consumers' cognitive conflicts must be minimized. One approach is to reduce the impact of negative attributes such as privacy concerns. Given the mobile phone's limited screen space, app/site designers should include only necessary elements on the shopping cart screen. Reducing clutter and using only essential elements will speed up the checkout process[50]. Since flipping pages on small screens is annoying and ineffective when comparing products, we recommend presenting the most preferable products first, based on consumers' individual preferences, current location or shopping habits[50].

In addition, consumers whose time duration daily in browsing between 1-1.5hours, have highly perceive "intrinsic enjoyment ". This group highly adhere to using

mobile shopping, so we suggest to push this group to complete the order while they are browsing on shopping platform.

Second, several actions can facilitate a purchase during browsing on mobile shopping. The serendipity and unexpectedness of a contextual offer can increase consumers' positive affect from commodity presentation, mobile coupons, return of goods, and exchange of goods during process of shopping, and after service in functional or emotional needs, triggering the shopping motivation.

It is a kind of "intrinsic enjoyment" to have a full range of meticulous planning that lets consumers feel mobile shopping is a pleasure, thus creating a satisfied shopping experience and a touching service. Special offers can pique customers' interest and continuance buying intention.

Third, value has high impact on satisfaction, which can be achieved via appropriate product promotion. This can help consumers locate target products quickly with less cognitive effort. Hwang, et.al.[51] indicated consumers will pay attention to the promotion commodities, which has a positive impact on encourage instant purchases or increase order size. Consumers are very concerned with buying cost-effective products in mobile shopping.

Finally, "application usability" has a significant impact on "customer satisfaction". Mobile shopping is different from the computer online shopping. The shopping platform and interface must have a friendly design, clear and easy to use. It is very important for the consumers to get the real-time interaction and social information sharing among the buyers. Therefore, we suggest that the retailers should focus on platform and interface design, as well as the trend of buying behaviour.

6 Limitations and future research

First, there are many other possible factors affecting customer satisfaction omitted in mobile shopping, such as the security and privacy concerns, monetary, and effective information etc., which have not been discussed in this research. Second, we recommend that the retailers present less advertisement to the consumer, given the mobile phone's limited screen space and reduce the impact of negative attributes such as too much ineffective information. Third, the app/platform designers should include only necessary elements on mobile screen to give customers' proper information for stimulating consumption. Fourth, reducing junk advertisement and using only essential information will speed up consumers' buying behaviour, due to flipping pages on small screen is ineffective and annoying when comparing price. We suggest presenting the technological innovation service. It is imperative to invest in mobile web and app strategies to stay on top of the growth. With the development of smart phone and internet of things, mobile shopping operators should also use new technologies to innovate services, such as instant interaction, video and 3D shopping to provide consumers with a more real shopping environment and more fun. Retailers should use open data to increase consumer analysis and understanding the needs of mobile shoppers.

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