Abstract

With the continuously increasing number of mobile devices and convenient mobile shopping in this age of mobile commerce, many Taiwanese consumers still do not use these devices to shop or discontinue mobile shopping after their first experience. Therefore, it is important for Taiwanese mobile shopping providers to understand consumers’ intention and behavior in order to improve the situation of mobile commerce in Taiwan. The purpose of this study was to investigate the main determinants of Taiwanese mobile shoppers’ behavior and find out what type of consumers would prefer using mobile shopping. This study employed a questionnaire approach as the research instrument designed to collect data and applied “An Adoption Model for Mobile Services” model (Sally & Indrit, 2007) to analyze the data. The 107 participants who must be Taiwanese and owned at least one mobile device were selected randomly on the road to fill in the questionnaire. The results showed that most of Taiwanese consumers have negative impression on mobile shopping. First, they think it is difficult to use mobile devices to shop because of unfamiliarity. Second, they would not be affected by media influences. Third, they do not think using mobile devices to shop would enhance their self-image or make their lives better. Fourth, trust and satisfaction are major determinants of m-shopper’s behavior. Finally, the study also found that there was no relationship between consumers’ attitude toward new product and their mobile shopping experience. The results of this study can provide valuable information to the Taiwanese m-commerce providers about Taiwanese mobile consumers and to establish a friendly and financially-thriving m-shopping environment.
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I. Introduction

With the continuously increasing number of mobile devices and the ubiquity of mobile networks, mobile commerce has already thrived in 2014. Mobile commerce (m-commerce), which is also called couch commerce, means that consumers sit on the couch and shop using their mobile devices. In many ways, mobile shopping has become a popular approach for modern consumers. This trend makes the m-commerce a new business opportunity. In the United States of America (U.S.A.) US mobile commerce sales have even reached $4.9 billion in 2011, and are predicted to reach $163 billion in sales by 2015(ABI Research, 2010). On the contrary, mobile commerce in Taiwan is still in its infancy but has great potential for businesses. According to the research of Market Intelligence & Consulting Institute (MIC) in October 2013, there are only 33% Taiwanese customers who have the experience of mobile shopping in the past year, and there are only 8.4% of them continue using their mobile devices to shop after the first experience. To compare the MIC survey in March 2013, the number of people who have the experience of mobile shopping has only grown by 16.4%. To compare the growing rate of Taiwan with the US, the growth of mobile shopping trend in Taiwan is much slower. Nonetheless, Taiwanese consumers are “slowly” changing their shopping approach. Therefore, it is necessary to examine Taiwanese consumers’ mobile shopping behavior, thus giving mobile shopping providers the opportunity to better understand the Taiwanese consumers’ behavior i.e. attitude, habit, and preference, and further improve their m-shopping platform to establish a better mobile shopping environment.

There are some research studies about mobile shopping in Taiwan, but there is only a few investigated mobile shoppers’ behavior. In addition, it is difficult to find relevant researches focusing on “the determinants” of adoption mobile shopping
behavior of Taiwanese consumers. By understanding the main determinants of mobile shoppers, the mobile shopping providers can work on finding the causes for consumers’ indifferent attitude towards mobile shopping. Therefore, this study aims to explore the determinants that affect the Taiwanese consumers’ usage, non-usage, and discontinuing the use of mobile devices to shop.

More specifically, the direction of this study follows these three questions:

- Why do Taiwanese use or not use mobile devices to shop?
- Why some consumers discontinue using mobile devices to shop after their first mobile shopping experience?
- What type of Taiwanese consumers would prefer using mobile shopping?

In order to better understand mobile shoppers’ shopping behavior, a questionnaire was administered to 107 participants who were selected randomly. The results were analysed and compared to various existing theoretical models (see the following section) on consumer intention and behavior towards mobile commerce.

II. Literature Review

Mobile commerce is defined by Liu (2000) as “any activity using word or voice or using public or private internet to communicate, exchange data or make transactions through mobile devices” (p. 6). Gunasekaran and Ngai (2003) also defined it as “any direct or indirect transactions involving monetary value can be called m-commerce as long as they are completed on wireless telecommunication networks” (p. 187-188). While mobile technologies and applications are rapidly and widely utilized in electronic commerce, it becomes vital for researchers and m-commerce providers to better understand the evaluative criteria from the
consumer's perspectives on mobile shopping. As the situation mentioned in the introduction part of this study, mobile commerce has been a huge success in some markets such as America. However, interestingly this innovation has not been as flourishing in Taiwan. According to the survey, Market Intelligence & Consulting Institute (MIC) in September 2013, there are still 67% Taiwanese never use mobile devices to shop. Therefore, understanding Taiwanese’s point of view on mobile commerce is extremely critical for successful management and development of m-commerce in Taiwan.

As the successful development of m-commerce in other countries, there were definitely a lot of prior studies about mobile commerce and mobile shoppers’ behavior. For example, there were several researches about exploring the factors that influence m-commerce adopters’ intentions. In Margherita Pagani’s article (2004), the author noted that perceived usefulness, ease of use, price, and speed of use are the most important determinants of adoption of multimedia mobile services and the importance of determinants differs by age in Italy. In Singapore, it also found consumer innovativeness, past adoption behavior, technology cluster adoption, age, and gender affect their adoption behavior. (Yang, 2008) In Spain, the study showed that age, attitude towards M-commerce, Internet shopping previous experience and relations with the Mobile are the main predictors of M-commerce decision while age, length of Mobile use, Mobile affinity, consumer attitude towards M-commerce and previous M-commerce experience are the most relevant factors influencing future M-commerce intention (Bigné, Ruiz & Sanz, 2007). The factors that influence m-commerce adopters’ intentions were similar, but the order of the importance of determinants differs by different countries; therefore, in this study, “localization” is the primary condition which prescribed that participants only can be Taiwanese for exploring mobile shopping behavior of “Taiwanese consumers.”
In Taiwan, there are some behavioural studies which have been conducted in the domain of m-commerce. The established field includes consumer recommendation behaviour in a mobile phone service context (Chen, Huang, & Chou, 2008), consumer behaviour in using mobile payment services (Lee, Lan & Sue, 2006), factors affecting individuals to adopt mobile banking (Yu, 2012), purchase behaviour and the determinants of mobile commerce acceptance (Chi, Yeh, Chien, & Yang, 2009; Wu & Wang, 2004).

In the previous studies which focus on the domain of “the determinants of mobile commerce adoption”, most of researchers utilized “Technology Acceptance Model (TAM)” to analyze Taiwanese consumers’ behavior and attitude which is a typical theory to explain how a new technology and the various aspects of it are received and used by the user. However, these types of behavioral research based on TAM theory have greatly advanced knowledge in this domain. As long as the result of the prior studies could not effectively help mobile shopping providers to create a better management and development of m-commerce, it is time to take a different angle that will garner different answers and avenues for further research.
In this study, “An Adoption Model for Mobile Services” would be applied as the theoretical framework. Sally & Indrit proposed this model in 2007 which was integrated Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Technology Acceptance Model (TAM) (Davis, 1989), Innovation Diffusion Theory (Rogers, 1962) and Motivational Theory. (See Figure 1)

Sally & Indrit (2007) claimed that user’s attitude would be affected by user predisposition, perceived usefulness, perceived ease of use, social influence and facilitating condition. In addition, user’s attitude affects his/her behavioral intention and gender and age are the variables of the above mentioned factors. Also, there are several elements involved in user predisposition, which are compatibility, behavioral control, image, personal innovativeness and interpersonal influence. Interpersonal influence and external influence are included in Social influence and promotion, perceived security and perceived privacy are involved in facilitating condition.
Comparing it to TAM theory (See Figure 2), the structure of Adoption Model for Mobile Services is more detailed and complete. It is necessary that the structure of theory changes with a changing society and technology. Therefore, this study would be based on the Adoption Model for Mobile Services theory instead of TAM theory.

![Figure 2: TAM theory](image)

### III. Methodology

**Research questions**

These three questions are the main research questions of this research paper.

- Why do Taiwanese consumers use mobile devices to shop?
- Why do some Taiwanese not use or discontinue using mobile devices to shop after their first mobile shopping experience?
- What type of Taiwanese consumers would prefer using mobile shopping?

**Participants**

The main participants of this study were Taiwanese consumers who had mobile devices. Additionally, the 107 respondents invited to participate in this study were randomly selected on the road and responded to a print version. As shown in figure 3,
the total number of 107 respondents, 69.2% were female and 30.8% were male.

**Figure 3: Gender of respondents**

![Pie chart showing gender distribution](image1)

**Figure 4: Age of respondents**

![Bar chart showing age distribution](image2)

The age of the respondents ranged from 19 to 65 years old and who must be Taiwanese and owned mobile devices. There was not a limitation of gender of the study participants. Figure 4 illustrated the age of participants. 26.2% respondents’ age were between 19 to 22 years old. 24.3% respondents’ age were between 23 to 30 years old. 24.3 respondents’ age were between 31 to 40 years old. 15% respondents’ age were 41 to 50 years old, and 10.3% respondents’ age were above 51 years old.
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From Figure 5, it can be seen that most of the respondents’ job occupation were students (31.8%) and civil servant (33.6%). 10.3% of respondents were teachers, 8.4% of them worked at service industry, and 6.5% of them were clerical staff. Only few respondents’ job were self-operated business (3.7%), agroforestry (0.9%), retire (0.9%), and other (2.8%).

**Figure 5: The job occupation of respondents**

<table>
<thead>
<tr>
<th>Job Occupation</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>34</td>
<td>31.8</td>
</tr>
<tr>
<td>Agroforestry</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>Teacher</td>
<td>11</td>
<td>10.3</td>
</tr>
<tr>
<td>Police</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>Clerical staff</td>
<td>7</td>
<td>6.5</td>
</tr>
<tr>
<td>Civil servant</td>
<td>36</td>
<td>33.6</td>
</tr>
<tr>
<td>Service industry</td>
<td>9</td>
<td>8.4</td>
</tr>
<tr>
<td>Self-operated business</td>
<td>4</td>
<td>3.7</td>
</tr>
<tr>
<td>Retire</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>107</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In figure 6, it showed that the income of participants per month. Most of participants earned between twenty-nine thousand NT dollars to sixty thousand NT dollars per month.

**Figure 6: The income of participants per month**

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 10,000</td>
<td>25</td>
<td>23.4</td>
</tr>
<tr>
<td>10,001-29,000</td>
<td>18</td>
<td>16.8</td>
</tr>
<tr>
<td>Income Range</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>29,001-40,000</td>
<td>27</td>
<td>25.2</td>
</tr>
<tr>
<td>40,001-60,000</td>
<td>26</td>
<td>24.3</td>
</tr>
<tr>
<td>60,001-80,000</td>
<td>6</td>
<td>5.6</td>
</tr>
<tr>
<td>Above 80,000</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>107</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Questionnaire**

The study employed a questionnaire approach as the research instrument designed to collect data for exploring Taiwanese consumers’ attitude toward mobile shopping. The full questionnaire was divided into three sections. The first part is the background information about participants, which included gender, age, education background, job occupation, and income per month. In the second part, there were five close-ended questions which were basic questions for knowing whether they had shopped by mobile devices and understanding their mobile shopping habit, for example, “Purchase Frequency.” In the third part, there were eight questions for exploring the three main questions of this research paper.

Among these eight questions in third part, there were three ranking questions. The purpose of using this type of question was to find out the key point and rank the principal relative importance of elements. In the questionnaire, there were some questions for analyzing what kind of person would prefer to do mobile devices to shop in both first and second section. For instance, purchase frequency, risk aversion, or personality would probably be the reasons affecting whether using mobile devices to shop or not.
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IV. Result

The main research questions of this paper were to understand Taiwanese consumers’ main determinants of using or not using mobile devices to shop. In other words, try to analyze Taiwanese consumers’ attitude toward mobile shopping through there below questions.

Part 2 of the questionnaire

In the part 2 of this questionnaire, the measures for the experience of mobile shopping, which include whether having the experience of mobile shopping, shopping frequency, and the average expense on mobile shopping per month were subjected to an item analysis. In figure 7, question 1 presented that 72% of Taiwanese have the experience of using mobile devices to “browse” the products by their mobile devices. However, question 2 showed that only 51% of Taiwanese had the experience of mobile shopping. In addition, question 3 presented that there are 43% of people who continue using mobile devices to shop after the first mobile shopping experience.

Figure 7: Experience of mobile shopping

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Have your ever used mobile devices to “browse” the products by your mobile devices?</td>
<td>Yes</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>77</td>
</tr>
<tr>
<td>Q2. Have you ever used your mobile devices to shop?</td>
<td>Yes</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>51</td>
</tr>
<tr>
<td>Q3. Do you continue using mobile devices to shop after your first mobile shopping experience?</td>
<td>Yes</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>43</td>
</tr>
</tbody>
</table>
**Part 3 of the questionnaire: Attitude toward mobile shopping**

The purpose of the eight questions in the third part is to explore the three main questions of this research paper. For question 7, respondents were asked for the attitude toward mobile shopping. From the figure 8, it shows that the Cronbach a is 0.846 which means that the internal consistency of the questions are strong; thus all the questions in this category are consistent and related with each other.

**Figure 8: Reliability Statistics**

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.846</td>
<td>.848</td>
<td>9</td>
</tr>
</tbody>
</table>

*Cronbach a = 0.846*

In figure 9, the Item-Total Correlations for each of variables was not high. All of them were below 0.7 which presents that the items in this test are not really related to what they are being tested for. In addition, the alpha of the variable 6 “enhancing image” is 0.419 which is the lowest compared to others. Thus, this question suggests to be considered removing from this set.

**Figure 9: Item-Total Statistics**

<table>
<thead>
<tr>
<th>Scale Mean If Item Deleted</th>
<th>Scale Variance If Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Square Multiple Correlation</th>
<th>Cronbach's Alpha If Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2. Easy To Use</td>
<td>22.33</td>
<td>13.656</td>
<td>.613</td>
<td>.454</td>
</tr>
</tbody>
</table>
On the other hand, for exploring Taiwanese consumers’ attitude toward mobile shopping, there were four different scales which were (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree for participants to choose according their thought toward mobile shopping. In figure 10, it showed that the average score which respondents gave, Most of the score were below 3.0. In other words, consumers’ attitude was partial towards negative.

| V5. Convenient To Pay | 22.36 | 13.759 | .593 | .406 | .827 |
| V7. Affected By Reference Group | 22.20 | 14.121 | .520 | .422 | .835 |
| V8. Affected By Media | 22.44 | 14.173 | .548 | .510 | .831 |

Part 3 of the questionnaire: Relation

The purpose of this section is to find out what type of Taiwanese consumers would prefer using mobile shopping. In this analyzing section, the hypothesis was made that people whose attitude is active and is full of curiosity toward a new technology
product have higher possibility of having the experience of mobile shopping. Therefore, the figure 11 and 12 presented that the relation of question 2 and question 6. The result showed that the Pearson r equals to 3.223 and the p value is higher than 0.05. It concluded that the hypothesis was false. The attitude toward new product and having the experience of mobile shopping was not related.

**Figure 11: Cross table**

<table>
<thead>
<tr>
<th>Experience of mobile shopping</th>
<th>Attitude to New Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Active &amp; Curious</td>
</tr>
<tr>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Yes</td>
<td>13</td>
</tr>
<tr>
<td>總和</td>
<td>20</td>
</tr>
</tbody>
</table>

**Figure 12: Chi-squared test result**

<table>
<thead>
<tr>
<th></th>
<th>數值</th>
<th>自由度</th>
<th>漸近顯著性 (雙尾)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson卡方</td>
<td>3.223(a)</td>
<td>2</td>
<td>.200</td>
</tr>
<tr>
<td>概似比</td>
<td>3.253</td>
<td>2</td>
<td>.197</td>
</tr>
<tr>
<td>有效觀察值的個數</td>
<td>107</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ R = 3.223, P > 0.05 \]

**V. Discussion**

As mentioned above, the purpose of this study is to explore the attitude of Taiwanese consumers toward mobile shopping and analyze the finding by the model “An Adoption Model for Mobile Services” which was proposed by Sally & Indri. After running the statistical tests, the results revealed the answers of three main research
questions. The first part of result presented the situation of the experience of mobile shopping in Taiwan now. Question 1 to 3 showed that 72% of Taiwanese have the experience of using mobile devices to “browse” the products, 51% of Taiwanese had the experience of mobile shopping, and 43% of people who continue using mobile devices to shop after the first mobile shopping experience. To compare the finding of MIC in 2013 which was mentioned in the introduction part, although percentage of having the experience of mobile shopping and continuing using mobile devices to shop increase in 2014(33% Taiwanese customers who have the experience of mobile shopping, and 8.4% of them continue using their mobile devices to shop. The number of people who have the real mobile shopping experience is still less than the number of people who only use mobile devices to “browse” the products.

In the second part of result, the finding was analyzed by the model “An Adoption Model for Mobile Services.” Sally & Indrit (2007) claimed that user’s attitude would be affected by user predisposition, perceived usefulness, perceived ease of use, social influence and facilitating condition.
Therefore, question 7 and 8 was used to test whether these variables which Sally & Indrit (2007) proposed would affect consumers’ attitude and behavior or not.

As the result, most of Taiwanese consumers have negative impression on mobile shopping. About the variable “Perceived Usefulness”, the score which respondents gave was 2.8. (Range 1~4 point) It showed that they thought it was not easy to use mobile devices to shop. In the variable “Social Influence” part, the respondents were asked whether they would be affected by reference group and media. The result presented that they thought they won’t be affected by them. About the variable “User Predisposition”, the number also showed that respondents didn’t think using mobile devices to shop would enhance their images. About the variable “Facilitating Conditions”, they extremely distrusted to use mobile devices to shop. To sum up these results, all the variables were negative. Consumers’ attitude and behavior were affected by these variables. Therefore, Taiwanese consumers’ intention of using mobile devices to shop was low because of these results of the variables. In addition, the result of survey also presented that the variables and behavior were related. On the other hand, it showed that Sally & Indrit’s model was available to test consumers’
From the survey, the answer of research question “Why do Taiwanese consumers use mobile devices to shop?” could be known. The main reason is consumer could shop anytime and anywhere. However, the main reason of not using and discontinue using mobile devices to shop was “mistrust.” About the third research question, “What type of Taiwanese consumers would prefer using mobile shopping”, the result showed that the attitude toward new product and having the experience of mobile shopping was not related. Therefore, the result did negate the hypothesis which was made that people whose attitude is active and is full of curiosity toward a new technology product have higher possibility of having the experience of mobile shopping.

To compare with the previous studies which also studied mobile consumers’ attitude, but utilized different model to analyze, the factors that influence m-commerce adopters’ intentions were similar to the previous studies. There is almost no difference even if the different model was utilized to analyze.
Limitation

There are some limitations in this research. First limitation is the participants of the questionnaire. All of them are from Kaohsiung and the number of female is much more than number of male. Therefore, these respondents can’t represent the opinion of Taiwanese consumers. Second, the restriction of time is also a problem. The whole research time is less than two months to collect variable participants to do the survey. In addition, they were force to finish the questionnaire on the road without completely pondering over the questions. Third, the research tried to utilize questionnaire to explore consumers’ intention and behavior. However, the intention and behavior of human is not so easy to figure out clearly. For future studies, researchers should pay attention to the participants. It would be better to focus on a specific group to study, such as student group.
VI. Conclusion

Mobile shopping has become a popular approach for modern consumers and this trend makes the m-commerce a new business. However, the acceptance of mobile shopping in Taiwan is slightly lower than western countries. Therefore, in the purpose of providing mobile shopping providers some suggestions to improve the situation, this study tried to use the model “An Adoption Model for Mobile Services” which was proposed by Sally & Indri (2007) to explore and analyze Taiwanese mobile shopping consumers’ intention and behavior.

Through the survey, the study finds that most of Taiwanese consumers have negative impression on mobile shopping. First, they think it is difficult to use mobile devices to shop because of unfamiliarity. Second, they would not be affected by media even if media report lots advantages of mobile shopping. Therefore, the advertisement about mobile shopping seems to make little impression on Taiwanese consumers. Third, they do not think using mobile devices to shop would enhance their self-images or make their lives better. The final reason which is also the most important one, the results of the study indicate that the variables of trust and satisfaction are major determinants of m-shopping, but other variables still have indirect influence on m-shopping continuance. Additionally, the study also finds that attitude toward new product and having the experience of mobile shopping are not related, which means that the study failed to find out what type of Taiwanese consumers would prefer using mobile shopping.

Therefore, the results of this study also contribute to the Taiwanese m-commerce providers to establish a friendly m-shopping environment after knowing the biggest
problem for Taiwanese consumers is “trust”. In other words, the m-commerce providers should focus more on the establishing of a trustworthy shopping environment first. After a trustworthy transaction mechanism has been established, the m-shopping providers can then solve the “unfamiliarity” problem. M-commerce providers should explain how to use instead of focusing on the advantages of mobile shopping in their promotion activities.

On the other hand, based on the survey results, some suggestions can be presented for further studies. After so many studies about exploring mobile shoppers’ behavior which utilized different model to analyze, the results are actually similar to each other. Therefore, for finding different answers, researchers should pay attention to the participants. It would be better to focus on a specific group to study, such as student group, instead of analyze the behavior and intention of mass. Then mobile shopping providers can be aimed at a specific group to create more suitable environment for Taiwanese mobile shoppers. In the end, although this study has some limitations, the information of study still has credible reference value.
References


Dear Participant:
Thank you for agreeing to participate in this survey. As part of my bachelor thesis at Wenzao Ursuline University of Languages, I am conducting a research “Analysis of Mobile Online shopping Behavior of Taiwanese Consumers.” The answers to the questions below should help us understand Taiwanese consumers’ shopping behavior. Your information would be very useful to this research and I hope your patience will be rewarded by knowing that the information you provide will also be helpful to improve mobile commerce in Taiwan. I am sincerely appreciated for your time spent on this questionnaire.

If you have any question about this questionnaire or the research, please e-mail sana81717@yahoo.com.tw or call 0963123863 to contact with me.

Once again, THANK YOU for your time, effort and information!

Joanna Huang (Researcher)
Wenzao Ursuline University of Languages
### I. 社經背景調查  Demographics

1. 性別 (Gender) □ 男 (Male) □ 女 (Female) 
2. 年齡 (Age) □ 19-22 □ 23-35 □ 36-49 □ 50 歲以上 (50 years or order) 
3. 婚姻狀況 □ 單身 single □ 已婚 

4. 職業 (Occupation) □ 學生 Student □ 農、林、漁、牧業者 Agriculture / Fishing 
□ 教職 Teachers □ 家務 Housework 
□ 文職人員 Clerical worker □ 待業中 Unemployed 
□ 軍警 Military □ 退休 Retired 
□ 公務員 Government officers / Civic servant 
□ 服務業 Service worker □ 自營企業 Self-employed 
□ 其他 Other _______

5. 個人平均月收入 (新台幣：元) (Monthly income) (NT$) 
□ 10,000 以下 (below 10,000) 
□ 10,001 ~ 29,000 
□ 29,001 ~ 40,000 
□ 40,001 ~ 60,000 
□ 60,001 ~ 80,000 
□ 80,001 以上 (above 80,001) 

### II. Basic questions about experience 

1. 您有使用過行動裝置購物過嗎? (Have you ever used mobile devices shopping before?)
   a. 是 Yes  b. 否 No (跳到問題 10 / jump to question 10) 

2. 您現在還有持續使用行動裝置購物嗎? (Do you continue using mobile devices to shop after the first mobile shopping experience?)
   a. 是 Yes  b. 否 No (跳到問題 10 / jump to question 10) 

3. 您使用行動裝置購物的頻率？ (Purchase Frequency)
   (How many times do you use your mobile devices to shop?)
   a. 每天 (Everyday) 
   b. 3-5 次 / 一個禮拜 (three to five times a week) 
   c. 3 次以下 / 一個禮拜 (below three times a week)
Analysis of Mobile shopping Behavior of Taiwanese Consumers

4. 您使用行動裝置購物消費的金額一個月大約為？
   (How much money do you spend on mobile shopping per month?)
   a. 1,000 元以下  (below NTD 1,000 per month)
   b. 1,001- 2,000 元  (between NTD 1,001 to NTD 2,000 per month)
   c. 2,001-4,000 元  (between NTD 2,001 to NTD 4,000 per month)
   d. 4,001- 6,000 元  (between NTD 4,001 to NTD 6,000 per month)
   e. 6,000 元以上  (more than NTD 6,000 per month)

III. Attitude Questions: 使用原因 The reasons of using mobile devices to shop)

5. What kinds of commodities you often buy on mobile shops? (Multiple selections)
   a. Digital purchases (i.e., music, eBook, images, TC shows, etc.)
   b. Clothing, shoes, accessories and bags
   c. Food
d. Tickets (i.e., concert, movies, sporting events, etc.)
e. NB/PC
f. Furniture
g. Electronics (TVs)
h. Mobile devices (i.e., Smartphone, tablet, etc.)
i. Skin care and cosmetics
j. Books and DVDs
k. Cars and scooters’ accessories
l. Luxury goods / watches
m. 3C products (memory card and printer)
n. Transportation devices/vehicles (car, motorcycle and bicycle)
o. Camera
p. Others ________

6. Which following reasons are the main reasons for you which affect you to choose using mobile devices to shop instead of using computer? Please rank it. (1= main reason)
   ___ a. 優惠多 例：限時搶購, 團購…more preferential measures Ex: flash sale, group purchase
   ___ b. 購物流程簡單  shopping process easy and convenient
   ___ c. 可隨時購物  can shop when I want
   ___ d. 可隨地購物  can shop where I want
   ___ e. 付費方式方便  payment method is convenient

7. 什麼樣的優惠措施會最吸引你？（請排名，1= 最吸引你）
   What kinds of preferential measures will attract you? (Please rank the top 3, 1= most attractive)
   a. 免運費 Free shipping
   b. 買一送一 Buy one, get one free
c. 限時搶購 Flash sale (Discounts in limited time)
d. 打折 discounts
g. 團購 group purchase
h. 其他 Others ________
Analysis of Mobile shopping Behavior of Taiwanese Consumers

8. 您會在固定時間使用行動裝置購物嗎？ (Purchase Time (Ir)regularity?)
(Do you use mobile devices to shop on a regular time?)

   a. 是 Yes  ___  早上 Morning  ___  下午 Afternoon  ___  晚上 Night
   b. 否，可能會在任何時間使用行動裝置購物  No, I may shop at anytime.

9. 你通常使用哪種方式付款？Which payments do you usually use?

   a. ATM 轉帳 ATM transfer  
   b. 郵政匯款 Postal remittance
   c. 在便利店 Pay at convenience stores (i.e., 7-11)  
   d. 貨到付款 Cash on delivery
   e. 信用卡 Credit card  
   f. 其他 Others _____________

IV. Attitude Questions: 不使用之原因 The reasons of not using / discontinue using mobile devices to shop

10. 以下哪些因素會導致您不想使用行動裝置購物？請勾選五個對你來說是主要原因的選項並排名，1=最主要原因）
What has prevented you from buying online with your mobile devices? (Please tick the top five statements which are the main reasons for you and rank them, 1=main reason)

   ______ a. 沒想過要用 Haven’t thought about it
   ______ b. 對使用行動裝置購物覺得不熟悉 unfamiliar with mobile shopping
   ______ c. 不信任行動購物之安全度 I am not comfortable with the security
   ______ d. 很難準確點到想點的選項 It’s difficult to click on exactly what I want
   ______ e. 網頁載入慢 Pages load too slowly
   ______ f. 很難搜尋商品資訊 It is hard to search or collect the information of products
   ______ g. 很難瀏覽商品 It is hard to browse products with mobile devices
   ______ h. 滿意現況，不想花時間嘗試新購物方式 I just don’t want to spend time trying new way of shopping

11. 您會因為連線速度品質而影響是否要使用行動裝置購物嗎？
(Will unstable condition or slow speed of mobile internet be the reason of not using mobile devices to shop for you?)

   a. 是 Yes  b. 否 No

12. 您認為使用行動裝置購物比網路購物安全嗎？ (Risk Aversion)
   Do you think it is safe to use mobile devices to shop?
13. If you have checked the option “unfamiliar with the process of mobile shopping” on Question 10, which part do you exactly feel unfamiliar with?

a. unfamiliar with the process of buying
b. unfamiliar with the payment
c. both a and b
d. other ______

14. Which best explains your shopping behavior on mobile devices?

a. Researched products on mobile device then bought the products by computer
b. Researched products on mobile device and alter bought within store
c. Researched and purchased through mobile websites
d. Researched and purchased through mobile APP

15. What are important elements which affect you to choose mobile websites/APP?

a. content/ information is useful
b. clean, clear and comfortable interface
c. easy to manipulate
d. other _____

感謝您撥空作答 Thank you!