Behavioral intention of using one-stop mobile application: evidence from department stores

Hong-Wen Lin \(^a\), Ya-Cing Jhan \(^b\) \(\dagger\) and Yuan Tseng \(^c\)  
\(^a\) Assistant Professor, Department of International Trade, Chinese Culture University, Yang-Ming-Shan, Taipei, Taiwan  
\(^b\)  
\(\dagger\) Ph.D. Candidate, Department of Business Administration, National Taiwan University of Science and Technology, Da’an District, Taipei, Taiwan  
\(^c\) Graduate Student, Department of Marketing, Chinese Culture University, Yang-Ming-Shan, Taipei, Taiwan  
\(\dagger\)  
kelly6824@hotmail.com (Corresponding author)

ABSTRACT

This research study is an attempt to focus on intentions of one-stop mobile application of departmental stores to determine the effects of time availability, perceived usefulness, compatibility, and apparently perceived easiness, besides the involvement of customers, which will obviously create a correlation effect in their continuous use. The Technology Acceptance Model and Diffusion of Innovations Theory have been used in this research as the well-set theoretical foundations. To further conduct the research on the right footings, we used the network of questionnaires to carry out an appropriate investigation on a total of 308 effective samples, recovered accordingly. The results of our research clearly indicated the following aspects broadly: compatibility, perceived usefulness and perceived ease of use will positively affect the intentions; whereas time availability and compatibility will positively affect the customer’s involvement; and the customer’s involvement will in turn, positively affect the continuous intentions to use the mobile application. In spite of these positive results, the research also indicated that three hypotheses are invalid. To be more precise, following factors had been included therein: (i) time availability versus intention to use, (ii) perceived usefulness versus customer involvement, and (iii) perceived ease of use versus customer involvement.

Contribution/ Originality

Since this study adopts the Technology Acceptance Model and Diffusion of Innovations Theory to produce a new conceptual framework, in order to research on the most popular issues pertaining to mobile application in e-commerce. The conclusion illustrates the effects of various variables in such conceptual framework, and appropriate recommendations have been made on the management implications of the industry.

ISSN (P): 2306-983X, ISSN (E): 2224-4425


© 2019 Asian Economic and Social Society. All rights reserved
1. INTRODUCTION

Through the revolutionary changes and other experiences brought about by the mobile devices, it has been gradually redefined in decision-making process of the numerous consumers (Faulds et al., 2018). With “m-powered”, the new technology of mobile devices (Martin, 2013), more accurate and seamless decision-making process could be achieved for consumers to create more mutually individualized interactions between the retailing operators and the consumers. In modern days, consumer’s use of mobile devices and the retailer’s reaction are rapidly changing the retail environment. To acquire the information that could help their decision-making, consumers usually download the mobile applications, which are available. When wandering around the departmental store, consumers simply need to download the individual mobile application and it will obviously manage all matters required for shopping and such type of shopping is called as “one-stop” type of experience in consuming services.

Based on the meaning defined and provided in historical literature, this research attempts to clarify the one-stop mobile application for the departmental stores as follows: When rendering the consuming services, these stores will place their entire focus on customers, where the mobile network will be almost based on integrating the online and offline shopping environment. Through modern and sophisticated technology (e.g. using IoT, The Big Data, physical measuring, and positioning system as the linking systems) and other infrastructure service facilities (for example, Wi-Fi, Beacon, e-Pay, e-parking service, and queuing number, etc.), the departmental stores may be linked up with the mobile device, used by consumers in order to provide them a well-planned comprehensive one-stop application service.

While facing the more popular technology today and its applications in modern days, many firms are motivated to establish relationships with consumers through mobile applications. With the widespread network of smart mobile devices and mobile applications, new opportunities for firms have been created, as well (Marsden and Chaney, 2013). Furthermore, the changes in consumers’ behavior also brought about new changes and challenges within those firms, which attempt to influence their consumers’ and divert their behavior towards mobile technology. Corresponding to these changes, firms also encounter various other problems on how to attract consumers through mobile devices with more effective approaches; the customers’ involvement also further spurred profound interest of scholastic and commercial fields (Brodie et al., 2011; Hollebeek, 2011; Higgins Scholer, 2009; Vivek et al., 2012; Zakir, 2013; Dessart et al., 2015).

As such, the research is being conducted by taking up and adopting Technology Acceptance Model and Diffusion of Innovations Theory as the theoretical basis in order to look more deeply into the following research purposes, through the one-stop mobile application provided precisely by the physical department store channels: viz., (1) Studying the effect of time availability, compatibility, perceived usefulness and perceived ease of use on intentions to use and customer involvement and, (2) studying the effects of intentions to use and customer involvement on their continual usage.

2. LITERATURE REVIEW

Technology Acceptance Model (TAM) is proposed and designed by Davis (1986) for explaining the behavior of computer users in accepting new information system. In nature, the TAM provides general kinds of interpretations for explaining the user’s acceptance level in acknowledging new technology and techniques so as to examine the variations between different groups and to explain consumer’s behaviors (Davis, 1989). In this regard, the TAM is not only the theoretical model that has been used most in studying the acceptance level for new technology but is also an effective tool for estimating the explaining individual’s intention to use for new technology and information (Szajna, 1996). Until now, the TAM has become the theme of many research programs as it is sufficient to support the overall interpretation effect for the theory (Yousafzai et al., 2010). The TAM assumes that individual behavior is totally spontaneous where they tend to consider the
meaning behind the behavior and action before deciding to perform certain behavior. Therefore, the TAM upholds that the “attitude toward using” and “behavioral intention to use” will be affected by “perceived usefulness” and “perceived ease of use” (Davis, 1989).

In spite of this, some researches consider that the TAM is too general in nature that it cannot provide sound interpretation for using the advanced mobile services and technology (Bouwman and van de Wijngaert, 2009; Salimon et al., 2017). Due to this reason, many researchers proposed that other variances should be included in order to expand the scope of TAM to reinforce the research model (Legris et al., 2003, Quan et al., 2010). According to Hu et al. (1999), it would not be enough by studying individual industry through TAM; instead, other measuring factors should also be considered and discussed together with the TAM to explain the behaviors of general public and consumers in a more effective way. As the purpose of this research is to study the general public’s intention of use for one-stop mobile application, the TAM will be used as the theoretical basis while including the Diffusion of Innovations Theory (DIT) to fortify the research structure.

The DIT is proposed by Rogers (1983). In nature, the DIT is a theory explaining how this kind of attitude is formed, how it leads to the final adoption or rejection, and how will the innovative features adapt to such process (Karahanna et al., 1999). According to Rogers (1995), he considered that the concept, information and matters that are different from the past can be regarded as an innovation as long as they are novel to the targets to be communicated; whereas, the diffusion is defined as the innovation process communicated among the members of social system through certain channel over time (Rogers, 1983). Currently, the DIT has been applied in a variety of realms for estimating and explaining the selection of innovation by the general public and their diffusion behavior. In DIT, it comprises the following five innovation features that will affect innovative things and they are relative advantage, compatibility, complexity, trialability and observability.

TAM and DIT provided a conceptual foundation for the research and the study of one-stop mobile application program. Based on the proposition and the definition of previous researches, the TAM and DIT are combined in this research, with customer involvement added as the dependent variable for carrying out the study. In the meantime, the suggestions proposed by Moore and Benbasat (1991) are also adopted for modifying the perceived usefulness and relative advantage as well as perceived ease of use and complexity that are similar in definition, and the perceived usefulness and perceived ease of use are retained.

3. METHODOLOGY

3.1. Research hypothesis and conclusion

3.1.1. Effect of time availability on the intention of use and customer involvement

Rogers (1999) concluded that economic factors can be used to measure the relative advantage in DIT, and the concept of time available reflected the relative advantage behind the mobile application of DIT (Kang et al., 2015). With the timely availability of mobile application, it allows the consumer to acquire the brand or product-related messages or to inquire about the promotional information without the time restriction (Zhao and Balagué, 2015). As such, time availability may enhance the consciousness value when using the mobile device (Kleijnen et al., 2007). In addition, Kim et al. (2013) also proved that consciousness value can stimulate consumer’s intention of involvement in mobile services. In the meantime, Wu (2016) also found out that time availability can stimulate the use of mobile application and message sharing while increasing the involvement level for the media. As such, if consumers acknowledge that they can enjoy the time available when using the mobile application that specific target or mission can be achieved instantly, it may stimulate the consumer’s involvement in the mobile application because it can increase the physical value. On this basis, he proposed following hypotheses:
H1a: Time availability poses positive significant effect on intention of use.
H1b: Time availability poses positive significant effect on customer involvement.

3.1.2. Effect of compatibility on intention of use and customer involvement
Compatibility refers to the level of consistency with the existing sense of value, past experience and potential consumer demand as expected for the innovation (Zolkepli and Kamarulzaman, 2015). The level of compatibility is connected with the elevation of individualization and customization, which represents the process of providing solutions to the target according to the messages obtained from the customer (Vesanen, 2007). Regarding this, Meuter et al. (2005) found that compatibility is the determining factor for consumers to use the self-service technology (e.g. telephone bank, hotel automatic checkout). In addition, the mobile application with higher compatibility can estimate customer’s level of involvement (Fang et al., 2017). In nature, compatibility of consciousness technology should allow consumers feel pleasant or interesting in the interaction of mobile message and recreational service (Tan and Chou, 2008). In this regard, consumers usually demonstrate a higher level of involvement in the application service program when the content of application services accord with consumer’s demand and preference. Based on previous research results, this research proposed following hypotheses:

H2a: Compatibility poses positive significant effect on intention of use.
H2b: Compatibility poses positive significant effect on customer involvement.

3.1.3. Effect of perceived usefulness on intention of use and customer involvement
Perceived usefulness refers to the level of work performance that can be elevated through specific technology as used by the user (Bruner and Kumar, 2005; Lee et al., 2006). Regarding this, Hasan and Ahmed (2007) proposed that when users find out the system can be easily used, it will help users accomplish more jobs and improve the work performance. When users find out a new technology can be easily used, perceived usefulness and perceived ease of use will pose significant effect on intention of behavior (Hu et al., 1999). In addition, Moon and Kim (2001) also pointed out that the perceived usefulness of new technology will pose positive effect on consumer’s intention of behavior. Once consumers acknowledged the effectiveness during online experience, the level of customer involvement may increase (Brodie et al., 2011; Mollon and Wilson, 2010). As such, this research proposed following hypotheses:

H3a: Perceived usefulness poses positive significant effect on intention of use.
H3b: Perceived usefulness poses positive significant effect on customer involvement.

3.1.4. Effect of perceived ease of use on intention of use and customer involvement
Perceived ease of use means that user may achieve higher work performance without making too much efforts in using the new technology (Walczuch et al., 2007). Under the same conditions, it will be much easier to operate modern technology and users will experience more obvious effect brought by such technology (Schepers and Wetzel, 2007). The higher the ease of use of new technology, the higher the possibility of using such new technology (Bagozzi et al., 1992). In the meantime, Mathieson et al. (2001) also pointed out that the perceived ease of use will pose positive significant effect on consumer’s intention of use; further, perceived ease of use allows users to build up stronger confidence in self-efficiency and self-control (Moon and Kim, 2001). As such, this research proposed following hypotheses:

H4a: Perceived ease of use poses positive significant effect on intention of use.
H4b: Perceived ease of use poses positive significant effect on customer involvement.

3.1.5. Effect of intention of use on continual use
This research is measured according to the level of intention of use, which is compared with the intention of behavior in TAM. In TAM, the intention of behavior represents consumer’s decision stage of using new technology and it will affect the Implementation Stage of actual behavior later
on. Comparing the decision stage, consumers of the implementation stage are under indecisive status on whether or not to use such service. Because the samples selected for this research are the users that are currently using the one-stop mobile application, the samples selected for the implementation stage are users that have used the one-stop mobile application in which, the implementation stage will affect the subsequent confirmation stage (Rogers, 1983). The confirmation stage refers to the decision process used by consumers to reinforce the innovation. When comparing with DIT, the consumer should decide whether or not it can be measured with continued adoption (Rogers, 1983). In this research, the term of continuous use is used to measure the variables. As such, he proposed the following hypothesis:

H5: Intention of use poses positive significant effect on continual use.

3.1.6. Effect of customer involvement on continual use

In previous researches focusing on substantial effect on customer involvement, most of them are dealing with the consumer behaviors in a conventional business environment (Reitz, 2012; Vivek et al., 2012). In comparison, Kim et al. (2013) used mobile application as the theme and he found out that continuous use is the result of customer involvement. However, Kang et al. (2015) analyzed consumer’s repeated use of products or intention of services and he concluded that the involvement on the emotional side is mutually related to the intention of using the mobile application. As such, this research proposed following hypothesis:

H6: Customer involvement poses positive significant effect on continual use.

From the above conclusion, the architecture model of this research is created and is as shown in Figure 1.

![Figure 1: Research architecture model](image)

3.2. Questionnaire design

The questionnaire designed for this research comprises the following two portions. The first one is to identify the effective samples and basic information survey, and only active users using the mobile application each day will be asked to continue answering the items contained in the questionnaire. Next, the questionnaire subject designed for each variable in this research adopted the scale form used by previous research and the descriptive content is also adjusted according to the scenarios developed for this research. This research is designed following structural questionnaire type with
Likert seven-point scale used as the measuring standard of all variables in which, “1” means disagree and “7” means agree.

In time availability, the scale developed by Dennis et al. (2008), Kleijnen et al. (2007), Szymanski and Hise (2000) contains 9 subjects; in compatibility, 7 subjects are designed by referring to the scale developed by Moore and Benbasat (1991), Meuter et al. (2005); in perceived usefulness, 7 subjects are designed by referring to the scale developed by Davis (1989); and in perceived ease of use, 9 subjects are designed by referring to the research questions developed by Davis et al. (1989), Lee et al. (2007), Nysveen et al. (2005), Vlachos and Vrechopoulos (2008). As for customer involvement, 7 subjects are designed by referring to the scale developed by Hollebeek et al. (2014), So et al. (2014), Kilger and Romer (2007); in intention of use, 6 subjects are designed by referring to the scale developed by Agarwal and Prasad (1998); Kim et al. (2010); and in continual use, 8 subjects are designed by referring to the research questions developed by Overby and Lee (1991); Jones et al. (2006); Ryu et al. (2010).

4. ANALYSIS AND RESULTS

4.1. Sample structure and reliability analysis

In this research, the department store one-stop mobile application consumers are selected as the sampling targets and the network questionnaire method is also used as the research tool. In result, a total of 318 samples are recovered. After deleting the missed answering invalid samples, the effective questionnaires are 308 copies which represent 96.9% of effective recovery rate. The sample structure is as shown in Table 1.

During the research, we used Cronbach’s alpha value to measure the internal consistency. The reliability analysis result indicated that Cronbach’s alpha value is over 0.7 for time availability (0.944), compatibility (0.969), perceived usefulness (0.935), perceived ease of use (0.963), intention of use (0.921), customer involvement (0.965), and continual use (0.960). As such, it is within high reliability scope, which represents that excellent reliability level can be achieved by the measuring tool used in this research.

Table 1: Sample structure

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Item</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>147</td>
<td>47.7%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>161</td>
<td>52.3%</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 20</td>
<td>23</td>
<td>7.5%</td>
</tr>
<tr>
<td></td>
<td>21~30</td>
<td>169</td>
<td>54.9%</td>
</tr>
<tr>
<td></td>
<td>31~40</td>
<td>86</td>
<td>27.9%</td>
</tr>
<tr>
<td></td>
<td>41~50</td>
<td>16</td>
<td>5.2%</td>
</tr>
<tr>
<td></td>
<td>More than 51</td>
<td>14</td>
<td>4.5%</td>
</tr>
<tr>
<td>Education level</td>
<td>Junior high school</td>
<td>5</td>
<td>1.6%</td>
</tr>
<tr>
<td></td>
<td>Senior/vocational high school</td>
<td>25</td>
<td>8.1%</td>
</tr>
<tr>
<td></td>
<td>Junior college or university</td>
<td>201</td>
<td>65.3%</td>
</tr>
<tr>
<td></td>
<td>Master's/doctoral degree</td>
<td>77</td>
<td>25.0%</td>
</tr>
<tr>
<td>Using experience</td>
<td>Below 12 months</td>
<td>195</td>
<td>63.3%</td>
</tr>
<tr>
<td></td>
<td>13-24 months</td>
<td>79</td>
<td>25.6%</td>
</tr>
<tr>
<td></td>
<td>25-36 months</td>
<td>18</td>
<td>5.8%</td>
</tr>
<tr>
<td></td>
<td>More than 37 months</td>
<td>16</td>
<td>5.2%</td>
</tr>
<tr>
<td>Frequency of use</td>
<td>Every day</td>
<td>13</td>
<td>4.2%</td>
</tr>
<tr>
<td></td>
<td>Every week</td>
<td>59</td>
<td>19.2%</td>
</tr>
<tr>
<td></td>
<td>Every month</td>
<td>32</td>
<td>10.4%</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>204</td>
<td>66.2%</td>
</tr>
</tbody>
</table>
4.2. Research hypothesis verification

In this research, the Multiple Regression Analysis method is based to study the correlation of time availability, compatibility, perceived usefulness, perceived ease of use vs intention of use and customer involvement. Further, it also studies the correlation of intention of use and customer involvement vs continual use.

First, this research set the time availability, compatibility, perceived usefulness and perceived ease of use as independent variable respectively and then set intention of use and customer involvement as dependent variable respectively for conducting the Multiple Regression Analysis. The analysis results regarding the effect on intention of use indicated followings (as shown in tables 2): Time availability presents negative significant correlation ($\beta = -0.243$, $\rho < 0.01$), compatibility presents positive significant correlation ($\beta = 0.691$, $\rho < 0.01$), perceived usefulness presents positive significant correlation ($\beta = 0.252$, $\rho < 0.01$), and perceived ease of use presents positive significant correlation ($\beta = 0.112$, $\rho < 0.05$). As for the effect on customer involvement, the analysis result indicated followings (as shown in tables 3): Time availability presents positive significant correlation ($\beta = 0.260$, $\rho < 0.01$), compatibility presents positive significant correlation ($\beta = 0.608$, $\rho < 0.01$), perceived usefulness fails to present positive significant correlation ($\beta = 0.134$, $\rho > 0.05$), and perceived ease of use presents negative significant correlation ($\beta = -0.212$, $\rho < 0.01$). Finally, this research also set the intention of use and customer involvement as independent variable respectively, with continual use as dependent variable. The analysis result for the effect on continual use indicated followings (as shown in tables 4): the intention of use presents positive significant correlation ($\beta = 0.623$, $\rho < 0.01$), and customer involvement also presents positive significant correlation ($\beta = 0.224$, $\rho < 0.01$). The analysis result indicated that other hypotheses of this research are valid except for H1a, H3b and H4b. (hypothesis testing results are as shown in Table 5).

Table 2: Effect on intention of use

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Adjusted $R^2$</th>
<th>$\beta$ coefficient</th>
<th>VIF</th>
<th>F-value</th>
<th>t-value</th>
<th>$\rho$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>0.583</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>Time availability</td>
<td>-0.243</td>
<td>3.497</td>
<td>-3.528</td>
<td>0.074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2a</td>
<td>Compatibility</td>
<td>0.691</td>
<td>3.282</td>
<td>10.351</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3a</td>
<td>Perceived usefulness</td>
<td>0.252</td>
<td>2.665</td>
<td>4.185</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4a</td>
<td>Perceived ease of use</td>
<td>0.112</td>
<td>1.659</td>
<td>2.355</td>
<td>0.019</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: Intention of use

Table 3: Effect on customer involvement

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Adjusted $R^2$</th>
<th>$\beta$ coefficient</th>
<th>VIF</th>
<th>F-value</th>
<th>t-value</th>
<th>$\rho$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>0.637</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1b</td>
<td>Time availability</td>
<td>0.260</td>
<td>3.497</td>
<td>4.043</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2b</td>
<td>Compatibility</td>
<td>0.608</td>
<td>3.282</td>
<td>9.755</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3b</td>
<td>Perceived usefulness</td>
<td>0.096</td>
<td>2.665</td>
<td>1.709</td>
<td>0.089</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4b</td>
<td>Perceived ease of use</td>
<td>-0.212</td>
<td>1.659</td>
<td>-4.780</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: Customer involvement

Table 4: Effect on continual use

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Adjusted $R^2$</th>
<th>$\beta$ coefficient</th>
<th>VIF</th>
<th>F-value</th>
<th>t-value</th>
<th>$\rho$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>0.811</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Intention of use</td>
<td>0.676</td>
<td>1.989</td>
<td>19.308</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Customer involvement</td>
<td>0.286</td>
<td>1.989</td>
<td>8.177</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: Continual use
Table 5: Analysis results of the variable relationship verification

<table>
<thead>
<tr>
<th>Hypothesis testing</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Time availability poses positive significant effect on intention of use.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H1b: Time availability poses positive significant effect on customer involvement.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a: Compatibility poses positive significant effect on intention of use.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b: Compatibility poses positive significant effect on customer involvement.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3a: Perceived usefulness poses positive significant effect on intention of use.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3b: Perceived usefulness poses positive significant effect on customer involvement.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H4a: Perceived ease of use poses positive significant effect on intention of use.</td>
<td>Supported</td>
</tr>
<tr>
<td>H4b: Perceived ease of use poses positive significant effect on customer involvement.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5: Intention of use poses positive significant effect on continual use.</td>
<td>Supported</td>
</tr>
<tr>
<td>H6: Customer involvement poses positive significant effect on continual use.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

5. CONCLUSION AND IMPLICATIONS

5.1. Conclusion
This research deeply studied as to how some variables, like time availability, compatibility, perceived usefulness, and perceived ease of use, will pose undue effects on attitudinal intentions of use and customers’ involvement. Further, this research also made attempts to study the effects of intentions of use and customers’ involvement in continuous usage.

As the first step, the compatibility, perceived usefulness, and perceived ease of use posed positive effects on the behavioural intentions of use and matches our hypothesis, which had been assumed for this research. However, time availability does not tend to pose any positive effects on intentions of use and failed to meet the hypothesis, appropriately required for this research. The reasons for these flaws and slackness could be seen in diversified services provided by the departmental stores of one-stop mobile application, whereas the time availability is being interfered by some non-instant functions.

In the next step, time availability and compatibility placed positive effects on customers’ involvement and obviously meets the hypothesis required for this research. However, the effect of perceived usefulness and perceived ease of usage on involvement of customers failed to meet the requisite hypothesis for this research. Previous researches had indicated that most of the mobile application functions may probably be restricted to the current consumers’ behavior that could be taken for granted to a certain extent (Tarute et al., 2017). In view of this fact, consumers might no longer regard the functional features of mobile application as specifically important and vitally useful.

Finally, the effects of intentions of use and customers’ involvement in continual use are apparently consistent with those results as expected for this research. By elevating the compatibility, perceived usefulness, and perceived ease of use of one-stop mobile application, the consumers would be encouraged to download mobile applications for continual use. In the meantime, with the passage of time the solutions on consuming decisions and the quality of content, as well as the time availability and compatibility provided by one-stop mobile application will lead to much higher levels of customers’ involvement so as to stimulate consumers’ intention of continuously usage of the one-stop mobile application.

5.2. Managerial implications
Regarding the clarifications on intentions of use, the perceived usefulness and perceived ease of use are in accordance with the interpretation provided in historical literatures, and it is also demonstrated that higher levels of consistency and effectiveness in the implementation and acceptance intentions
of departmental stores in one-stop mobile application (López-Nicolás et al., 2008). However, time availability failed to effectively elevate the intentions of use. The results of this research actually indicated that the respondents are mostly consumers with less than 12 months of experience in using one-stop mobile application. Therefore, more focus should be placed on the feedback of practical values to consumers during the earlier promotional stage. Once the practical values are obtained by the consumers from one-stop mobile application, it stands at higher level than other search channels (e.g. Internet or other Apps). Then higher intentions of use will be motivated towards elevating the frequency of use.

Considering the aspect of customers’ involvement, it can be well established that with through further consuming experience of one-stop mobile application and by knowing the features of consciousness innovation, with the passage of time the consumers will be inclined towards this technology. As such, it is suggested that the time availability and compatibility of one-stop mobile application should be emphasized during the promotional period. For example, by helping the consumers to have access to the sales counter or services facilities more easily and without hindrance. In order to provide such facilities the customers may quickly find out the required merchandise or services, so as to satisfy their demands and make their decision of purchasing power more efficient to rapidly react accordingly. In the meantime, it is also required to collect and analyze the information via Big Data and then provide the dedicated services and products according to the demands of different customers’ groups. In this way, we may elevate the consumers’ impression for time availability and compatibility and also stimulate a high level of customers’ involvement.

Finally, we studied that departmental stores’ one-stop mobile application is the appropriately used technical-oriented service, considering the personal experience of consumers where their intentions of use and customers’ involvement will obviously intend to play key roles in continual usage of this application. Through an effective understanding of the impacts of intentions of use and customers’ involvement on one-stop mobile application, the business operators may look further into the consumers’ behavior in continual use, after the new mobile application is gradually experienced by consumers. As far as physical stores are concerned, the mobile application under smart retailing and associated Beacon and IoT technologies, etc. are well positioned as auxiliary tools. To achieve successful mobile application, the business operators should develop innovative approaches so that mobile application could conduct and undertake more effectively and efficiently, the online and offline clicks-and-mortars with physical stores in order to provide much better individualized consuming experience for their valued consumers.

**Funding:** This study received no specific financial support.

**Competing Interests:** The authors declared that they have no conflict of interests.

**Contributors/Acknowledgement:** All authors participated equally in designing and estimation of current research.

Views and opinions expressed in this study are the views and opinions of the authors, Asian Journal of Empirical Research shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.

**References**


