Mobile shopping, Website interaction, Consumer shopping behavior and Website App loyalty - An empirical investigation of the nine mobile shopping website App

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ABSTRACT:

With the rapid explosion of smartphone, consumers who called bow family or mobile consumer have been increasing year by year. There are more than 1 billion users who use smartphone in the world till now. In addition, experts predict that there will more than 2 billions users in 2015.

This paper uses the logical deductive research for hypotheses and frameworks. A research with 269 observations from consumers who have purchased experiences for mobile shopping was used. Besides, a structural equation modeling was used for data analysis and hypotheses testing.

The paper indicates that there is a difference between shopping by smartphone and traditional shopping. Nowadays, consumers can buy things anytime and anywhere through smartphone. Therefore, we should research that how to let consumers to repurchase things on mobile shopping.

KEYWORDS : Mobile shopping, Website interaction, shopping behavior, Website App Loyalty, Structural equation modeling

Introduction
Background and Motivation
First quarter 2010 global smartphone shipments reached to 291 million, research institutes forecast in the second quarter 2010 global handset shipments are expected to rise to 309 million, representing a growth of 11% over the same period in 2009. The main driver of market growth from smartphones, with full Internet access has also been seen as the next U.S. and European operators revenue source (data services) are willing to give generous subsidies (to encourage consumers to redeem). Positioned Entry-Level entry smartphone products more diversified and more friendly price outlook to seize the market. As the average sales price of smart phones can still be maintained in the range of 120 to $150, much higher than the average mobile phone products for $30 to 70 range. Revealed that the majority of mobile phone brands in the smartphone resource development is not surprising, as the flagship brand manufacturers have launched this year's flagship model, the smart phone shipments in the second quarter of 2010 will be gradually rise, expected performance in the second half than the first half of 2010 is expected. In particular, China's mobile phone market this year can still maintain a growth rate above 10 percent, 40 percent of smartphones in the future more explosive speed increases every year. Estimated second half of 2010 as global demand for smartphones growing rapidly, the global mobile phone shipments per quarter remained more
than 300 million or more.

According to estimates, the smartphone Samsung 2013 second quarter shipments reached 72.4 million units, compared to the same period last year, the growth rate of 43.9%. But so did not win the overall growth rate of smart phone shipments growth rate, so Samsung in the global smartphone market share has a slight decline, from 32.2% last year to 30.4% in the second quarter.

Mark Lewis, online director at department store John Lewis, said the biggest transformation in retail in 2014 would be the blurring together of all the different shopping channels, from online and mobile to stores, home delivery and collection. "Customers expect us to offer them a completely seamless service across all touch points and our job is to wire it all together," he said. The rise of click-and-collect could be behind a huge growth of home and garden goods sold online. Sales rose by a quarter between December 2012 and December 2013, a pace of growth only matched by lingerie. The next fastest growing category was accessories, such as belts and scarves, followed by electrical goods.

“Mobile-social consumers feel strong bonds with their brands. They want a say in these brands in exchange for their loyalty. And when they shop, they expect to have their questions and concerns addressed on the spot, while they are in the store. Omnichannel retailers want to capitalise on this cultural shift and connect with mobile-social consumers. “Mobile customer engagement solutions help retailers succeed by giving them a means to focus staff attention on each shopper’s experience as it unfolds. Instead of reacting to aggregated receipt-based feedback, retailers have the opportunity to connect shoppers with associates, establish a real-time dialogue and resolve their concerns before they leave the store. These connections can be made in person, through a call centre, via a mobile website or over SMS.”

Mobile customer engagement technology can empower omnichannel retailers to connect and communicate with shoppers on their own terms, in real time, using their choice of media. Busa said these products help retailers achieve five key outcomes that aren’t possible with receipt-based surveys:

- Connect with all shoppers — Mobile customer engagement allows retailers to communicate with buyers, showroomers and non-buyers during their experience. The ubiquity and ease of use of mobile-based engagement generates high response rates (15% to 34%) compared to receipt-based surveys (fewer than 1%).
- Improve operational excellence — The real-time operational capabilities of mobile customer engagement solutions make it easy for shoppers to get help and offer valuable insights on products, prices, selection and service. Retailers can use shopper input to motivate employees and improve operations before the next shopper walks into the store.
- Create a private, shopper-led dialogue — Mobile customer engagement solutions foster two-way dialogue between the shopper and the retailer. The shopper gains a chance to be heard. The retailer gains an opportunity to respond in real time to satisfy the shopper, convert a sale, resolve an operational issue and build a customer relationship.
Drive real-time action and resolution — Mobile-based engagement empowers associates to take responsibility for the customer experience. Staff members (associates or call agents) are notified when shoppers ask for help — and armed with operations-oriented tools and insights that can help solve the problem and convert the sale.

Pre-empt negative reviews — With mobile engagement solutions, retailers can connect with shoppers privately and resolve issues before they reach social media. Real-time action can help retailers overcome negative experiences, draw out positive reviews, and inspire new levels of brand evangelism.

Instore mobile use is a central part of the shopping experience for millennial and Gen X consumers. “For omnichannel retailers, the mobile device represents a promising new medium for connecting with — and winning over — these prized demographics,” Busa advised.

According to the above information, we can see the trend of smart phones also bring a lot of business opportunities and challenges, which is the main motivation of this study is to analyze in depth the characteristics of individual consumers with mobile shopping and consumer behavior and other factors relationship variables, the ultimate goal is to be able to provide marketers reference variables to enhance consumer loyalty for mobile shopping site.

By the above statement motivation to explore the relationship between consumption of smartphones in all aspects of shopping, expect by constructing theories and empirical way through a questionnaire distributed to learn how to act shopping affect Internet marketing strategies and trends. With this study, the impact on consumer purchasing decisions can have a better understanding of the factors, but also provide the basis for marketing Planning staff and future researchers, hereby the purpose of this study are summarized as follows:
1. Discussion and analysis the relationship between mobile shopping and website interaction
2. Discussion and analysis the relationship between mobile shopping and customer behavior
3. Discussion and analysis the relationship between mobile shopping and mobile shopping website App (abbreviation: website App)
4. Discussion and analysis the relationship between and consumer behavior
5. Discussion and analysis the relationship between website interaction and website App
6. Discussion and analysis the relationship between consumer behavior and website App

According this study of motivation and purpose, the scope of this study are defined as follows:

i) In this study, using or have used mobile shopping for study object . And then through various mobile phone version of the shopping sites like Amazon, Pay-easy, Alibaba and Taobao, etc. to verify the results.

ii) This study object will be locked in Taiwan , includes different gender (male, female), age, occupation (office workers, students).
Literature review

Mobile shopping features cognitive

Mobile shopping biggest feature is "immediate action of" independent of time and place restrictions, which are not available in other shopping mode features. The scholars Clarke (2001) that the main characteristics of action shopping are the following: the ubiquitous characteristics (Ubiquity), convenience (Convenience), the positioning of (Localization), personal (Personalization); Tsalgatidou & Pitoura (2001) also pointed out that mobile commerce The purpose is to provide businesses and consumers through the use of mobile communications capabilities to gain access to benefits, the use of methods are the following: location of, usage, ubiquitous, personalized service.

Service quality is the focus of an individual industry focus, apart from a good performance, but allow consumers spending again to buy, is the industry's expectations. Different service types may produce important for users of service quality big impact, service patterns to establish traditional service or service personnel to service point touch user-based, user feedback, then through these service locations or service personnel to communicate. The services offered on the Internet is interaction between people and machines, not the usual services to people face to face way to provide services. At this time, Internet users and service providers will not be in direct contact with staff face to face, such as the user does not know the service provider personnel deportment, expression and attitude (Novak.1996). Li. Tan & Xie (2002) once SERVQUAL basis, in accordance with the characteristics of different industries to modify, develop six Unlike SERVQUAL service quality dimensions to measure the commercial activity on the Internet, namely reliability (reliability), assurance (assurance), empathy (empathy), tangibility (tangible), reactive (responsiveness) and information quality (Quality of Information).

Currently Shopping by smartphone environment, companies find that many sites are emphasized in the integrity of the product types, shopping transaction security considerations, and the use of new IT technologies and web design, to attract the attention of consumers; But most website marketing companies in this process, but ignored the Internet is not a major consumer shopping channels throughout the shopping process, there are still a lot of influence consumer purchasing decisions. Based on the above literature we have established the structure of the network environment, the structure of the research network environment including "Searching convenience" means consumers unlimited time and space to collect product information via smart phones on the network; "Transaction Security" means the consumer's personal information, such as credit card numbers, mobile shopping in the security process of transferring data and transaction processes; "convenience" means online shopping allows consumers to visit the online store at any time, can also be reduce transportation and parking problems, and pay the bill eliminating waiting time consuming and shopping journey; this study attempts to explore how the network environment affect consumer online shopping wishes.
Website interaction

As the network technology is mature, offers many interactive communication interfaces (eg: e-mail, on-line chat and video conference etc.), people by linking networks, and corporate bodies for dialogue, so that enterprises can get the customer's personal information, such as special needs and evaluation of feedback information, and use this information to integrate into other businesses and increase jobs operating efficiency and performance, so you can identify strategic advantage, then its products and services customization; may develop long-term customer relationships to increase customer loyalty, reduce brand conversion, and increase cross-selling opportunities. Many scholars began to notice this new media that interactive computer will be the main advantage of this media, Stewart & Pavlou (2002) believe that the reason why compared to other online media power of the media to the big, because it can do more than other traditional media more interactive activities, so many studies on the interactive website in the late 1990s began to ferment.

Consumer shopping behavior characteristics

Society has been the producer -oriented era, the era of the evolution of marketing to market consumer-oriented, so the consumer psychology for a variety of markets will have an impact. Supplier for manufacturers in terms of who can make the maximum to meet the needs of consumers and their consumption behavior master, who will be able to get the maximum profit. Therefore, the main purpose of consumer buying behavior analysis is to understand the target market, consumer behavior, based on the characteristics and trends in the market as a managed basis. Consumer buying behavior is an interdisciplinary field integrated (multidisciplinary) Disciplines, including its structure and concepts of sociology, psychology, economics and marketing science and other fields. Therefore, many scholars from different perspectives define consumer behavior. Pratt (1974) considered "consumer purchase behavior " means " the decision to purchase the action, in other words by cash or check is required to exchange goods or services." Walters (1978) suggested that " consumer behavior " is " when people buy and use products and services, all relevant decisions behavior." Engel & Blackwell (1990) considers consumer behavior must be added " the decision-making process " and therefore will be defined as "individual direct access to and use of economic goods or services of behavior, including guidance and decided to various behavior whom the decision-making process." Seen, consumer behavior is that consumers buy and use the product or service to enjoy a dynamic and continuous process, and consumers to buy the product was not the purpose of a commercial order, but the order to satisfy themselves or their family needs. While consumers in the purchase process will involve the collection of information, evaluation, and product purchase, use, handling and service. Therefore, the study of "consumer behavior " that is, to understand how consumers in their money, time and precision force and consumer spending is on the relevant conduct, including who is buying (who)? Buy what things (what)? Why buy (why)? How to Buy (how)? When to buy (when)? Where to buy
(where)? How often buy time (How long)? (Kotler, 1994). Summing up the above, consumer behavior is human behavior one level, many scholars in different angles to explore consumer behavior, and the scholars of consumer behavior is defined not do the same, but can be found in consumer behavior is a contains all the relevant in purchase decision process behavior.

**Consumer shopping behavior**

The theory of reasoned action (TRA), developed by Martin Fishbein and Icek Ajzen, posits that individual behaviour is driven by behavioural intentions. The theory received particular attention in the field of consumer behaviour as it provides a simple tool to identify possibilities to change customers’ behaviour when using an innovation. To this regard, the actual use of an innovation is determined by the individual’s behavioural intention to use it. The model resulting from their research is visualised in and consist of the following components:

Starting from the behavioural intentions, these include the functions of an individual’s attitude towards the behaviour and the subjective norm surrounding the performance of the behaviour. Accordingly, the actual use of an innovation is determined by the individual’s behavioural intention to use it. The Attitude towards an act or a behaviour are the individual’s positive or negative feelings about performing a behaviour, determined through an assessment of one’s beliefs. Subjective norm is defined as an individual’s perception of whether people important to the individual think the behaviours should be performed. “To put the definition into simple terms: a person’s volitional (voluntary) behaviour is predicted by his/her attitude toward that behaviour and how he/she thinks other people would view them if they performed the behaviour. A person’s attitude, combined with subjective norms, forms his/her behavioral intention”.

**Mobile shopping website App loyalty**

Reichheld et al. (2000) concluded that the application in the "real business environment," the brand loyalty concepts, migrated to the "Network Environment" on still apply. Fan Zheng Qiang (2000), "shopping website loyalty" should not be considered only on the network duplicate shopping behavior, we should focus consumers repeated log in a shopping website.

In the "Web site loyalty" aspect, Wu Qi Minh, Fan Zheng Qiang (2000), "Network loyalty" Consumers should not be considered only on the network duplicate shopping behavior, consumers should stop repeating the behavior of the measure included. The "site loyalty" should be divided into special "on the station loyalty" and "shopping loyalty" two parts. Wu Zhaoming (2006) Web site users the "attitude", "trust" and other cognitive to the "promotional activity level" and "subjective norm", the website will affect users' shopping loyalty. "Day (1969) believes that: customer loyalty but its duration is not within the customer to buy a product off behavior. In the environment Internet, customers can tap trade
looking to the desired product or service, you can light trading to get tourists, and there may
be a light trading liquidity to lose customers, and therefore, in a virtual environment,
companies want the Internet on the road to create customer loyalty is not easy for. Network
of loyalty, is the conversion of the physical environment after modification by the loyalty to
the network environment, the basic definition is not dissimilar to the. Gillespie, Oliver &
Thiel (1999) for network users were asked the three indicators: the number of times to visit
the site within a certain period of time, every time to stay to visit the site each visit web
browsing information depth. Wendan Song (2002) also made because of the attitude of
loyalty on the site will not result in a lower environment differ, so the loyalty measure
attitudes surface is used directly for the network environment.

Sun Meijun (2000) has explored the factors that affect the network’s loyalty, and
loyalty will be divided into the station and shopping loyalty loyalty of two parts, the literature
that site users ‘loyalty on the station,’ ”will be the site use those of the “ attitude ”to the site
of their cognitive “ promotional activity level ” and “ subjective norm ” directly affected. Wu
Zhaoming, Fan Zheng Qiang (2000), Wu Zhaoming (2004) considered the last ”customer
loyalty ” in the literature, based on the consumer’s shopping behavior is repeated or attitudes,
as measured loyalty connotation. But "Network loyalty " should not only consider the
consumer shopping behavior is repeated on the site is, the consumer should be repeated on
the station into the behavior of measure. Because profit foundation website does not only
come from the consumer’s shopping behavior, consumers stand on the number of times can
also be used to provide a basis for its advertising billing published. Therefore advocate:
"Network loyalty " should be divided into special " on the station loyalty " and " shopping
loyalty " two parts. Thus, " the website loyalty " should be divided into special " on the
station loyalty " and " shopping loyalty " two parts. Wu Zhaoming (2006) Web site users the
" attitude ", " trust" and other cognitive to the " promotional activity level " and " subjective
norm " , the website will affect users ‘shopping loyalty. ”

Methodology

Research Hypothesis

Based on the research questions and conceptual framework, developed out of the research
hypotheses to mobile shopping features, website interaction, consumer shopping behavior
and shopping website App loyalty - the mutual relations between Mobile App variables, this
study is assumed to be six, the first point to explore the mobile shopping characteristics and
website interaction of relevance; second action point to explore the mobile shopping
characteristics and consumer shopping behavior influence; affect third point to explore the
mobile shopping characteristics and website App loyalty of the relationship; fourth point to
explore the relationship between the website interactivity and consumer shopping behavior;
fifth poin to explore the website interaction and mobile shopping App loyalty of the
relationship; sixth point to explore the consumer shopping behavior and mobile shopping
website App of the relationship.

1. The first point to explore the relationship between mobile shopping features and website interaction:

Simple ways you can take action on this information is to create a streamlined mobile checkout process to avoid common pitfalls like shopping cart abandonment. Using a mobile analytics tool like Localytics, you can use funnel analysis to see areas of your app where consumers drop off from converting. This kind of knowledge can help you improve the mobile shopping experience for your customers. The most important of mobile shopping characteristics is it is not limited by space or place. Consumer can share information to others immediately. Therefore propose the following hypothesis:

**H1: Website interaction will be higher when there is a higher mobile shopping characteristics.**

2. The second point to explore the relationship between mobile shopping features and consumer shopping behavior:

Consumers love coupons. According to Emarketer, the number of US mobile coupon users will rise from 12.3 million in 2010 to 53.2 million in 2014. If you reward your customers with coupons, they’ll have more incentive to stay engaged with your app. People want to feel rewarded when they use your app. If you see them really engaging with your app, whether they’re using it every day, checking in, or tweeting, then reward them with a coupon, letting them know you appreciate their commitment to your app. GFK states that 44% of advanced device owners are looking for coupon opportunities on their devices and 17% have already purchased a product via mobile platforms. People are constantly looking for discounts, and if these discounts or rewards are in the palm of their hand, why wouldn’t they use them? Therefore propose the following hypothesis:

**H2 : Consumer shopping behavior will be higher when there is a higher mobile shopping characteristics.**

3. The third point to explore the relationship between mobile shopping features and mobile shopping website App loyalty:

Unlike traditional shopping store, mobile shopping improve the shortcomings of traditional shops and its limitations, such shopping patterns enable consumers to get the product in anywhere around the world, saving shopping time and physical consuming; may provide for individual consumers personalized service, combined with efficient network path, App and other functions, the product is delivered to consumers in the shortest possible time; it will change the traditional shopping habits of consumers using mobile shopping, in order to reduce traffic inconvenience traditional shopping issues such action is to obtain goods shopping channels and ways to best meet different needs of consumers. Therefore propose the following hypothesis:

**H3 : Mobile shopping website App loyalty will be higher when there is a higher mobile shopping characteristics.**
4. The fourth point to explore the relationship between website interaction and consumer shopping behavior:

Peppers & Rogers made one marketing in 1993 (The one to one marketing concept, the main emphasis when companies interact with customers, it is necessary for different customers and strive to give the service meets their individual needs. Pair network marketing connotation of the road, that is the use of Internet far and wide and features immediate reaction to attract, maintain and strengthen relationships with customers between. The ninth GVU Center survey of Internet users conducted in 1998 in the found that 64.2% of Internet users conduct online shopping reason is to save time, consumers have any questions and comments on the online auctioneer can communicate through the site message system set up, consumers were able to auction talking to each other, and immediately convey the message and therefore proposed the following hypothesis:

**H4**: Consumer shopping behavior will be higher when there is a higher website interaction

5. The fifth point to explore the relationship between website interaction and mobile shopping website App loyalty:

Community Website operators can further cohesion between the opinions and attitudes of users to form word of mouth effect, positive interaction between users through the formation of a sense of trust and understanding, not only to meet the members' sense of belonging to the community, but also the establishment of community members for the site an important factor in loyalty. Therefore propose the following hypothesis:

**H5**: Mobile shopping website App loyalty will be higher when there is a higher website interaction

6. The sixth point to explore the relationship between consumer behavior and mobile shopping website App loyalty:

In Wu Zhao Minh (2006) study also found that the strongest factor affecting the site users' shopping loyalty, but attitude; followed by promotional activity level; then followed by product capabilities, "followed by" trust "subjective norm", the last is the power of information "and" product delivery capability. "Finally, this study found that: In addition to the Web site allows users to generate good website attitude and stop organizing promotional activities to attract users in a timely manner, the users of the site yet to focus on the "trust" level. If the site allows users to find a trustworthy and reliable site, its methods can be improved by providing shopping mechanism, the website will be willing to take on commitments transaction process negligence; therefore consumer loyalty for the site level, so impact on consumer shopping behavior. Therefore propose the following hypothesis:

**H6**: Mobile shopping website App loyalty will be higher when there is a higher consumer behavior
### Questionnaire Design

3.1 Define and measure the research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Question topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile shopping characteristic</td>
<td>Immediately</td>
<td>1. In your opinion, mobile shopping to provide adequate and timely update of the information content.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. In your opinion, mobile shopping is not control by space and time, anytime, anywhere can find the desired product or service.</td>
</tr>
<tr>
<td>Search convenience</td>
<td>1-3</td>
<td>3. In your opinion, the website has a strong search capabilities, easy to find the desired product</td>
</tr>
<tr>
<td></td>
<td>1-4</td>
<td>4. In your opinion, product classification in mobile shopping website are very rich and detail</td>
</tr>
<tr>
<td>Customization</td>
<td>1-5</td>
<td>5. In your opinion, mobile shopping can offer personalized service.</td>
</tr>
<tr>
<td></td>
<td>1-6</td>
<td>6. In your opinion, mobile shopping need to provide to customers a forum to exchange views with each other.</td>
</tr>
<tr>
<td></td>
<td>1-7</td>
<td>7. In your opinion, mobile shopping often concern me through online information</td>
</tr>
<tr>
<td>Communication</td>
<td>2-8</td>
<td>8. In your opinion, shopping website App version provides users with two-way communication channel</td>
</tr>
<tr>
<td></td>
<td>2-9</td>
<td>9. In your opinion, shopping website App version give you the opportunity to reply to comments and reactions</td>
</tr>
<tr>
<td></td>
<td>2-10</td>
<td>10. In your opinion, through shopping website mobile version you can exchange information with other users</td>
</tr>
<tr>
<td>Controlled</td>
<td>2-12</td>
<td>12. In your opinion, you believe in the use of mobile shopping, feel that they have considerable autonomy</td>
</tr>
<tr>
<td></td>
<td>2-13</td>
<td>13. In your opinion, when using the shopping website App, I can freely choose to look at the contents within the purview</td>
</tr>
<tr>
<td></td>
<td>2-14</td>
<td>14. In your opinion, when using the shopping website App, you can easily find feature or page</td>
</tr>
</tbody>
</table>
### Consumers shopping behavior

| Feedback | 2-15 | 15. In your opinion, when you need help, the shopping website App will quickly respond to my request  
| 2-16 | 16. In your opinion, when using the shopping website App, you can quickly get the information you want  
| 2-17 | 17. In your opinion, the shopping website App can deal input data quickly  

| Promotions activities | 3-18 | 18. In your opinion, the shopping website App is rich promotional activities  
| 3-19 | 19. In your opinion, the shopping website App offers discounts (eg: bonus points) and more  
| 3-20 | 20. In your opinion, because the shopping website App's promotional activities attract me to use mobile shopping action.  

| Subjective scale | 3-21 | 21. In your opinion, when you determine which shopping website App to shop, you will be affected by the views of others and change  

| Shopping experience | 3-22 | 22. In your opinion, you will trade on a shopping website App if you have experience for it  

| Behavioral loyalty | 4-23 | 23. In your opinion, the next one will be at the same shopping website to trade. (Habitual)  
| 4-24 | 24. In your opinion, you are not because other shopping sites concessions to attract and change  

| Attitudinal loyalty | 4-25 | 25. In your opinion, when you have a demand, the first priority in a familiar the shopping website for chosen  
| 4-26 | 26. In your opinion, you are willing to recommend others to trade in you familiar the shopping website  

### Website App Loyalty

<table>
<thead>
<tr>
<th>The questionnaire recycle and analysis</th>
</tr>
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<tbody>
<tr>
<td>After finishing the send out questionnaires, if all options in the questionnaire, only a single answer to any scale or omissions in any portion of respondents who carried out without blank, it will be regarded as invalid questionnaires. In this study, a total of 300 questionnaires were sent questionnaires, 300 responses were valid questionnaires shave 31 copies, so the total number of copies of valid questionnaires 269, its questionnaire response rate, as shown in Table 3.1.</td>
</tr>
</tbody>
</table>
Table 3.2 The questionnaire recycle

<table>
<thead>
<tr>
<th>Sample recycle</th>
<th>Recycle rate</th>
<th>Valid questionnaires</th>
<th>Invalid questionnaires</th>
<th>Valid questionnaires rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>100%</td>
<td>269</td>
<td>31</td>
<td>89.66%</td>
</tr>
</tbody>
</table>

Validity and Reliability

This study used confirmatory factor analysis, CFA for the study to measure the share read mode analysis (CFA) through confirmatory factor method to test your fill concept has sufficient convergent validity. This study proposes two conditions are met convergent validity: the coefficient (1) individual variables between its proprietary constructs must exceed 0.5 above (Hildebrandt, 1991); t test value between their exclusive constructs (2) individual variables must be marked, that the value of 1.96 t standard (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988). From all of this study is equivalent to a standardized factor loading parameters, factor loadings of each variable is quite high, t values greater than 1.96 was significant, SMC values were close to or more than 0.5, indicating the theoretical constructs of the study in line with the construct validity requirements.

A measure of the reliability of the tool has to be able to obtain stable measurement results under different conditions. Commonly used measure of reliability tools are mainly three types, stability, contour and consistency. Likert scale currently used to test the reliability of the method is the scale Cronbach's coefficient alpha (α), its value is the same concept used to measure the consistency of the next project. Generally, expressed confidence measure is the subject of an acceptable, if α values greater than 0.90 indicates the reliability measure is the subject of very good when α values greater than 0.70; If α value of less than 0.50 must re-examine whether the test tool or program wrong. In addition, the report of the AMOS output, the data can be squared multiple correlation of individual disguised as a reliability index. SMC index between 0 and 1, Kline (1998) considered SMC reliability index above 0.5 can be accepted, the higher the number the better. SMC said that this observation is generally higher variable suitable as measurement tools, the higher the degree of linear correlation, the higher reliability. Cronbach'α value of this study were greater than 0.7, and the average value was greater than 0.5; reliability index can be seen in this study are good.

Results

Structural equation model fitness evaluation

In this study, the model's overall goodness of fit is rated informed by Table 4.11, chi-square test value of X2 and its degrees of freedom (df) ratio of 2.145, less than 3 standard, which means that the data and model compatibility; goodness of fit index (GFI) is 0.957
greater than 0.9 standard, showing the number of variables and covariates theoretical model can explain the observed high degree of variation in the number of variables and common data, this model has a good degree of adaptation; adjusted goodness of fit index (AGFI) 0.924 comply with more than 0.8 standard, the display mode has a good fit; residual rms (RMR) was 0.009 less than 0.05 standard display mode can be accepted; asymptotic root mean square error (RMSEA) is 0.055 very close to less than the required 0.05, falling between 0.05 to 0.06, with a theoretical model can be regarded as a good fit degrees.

In appreciation adaptation measure, the specification fit index (NFI) is 0.941 comply with the requirements of more than 0.9, which means that the ideal model fit; comparative fit index (CFI) is greater than 0.972 comply with the requirements of 0.95, indicating good model fit ; appreciation fit index (IFI) request shall be deemed to be greater than 0.9 has the ideal fit, IFI this study was 0.972 display modes have a good fit; relative fit index (RFI) requirements must be greater than 0.9 indicates an acceptable mode , greater than 0.95 indicates considerable adaptation mode (Hu & Bentler, 1999), RFI 0.912 of this study is greater than the required 0.9, the said pattern is acceptable.

In simple effective adaptation measure, the simple efficiency specifications fit index (PNFI) are amended NFI, the scholars have suggested mode if not done when compared PNFI values greater than 0.5 can be taken as a model by whether or not the standard, PNFI of this study is 0.633 Show exceed this standard, each degree of freedom in the table model can achieve proper fit degrees; Jane efficiency benign adaptation index (PGFI) between 0 and 1, the higher the value, the more simple table model effect, as if mode is the accepted standard, generally PGFI values greater than 0.5 are taken as the standard, PGFI of this study is greater than 0.537 meets the requirements of 0.5, which means that an acceptable model fit.

The relationship between mobile shopping characteristic and website interaction:

Based on the above test results for each hypothesis, the overall pattern of the path of this study is shown in Figure 4.1
Conclusion

Result

Table 5.1 Hypothesis testing verification results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Website interaction will be higher when there is a higher mobile</td>
<td>Support</td>
</tr>
<tr>
<td>shopping characteristics</td>
<td></td>
</tr>
<tr>
<td>H2: Consumer shopping behavior will be higher when there is a higher</td>
<td>Support</td>
</tr>
<tr>
<td>mobile shopping characteristics</td>
<td></td>
</tr>
<tr>
<td>H3: Website App loyalty will be higher when there is a higher mobile</td>
<td>Not</td>
</tr>
<tr>
<td>shopping characteristics</td>
<td>supported</td>
</tr>
<tr>
<td>H4: Consumer shopping behavior will be higher when there is a higher</td>
<td>Support</td>
</tr>
<tr>
<td>website interaction</td>
<td></td>
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<tr>
<td>H5: Website App loyalty will be higher when there is a higher website</td>
<td>Support</td>
</tr>
<tr>
<td>interaction</td>
<td></td>
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<tr>
<td>H6: Website App loyalty will be higher when there is a higher Consumer</td>
<td>Support</td>
</tr>
<tr>
<td>shopping Behavior</td>
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</tbody>
</table>

Discussion of research

The hypothesis H3 has proved that the higher mobile shopping maybe will not direct influence shopping website App loyalty. It proves one thing, when smartphones become the largest pass way on online shopping market, mobile shopping will only impact consumers to change shopping patterns, from online shopping to mobile shopping. Impacting to shopping website App loyalty is 2 variable, website interaction and consumer behavior. Thus, according to the results of this study and inference, a successful mobile shopping website App rely on its own business model and structure of the website to go home shopping operators to reach consumers through the website interactive and consumer behavior two variables, to understand consumer mentality.

Marketing meanings

In the framework of this study, based on empirical results and findings, to be explored in the study results implied meaning of marketing for online shopping App operators develop their marketing strategies home.

i) Proper use of mobile shopping features can improve the site interactive, consumer behavior, from online shopping to enhance loyalty App

By the remarkable results of this study, the characteristics of mobile shopping website interactivity and consumer behavior positively significantly affect the relationship. Universality smartphone consumers in the search for information or help with corporate communications will not be limited in time and space, and thus stimulate the willingness of
consumers to buy more. Enterprises are expected to reach business goals, through the website interactivity and consumer behavior, to attract consumers in the online shopping App transactions.

ii) Efficiency of the shopping website willingness to enhance consumer shopping
One of the actions shopping feature is customizable through the interactive website, entrepreneurs can grasp the main fees range of products which consumer buying, so entrepreneurs can take the initiative to sell to consumers through smartphones, stimulate the potential they buy. In marketing view, the most critical is providing consumer products which they need, rather than how much product to the consumer. Through interactive website, entrepreneurs can grasp these messages, instant gratification stimulate consumer demand or the number of potential consumers to buy.

iii) From a consumer behavior variables, to grasp the mentality of consumers shopping
Cognition in general, whether it is a traditional store shopping or online shopping, promotional activities will affect consumer purchase intention. Therefore, entrepreneurs can from this point to reach consumers, if consumers feel well; consumers will choose your online shopping App transactions. The site for a long time will become consumers using App shopping habits. While consumers may be affected by other factors change to buy online shopping App, but habits are difficult to change things! Therefore, this habit will enhance consumer loyalty to a particular site's shopping App.

Limitations of the study
1) Study Area
Due to resource constraints and geographic area of the city, this study is limited to Internet users in Taiwan to make sample surveys, and Internet popularity in Taiwan cities and counties still decibel uneven; therefore not fully representative of other regions or countries only consumer characteristics. In addition, because of the time, this study can only be issued 300 questionnaires were analyzed using SPSS statistical system; the sample size will affect more analysis of the results. Therefore, this research is to study the sample is not large enough; the verification result may not reach 100% of the requirements.

2) Study object
The subjects had to adopt mobile shopping as interviews with the object. But the mobile shopping for Taiwan Fairly is still new topic. In order to contribute to the results of the study, presented to the respondents in this study, if you are not using excessive actions shopping, online shopping experience to be able to answer the questionnaire. Accordingly, the results of this study, although there between variables (except the hypothesis H3) was significantly associated with, but not high, there are two "***", even is one "*", instead of three "***". In addition, from the sample, women accounted for half of the respondents (a total of 171 women, 64%; total of 98 males, 36%), and therefore, the results of this study can not show a difference of gender, because men and women have different consumption characteristics.
However, according to many surveys, shopping section, women would have loved shopping, spending much more often than men, so this study infer that the sample is fit with actual market trends.

3) Research Tools
The five-point Likert scale study conducted a questionnaire to collect table, respondents to the subjective memory by key way of doing Questionnaire respondents, the questionnaire distributed approach to network online questionnaire conducted, although Hoffman and Novak (1996) pointed out that when measuring the behavior of Internet surfers, participants received a questionnaire in the network environment to answer a higher reliability; but still intended to be misunderstood problems arising case there will still be a certain degree of variation.

4) Structural variables
In the overall study architecture, there are many variables that affect mobile shopping features, website interaction, consumer shopping behavior and website App loyalty ...but there are many other relevant variables could be explored, such as demographic variables, website design, security etc. It should be added to other variables in order to more complete explanation capabilities.

Reference
Wheetley Company.


57. Mobile Websites (Mobisites), Mobile Web Standards and Mobile SEM 2010
