The Mediating Role of Incumbent System Habit in the Relationship between Customers Perceived Value and Repurchase Intention in Smartphone Industry in Malaysia

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Abstract

The increasing number of smartphone vendors have made the competition in smartphone industry becomes fiercer than before. The implementation of habit construct in the research model have recently gained increasing attention among the IT researchers. Despite preliminary literatures perceived consumer habit as determinant of repurchase behavior in digital context, majority of the studies have defined consumer habit from the perspective of situation of use, and still lack of research focusing on habit from the perspective of skill developed related to the system. This study therefore aims to provide research model investigating the mediating role of skill-based habit related to the system (incumbent system habit) in the relationship between customer perceived value and customer repurchase intention in smartphone context.

Keywords: Smartphone; Habit; Perceived value; Loyalty.

1. Introduction

Smartphone industry is one of the fastest growing industry in the world. Survey has indicated that the adoption of smartphone has experienced tremendously an increasing from year to year in both developed and developing countries (Poushter, 2016), particularly in Malaysia. The usage of smartphone in Malaysia has been reported to increase from 14% in 2004 to 53.4% in 2014 (Malaysian Communication and Multimedia Commissions, 2015). Malaysia was recognized to have the second highest mobile phone market penetration in Asia after Singapore by 80% in 2013 (Nielsen Report, 2013) and has reached its highest market penetration by 140% in 2014 (World Bank, 2014). Nowadays, the smartphone users in Malaysia has reached 16.4 million from 30.9 million of its population and it is predicted to keep increasing to reach 23.31 million of smartphone users in 2022 (Statista, 2017). Given that Malaysia has large number of smartphone users, understanding their post-purchase behavior of smartphone is crucial for the manufacturers in order to ensure that they can sustain and compete in the fierce market environment.

Previous empirical studies have reported that when the people decide to stay or switch with particular brand, they might first evaluate about the value of the product or service (e.g. Chen et al., 2015). Past mobile technology related studies have also noted that the success of retaining the customer is determined by the value that the customer received (Chuah et al., 2017; Yeh et al., 2016; Kim et al., 2016; Lim and Shankar, 2014). However, the non-value factors could not also be ignored and its effect on customer purchase behavior must also be explored. The continuance usage of smartphone on the daily basis may cause the users to develop habit and it may also affect their future purchase behavior.

Limayem et al. (2001) has argued that the continuance usage of IT varies depending on the level of consumer habit. Furthermore, a number of studies have demonstrated that habit may directly or interactively influences repurchase behavior (e.g. Hsu et al., 2015; Chiu et al., 2012). Despite the adoption of habit has recently gained a lot of intention and has been examined in the IT related literature. However, only few studies have sought to understand how habit is produced thus influence future purchase
behavior. In addition, the perspective of habit related to the system has not previously been examined in IT related literature particularly in smartphone context. To fill this gap, this study therefore aims to investigate the mediating role of habit related to the system (incumbent system habit) in the relationship between customer perceived value and customer repurchase intention. One must understand that the usage of product-based technology such as smartphone requires learning process, and the people tend to handle almost all their daily affairs using smartphone (Hamka et al., 2014). Accordingly, the frequent usage of smartphone may cause the users to develop specific skill related to the system and influences their purchase behavior, thus it may also reduce the impact of perceived value gradually.

2. Literature Review

Repurchase Intention

The focus of this study is to understand the drivers of customer purchase behavior as it is perceived to be the main purpose of retaining the customers (Khan et al., 2015). The term repurchase intention is commonly used in marketing literature to measure customer purchase behavior due to the actual data (real purchase data) may be difficult to obtain (Duman and Mattila, 2005). In this study, repurchase intention can be defined as the customer’s strong commitment to rebuy the same smartphone brand in the future. Previous technology related studies have shown that repurchase intention does significantly predict the actual purchase of the technology or application (e.g. Yeh et al., 2016; Hsu and Lin, 2015).

The perception of value has been commonly adopted in the mobile technology related studies to predict consumer behavior intention due to it covers various aspects of value such as cognitive, affective, and social aspect. Consequently, various models related to customer perceived value in IS context has also been proposed by previous studies whereby technology acceptance model (TAM) and unified theory of acceptance and use of technology (UTAUT) models have been perceived to be the most recognized model used to predict consumer behavior. However, in consideration of the frequent use of smartphone, the way the users use their smartphone may also be influenced by the system applied in their device (Lin et al., 2015), thus their usage behavior may also become habitual. Therefore, this paper will also examine the habitual construct of “incumbent system habit” to predict the repurchase behavior of smartphone users.

Customer Perceive Value

Consumer value has been perceived to be the key factor for organization success. Although there are many premises of conceptualization of perceived value that can be divided into unidimensional approach and multidimensional approach (Sánchez-Fernández & Iniesta-Bonillo, 2007), literatures have shown that customer perceived value is better conceptualized as multidimensional constructs as it captures various value dimensions thus provides better prediction of customer purchase behavior (Zauner et al., 2015). In this regard, the earlier study of Sweeney and Soutar (2001) have divided value into four dimensions consists of functional value, monetary value, emotional value, and social value, as well as have developed the scales to measure such dimensions so-called “PERVAL” in their study.

In perceived value literature, PERVAL has been perceived to be the most recognized as well as effective scale measurement to measure perceived value among the marketing researchers. However, due to the dimensions used are for general purpose, some value dimensions therefore have not been examined as well as its measurement are not provided in the study (e.g. conditional value and epistemic value). Since the use of smartphone involves various type of values apart from what has been mentioned above, few studies have addressed the need to enhance the perceived value concept by including more dimensions
related to the use of smartphone and to examine its effect on the user's purchase behavior. Previous studies on digital telecommunication context have provided a significant evidence that epistemic value (e.g. Gummerus and Pihlström, 2011) and interaction support value (e.g. Phang et al., 2009) should not be ignored in the research model when measuring customer purchase behavior. Therefore, in this study, the various dimensions of perceived value have been integrated in the research model for the investigation of smartphone usage among Malaysian users which includes functional value, emotional value, monetary value, social value, epistemic value, and interaction support value.

Functional value can be defined as the utility derived from using the smartphone related to ease of use, its quality, and performance of smartphone (Kim et al., 2016; Sun and Su, 2013). Monetary value is defined as the monetary benefits that the customer gain from purchasing the smartphone (Tseng and Lo, 2011). Emotional value refers to the user's perception of fun, happiness or pleasure from using the smartphone (Sun and Su, 2013). Social value is defined as the utility derived related to the enhancement of social self-concept from using the smartphone (Sun and Su, 2013; Chun et al., 2012). Epistemic value pertains the benefits received by the users related to the product capacity in arousing the user's curiosity or offer novelty through personal experience in using smartphone (Pihlström and Brush, 2008). Finally, interaction support value relates to the benefits that the users receive to enhance the social interaction with other smartphone users (Phang et al., 2009).

Although multidimensional approach has been perceived to be better conceptualization of perceived value. The different arguments exist between the lower order and higher order model of the construct. The consumption value theory of Sheth et al. (1991) has postulated that the value components are independent to each other and therefore the lower-order multidimensional model of perceived value has been commonly adopted in predicting consumer attitude and consumer behavior particularly in mobile technology and information system context (e.g. Hsiao et al., 2016; Yeh et al., 2016; Yu et al., 2013). However, recent study of Chuah et al. (2017) has provided evidence that perceived value is better modelled as second-order multidimensional construct in predicting customer behavior. Therefore, this study conceptualized perceived value as reflective multidimensional second order construct.

**Incumbent System Habit**

In general, habit is defined by the researchers as the automatic response related the certain situational cues (Yang et al., 2016). In this regard, Limayem et al. (2001) has postulated that the automaticity of habit occurs due to the repeated learning process. That is, people are likely to perform some actions unconsciously because they are used to perform it for several times. The issue of habit has recently gained an increasing attention in information technology related studies and has been adopted to predict customer behavior phenomenon (Lin and Wang, 2016). In this study, the authors took habit as mediating variable in predicting the behavior of smartphone users.

In the context of smartphone use, habit may be referred as the automatic behavior in using smartphone due to certain situational cues such as browsing internet or checking email whenever entering the subway (Venkatesh, 2012). However, based on reviewing the previous IT related literatures, the habit construct adopted was mostly conceptualized as general habit or focused on the automaticity use of smartphone due to certain situation (Soror et al., 2015) and lack of research focusing on the specific habit related to the system. Murray and Häubl (2007) has postulated in their skill-based habit theory that habit may also be produced trough skill developed from using the technology. That is, after repeated learning process, people will have specific skill in using the technology thus the sequence steps needed to perform some actions will be unconsciously done. Therefore, in this study, the conceptualization of habit construct will be focused on the specific skill related to the system rather than the general use of smartphone.
Unlike the common IT literatures, in this study, habit is conceptualized as reflective second order multidimensional construct. Previous study of Polites (2009) has argued that in order to have better measurement, habit is better modelled as second-order multidimensional construct due to the automaticity-nature of habit may be produced by several factors. The study of Polites and Karahanna (2012) further have proposed three dimensions of habit constructs such as “controllability”, “awareness”, and “mental efficiency”. Controllability can be defined as the level of difficulty that the users perceived in controlling or resisting a particular behavior (Polites and Karahanna, 2012). Awareness is defined as the extent to which the users may be unaware about the presenting of the situational cues that triggers them to do a particular behavior (Polites and Karahanna, 2012). While mental efficiency can be referred as “the extent to which the perceptual or judgmental process demands attentional resources.” (Polites and Karahanna, 2012). In other words, it can be understood that when the users have high level of habit, they can be considered to have high level of mental efficiency. Hence in this study, these three dimensions of habit are employed into the context of smartphone use.

3. Hypotheses development

Perceived Value and Repurchase Intention Relationship

Previous mobile technology related studies have provided evidence that perceived value is the key determinant of repeat purchase behavior (e.g. El-Adly and Eid, 2016; Wu and Ho, 2014; Tseng and Lo, 2011). The study of Osman et al. (2012) have identified that people use smartphone for various purpose besides for telecommunication, such as for entertainment, study, and navigation. Consequently, predicting customer purchase behavior in smartphone context will be more accurate if the study includes various elements of customer’s value. UTAUT model has been recognized as the complex as well as effective model to predict customer behavior intention in IS context as it integrates various aspect of customer value including functional value, hedonic value, and social value. The subsequent studies have also revealed that the elements related to customer value significantly affect customer behavioral intention in different IS context such as mobile payment (Oliveira et al., 2016), technology acceptance of Phablets (Huang and Kao, 2015), and mobile banking (Yu, 2012). As perceived value associates with the benefits that the users receive from using smartphone, hence it is expected that the higher the value receive by the users, the stronger the commitment to repurchase the same smartphone in the future. Therefore, it is hypothesized:

H1: Customer perceived value (functional value, emotional value, monetary value, social value, epistemic value, and interaction support value) have positive effect on customer repurchase intention.

Perceived Value and Incumbent System Habit Relationship

Previous literatures have postulated that habit is developed through certain amount of repetition (e.g. Venkatesh, 2012; Limayem, 2001). The study of Chiu et al. (2012) further have argued that the repetition of using the technology such as smartphone will only occur when the customer perceived that the technology they use offers superior value to them. That is, it can be understood that when the people evaluate their consumption experience from using the technology positively, it is likely that their willingness to perform the same behavior increases, thus become a habit (Venkatesh et al., 2012; Hasiao et al., 2016). Ye and Potter (2011) noted that through the frequent use of technology such as smartphone, people will also learn and increase their understanding on how to operate the device and how to gain more advantages from it. Accordingly, it can be inferred that as positive experience increases the
smartphone usage, people will also gradually learn and develop specific skill in operating their smartphone related to its system, thus such behavior may become habitual. Hence, it can be hypothesized that:

H2: Customer perceived value is positively associated with the incumbent system habit in smartphone

*Incumbent System Habit and Repurchase Intention Relationship*

The relationship between habit and continuance intention has been supported by both habit theory (Kim and Malhotra, 2005) and previous IS related studies (Amoroso and Lim, 2017; Hsiao et al., 2016). The study of Chiu et al. (2012) have also evidenced that habit has both direct and interactive effect on consumer behavior. Although the findings from previous studies showed a significant effect of habit on consumer behavior intention, however the relationship between skill-based habit related to system (incumbent system habit) on consumer repurchase intention is hardly found.

Unlike prior IT related studies, this study views habit from the perspective of the automatic response related to skill developed in using the technology or system. Murray and Häubl (2007) have postulated in their skill-based habit theory that the consumer may become lock-in to particular technology when the cost of switching (e.g. perceived ease of use of the product) to a competing brand outweigh the benefits. This means, the specific skill related to the system that has been developed during the use of the technology may lock-in the consumer to switch to another brand. This is because when the new technology or new system is introduced, the skill that the user has developed in using the incumbent technology will not be transferable (Murray and Häubl, 2007), thus it will increase the perception of ease of use of the incumbent system as they need to adapt and learn with the new introduced system. Consequently, the commitment to repurchase the same smartphone brand will increase as the perception of ease of use increases. Hence, it can be hypothesized that:

H3: Incumbent system habit has positive influence on repurchase intention

Figure 1: Proposed Research Model

![Figure 1: Proposed Research Model](image-url)
4. Research Method

The respondents of this study will be the smartphone users in Malaysia in the age above 18 years old. The total of 400 questionnaires will be distributed to university students via convenience sampling technique. As this research is focusing on the mediating role of skill-based habit related to smartphone system, the participants therefore will only be chosen for those who have used their smartphone for more than one year to ensure their habit towards the system is well-developed.

In this study, the three constructs (customer perceived value, incumbent system habit, and repurchase intention) employed in the research model will be measured by multiple item scales adapted from previous studies. For the customer perceived value construct, in line with the study of Chuah et al. (2017), the construct is conceptualized as second-order multidimensional construct that consist of six value dimensions. All the measurement items for each value dimension are adapted from the specific sources such as functional value (Sweeney and Soutar, 2001; Sun and Su, 2013), value for money / monetary value (Sun and Su, 2013; Pihlström and Brush, 2008), emotional value (Sun and Su, 2013; Sweeney and Soutar, 2001), social value (Chun et al., 2012; Sun and Su, 2013; Sweeney and Soutar, 2001), epistemic value (Pihlström and Brush, 2008), and interaction support value (Phang et al., 2009).

For the incumbent system habit construct, this study conceptualized it as second-order multidimensional construct as suggested by Polites (2009) that consist of three dimensions of habit including “awareness”, “mental efficiency”, and “controllability”. The items used to measure these dimensions are adapted from previous study of Karahanna and Polites (2012). Lastly, to measure repurchase intention construct, the items used are adapted from previous mobile technology studies such as Kim et al. (2016) and Chaudhuri and Holbrook (2001). All of these measurement items are rated based on five-point Likert scales from strongly agree to strongly disagree.

Since the measurement items used in this study have been modified to fit with the target context, the questionnaire pretesting therefore will be conducted to ensure its content validity. Content validity is referred as the judgment of the expert regarding the scales developed whether it logically and accurately reflects the actual meaning of what it intends to measure (Thanasegaran, 2009). The total of three academician specialist in consumer behavior and information technology will be involved in this study to review the scales. Their opinions and feedback regarding the scales developed in this study will be refined and the questionnaire items used in this study will be revised accordingly.

5. Conclusion

The objective of this study is to explore the factors influencing customer repurchase behavior in smartphone context. The non-value factors such as consumer incumbent system habit is included in the research model of this study to understand its mediating effect in the relationship between customer perceived value and customer repurchase intention. The authors believe that the result of this study could provide useful information as well as may have crucial implication to the future studies and manufacturer in IT related fields particularly in smartphone context.
6. References


