



Determinants of Customer Perceptions toward Online Shopping Via Facebook: Malaysian Case Studies

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ABSTRACT

New business practice through the Internet has adopted by the retailers, and has been generally known as e-commerce. Sellers and consumers can make a business deal through the Internet without face-to-face communication. Widespread of E-commerce has gross up the numbers of consumers to shop online, it's become a new trend around the world. The retailers have profited through this new channel and consumer has improved their lifestyle by using online services to purchase products. The purpose of this research is to examine determinants (e.g., perceived usefulness, perceived ease of use, perceived risk and perceived enjoyment) of customer perceptions toward online purchasing via Facebook (F-Commerce) among Asian region. This study makes some contributions, (1) this study tests determinants of customer perception of online shopping through F-Commerce to provide implications for Internet retailing and (2) provides ideas for online marketing strategy

Keywords: Facebook, f-commerce, purchase, consumers.

1. INTRODUCTION

In this new era, almost every family has at least one electronic device that could use for Internet connection. According to the Internet World Stat, in the year 2010 Malaysians spent about MYR1.8 billion for online shopping. New business practice through the Internet has adopted by the retailers, and has been generally known as e-commerce. Sellers and consumers can make a business deal through the Internet without face-to-face communication. Widespread of E-commerce has gross up the numbers of consumers to shop online, it become a new trend around the world including Malaysia. An electronic peer-to-peer communication has become one of important phenomena in aligning the rapid growth of the Internet (De Bryun and Lilien, 2004). Internet access is a preferable method for communication, people apply it wisely into social networks which are much appealing has replaced the typical phone call or text messages.

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Facebook is one of many famous social networks which not only allows users to keep contact with friends and family, but also sharing their photos, posting their thoughts as status, gathering product information, making online purchases and browsing for enjoyment. Many Facebook users took the opportunity to use it as the channel to do business, hence, appeared the trend of Facebook Commerce or F-Commerce. For this study, factors that affecting customer's perceptions on Facebook Commerce will be identified by using the Technology Acceptance Model as main method, which included, perceived enjoyment, perceived ease of use, perceived usefulness, and perceived risk. Meanwhile, socioeconomic characteristics will be included in consideration due to possibility of affecting customers on decision-making.

This study was conducted because limited of study on consumer behavior focus online shopping in Malaysia (Haque and Khatibi, 2006).

1.1 Facebook in Malaysia

Facebook is well known to people. It is a hot place to surf when one's on the line. People update new status, post latest wall photo, share fantastic links and videos, and keep contact with friends by leaving comments. Other than that, Facebook users can share any interesting information by supported tools or applications. For example, YouTube channel is equivalent of a Facebook profile; online sellers can post up their products video or share the video from YouTube to support their product description. The watched amount of online videos is traceable and could attract the "long-tail" viewers (Eric Tsai, 2010). Facebook is in the second rank for traffic generation, only after Google. It was created in February 2004 now has over 600 Million users, logging in on average of four times per day. Yet the number of Facebook active users is still increasing day by day, this proves the potential of Facebook Commerce. Estimate by Social Bakers, around 10-23 million people in Malaysia have their own Facebook account and it puts Malaysia to be number 16 in Global Facebook Rank due to March 2011. The concept of "Facebook marketing" has gained in strength along by the trend of social network (Brad, 2011). An "international business" can be built without any start-up costs by using Facebook account.

Normally there are two options for the F-Commerce; either creates a professional business page for your retailer store or just build a creditable network through your existing Facebook personal account or using both at the same time to run your business. Invitations can be sent to his/her friends and other people in the network or through the opened page. Using Facebook social plug-in allows users to click a "like" on posts and check the posts that have been liked by friends. A survey conducted by Vendor Shop Social, 62% of the people that like a page would buy from it. When a potential customer likes or share the page, the post will appear on his/her Facebook wall. Assume a Facebook user has 100 friends in list; indirectly the page may spread around to another 100 potential customers.

1.2 E-Commerce in Malaysia

With a rapid change and growth of the internet technologies, E-commerce in Malaysia has various supports from Malaysian government and private sectors. Internet World Stat reported that Internet user growth rates in Malaysia from year 2000 to 2010 is an increased trend with 356.8 percent. In year 1995, Malaysia spent MYR5 billion on building Multimedia Super Corridor (MSC) project. Its main focus is to help others company in the world to examine the limitation of the technologies and be prepared for the future (Pillai S, 2000). As a result, more development and implementation in multimedia aspects also allow businesspersons in Malaysia to be more competitive in the worldwide marketplace by increasing the usage of multimedia services and products into business activities. However, Asians more prefer to the traditional shopping system rather than online shopping due to culture and traditional thinking. Culture has directly influenced consumer purchase behavior in Malaysia. Although a lot of implications of Malaysia's E-commerce, but in fact it is still a low demand rate for Malaysians that buy through online. The 4th Malaysia Internet User Report shows that Malaysians people are very inquisitive about this new fresh e-market but are deferring the transactions due to concerns over internet and credit card security, little broadband diffusion rate and the absence of local purchaser protection by laws (The Economist, 2006).

1.3 Problems Statement

Some researcher agreed that the internet advertising could bring benefits to the online retailers and consumers. With a directly connection between buyers and sellers through internet services, yet Facebook supports the interactivity functions with chat box and message box. Both sides can send a private message or comment on the comment box to bring forward an effective communication (Bloch et al, 1996). Facebook applications are supporting a fully digital information exchange between them; the online retailers can upload the photo into photo album in Facebook with some description and URL links about the products. Then the Facebook users who interested on the product or service can comment at the page to ask for more details. The pages can be update on the spot to provide latest service, online retailers able to reply to potential customers' request or questions anytime and anywhere. Compare to traditional store, online service could be more efficiency even the retailer in offline status.

Malaysians still in tend to be "followers" in F-Commerce; they need a guidance to deal with e-commerce services. However, we have to know that online business could help to cost reduction for start-up and operation. Other than that, this helps to cut off indirect distribution since it is direct go through the consumers after the goods received from suppliers. The problems are we have to understand perceptions of consumers toward online purchasing activities in order to gain the advantages. A study from Hussin et al. (2004), stated most of the

people vacillated to buy through online, the confident level will make people shifted to other market rather than choose the electronic market. Three issues conducted the failures of common scenario in an electronic commerce, such as lack of understanding, safety issues and confidentiality of personal data, and lack of business information. Further discuss about lack of understanding, Asian people like to use touch sense before purchase one product or service, and through internet they only could read through the description and can't get know how the quality of products. Second, lack of security and privacy of personal information, sometimes security of Facebook being argued, it may hack by hacker and all the data might be stealing to do some illegal matters. Demographic also plays an important role in F-commerce market, age, cultures, and education levels are included in this segmentation. Lastly is because of distrust of retailer, lack of the business information or the way retailer responds on questions will cause consumers to have the different impression on that online retailer. These issues become important factors to be concern by online retailers in order to eliminate the gap with the potential customers. According to Haque et al (2006), he said that the Internet shopping maintain stagnant at its first stage in Malaysia, with a lack of knowledge about consumers' perception in applying this new shopping method and determinants of which can affect their attitudes and intentions.

1.4 Research Objective

The following research questions are proposed for this study:

1. To investigate the adoption of Technology Acceptance Model which included perceived usefulness, perceived ease of use, perceive risk, and perceived enjoyment do significant effect to Malaysian Facebook users on F-Commerce.
2. To identify the major factors that greater associated with customer's intentions to do online shopping on Facebook.

1.5 Research Questions

The following research questions are proposed for this study:

1. Is the adoption of Technology Acceptance Model Consist of perceived usefulness, perceived ease of use, perceive risk, and perceived enjoyment do significant effect to Malaysian Facebook users on F-Commerce?
2. What are the factors that greater associated with customer's intentions to do online shopping on Facebook?

1.6 Scope of Study

The study was conducted based on 500 respondent mostly from major states in Malaysia that contribute to online traffic of F-Commerce such as Kuala Lumpur, Selangor, Penang, Johor, Sabah and Sarawak.

- Targeted current Facebook users who did or planning to do online purchasing.
- Major target respondents would be Facebook users aged between 18-35 years old since as statistics studied show young adults in Malaysia are most active in the social networking.

2. LITERATURE REVIEW

2.1 Introduction

F-Commerce named to represent Electronic commercial by Facebook, a well-known social network. In this century, many people like to use Facebook to manage and promote their business in order to spread the promotion in a very fast speed.

Technology Acceptance Model (TAM) by Davis et al (1989) is the main reference for this study; it includes 4 divisions included perceived of risk, perceived ease of use, perceived useful and perceived enjoyment. These elements are influence by the reasonable actions of customer's behavior.

Zwass (1996) defined that started of website and the internet in 1993, has been crucial point to the E-commerce activities. Yet E-commerce is born globally with less political barriers and geographic barriers into this network environment (OECD, 1997). While in this 21st century, almost the entire household owns at least one computer or mobile to connect through Internet. Hence, usage of IT as e-commerce has become widespread in this global market, latest trend would be social networking websites.

Li & Zhang (2002) identified that purchasing online has become the 3rd best popular internet activity following by e-mail and web-browsing. Article from MVF Global stated that with 14 billion Malaysian visited to view each month on page site of Facebook makes it as the top rank of site was visited in Malaysia ; 73.9% it reach of exclusive visitors as a percentage of the Internet population. The Facebook users in Malaysia mostly more interested on fitness, beauty, food, people, drink, society, arts, music, entertainment such as games and online video. Focus on these kinds of businesses will bring up more profitable opportunities for new online retailers. E-commerce could run in 24 hours a day, even the page

owner is offline but still the business is on-going with customer self ordering by leaving instant message.

Nowadays, consumers are now able to access to Internet from other devices such as mobile phones instead of personal computers. Survey by MVF Global stated that more than five million of Malaysian people get access to the internet right away from their mobile phones and they would suggest that Facebook and Twitter are an example that receiving their share of mobile users ; probably the most mobile user friendly sites. Furthermore, a survey conducted by TNS proved mobile users spent about 2.2 hours on e-mail and 3.1 hours on social networking. Therefore, it is driving the online retailers to move their business toward Facebook better than keep sending message to customers' mail box yet treats as spam. At least, Facebook users have the rights to untagged themselves from the photo or status if they not interested on the promotion.

According to Chua et al.(2006), group of products being classified into two groups, one is group of product could display by digitally communicable information, people not expects for a touch on products before purchasing and this kind of products are ideally suited for online business. The second group of product as "experience products", consumers prefer in senses where they want to touch, see, and try the products before purchasing. Online shopping behavior has a direct impact toward growth of one's online business, it is indications to the process of online purchasing of goods or services. Typically, there are few steps of process to consider when consumers go for online shopping. Liang and Lai (2000) said that a potential consumers will recognize a need before they go to Internet for further related-information. When they attracted by the information about the product or service that could fulfill their common needs, they will continue with evaluation. Choose the best fits and finally a transaction is conducted.

2.2 Technology Acceptance Model (TAM)

To improve the marketing strategies, online retailers have to understanding how customers behave in the process. An officially definition of consumer behavior is "The study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society," (Lars, 2010). Further this research, researcher found out a suitable theory that could lead this study to a deeply understanding. The theory named "Technology Acceptance Model" which conducted by Davis et al (1989) was resulting from the Theory of Reasoned Action (Dalhagen, 1997) showed by Figure 1 below where could be used to determine the online customer behavioural intention to do purchase decision making.

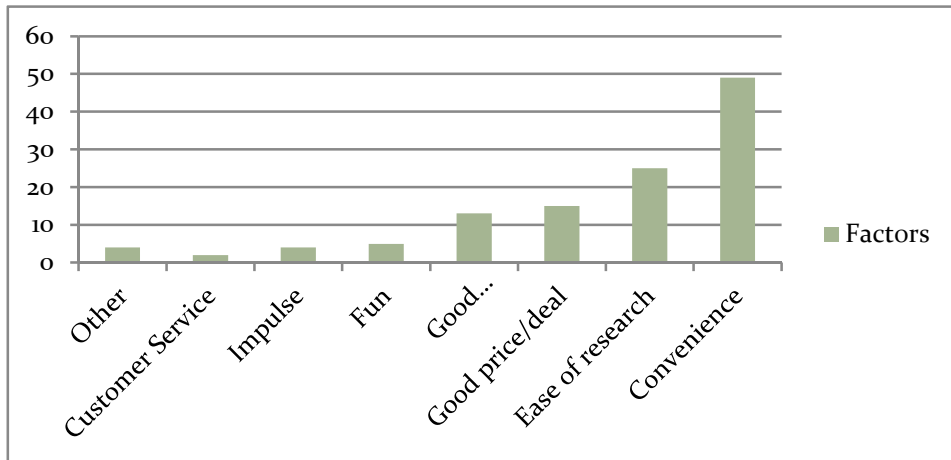


Figure 1: Theory of Reasoned Action

At the first, there were only two determinants conclude by Davis included “perceived usefulness” and “perceived ease to use”. In year 1992, another determinant added which is “perceived enjoyment” into TAM (Davis et al, 1992). In year 2003, Pavloy found out another element which is “perceived risk”; added it into TAM model as showing in Figure 2.

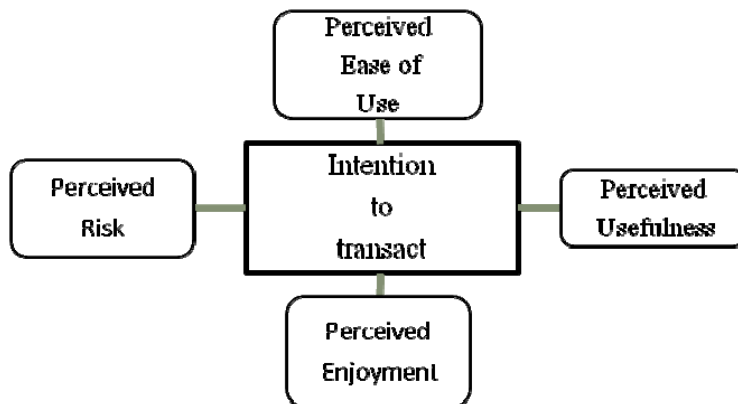


Figure 2: Integrating Perceived Risk with Technology Acceptance Model by Pavlon (2003)

A simple briefing about the elements before further for more researches. "Usefulness" defines the belief of online users that technology could enhance their performance and improve effectiveness of productivity. From customer perception it is related to the result regarding to the outcome of experiences. "Ease of use" is about the usage of technology will be free to effort by users. It does refer leading customers to the final outcome; they have freedom and the rights to search for information (Davis, 1989). "Enjoyment" is the outcome from the usage of technology, if it is fulfill with the expectations and make the process move smoothly, yet the performance costs may be predicted according to Davis et al (1992). "Risk" is possibility of loss and danger causes that the technology users willing to adopt during online purchase processes.

2.2.1 Perceived Usefulness

As shown in the Figure 1, most of the online shoppers choose to do online shopping rather than purchase from traditional store just because of convenience. Accessibility are the most influential aspect that inspires shoppers to do online transactions (Khatibi et al, 2006). The transaction in online perspectives, product display, ease of ordering and timely delivery play important role to bring convenience to consumers. Consumers able to do ordering through Facebook online store while Facebook-ing without step out from the house. Online stores are available to be access 24 hours a day with no holidays; this medium provides consumers a powerful alternative channel for purchasing with no location boundaries. Perceived usefulness becomes one of the factor that affects the numbers usage of Internet. Perceived usefulness defined as the positive intention to buy and the degree to which an individual observes that a new technology will augment or improve they performance (Chaffey et al., 2009). When one noticed the technology is useful to improve their performance, they will not hesitate to continue their works by using the electronic methods. Similarly, Perea et al (2004) said it completely engaged with the intention on online purchase, where the time also effort required learning about online method.

A statistic conducted by Lim Yung Hui (2010) showed that Facebook in Asia had two dominant age groups majority are "25 – 34" and "18 – 24". Normally users in developed countries those aged above 25, but the youthful "18 – 24" age group is dominant in Malaysia, Thailand, Vietnam, Sri Lanka, Philippines, India, Pakistan, Indonesia and Bangladesh. Thus, the researcher know that online shoppers among Malaysia are mostly younger generation. This is a good opportunity for online retailers to choose Facebook as their path to do online business. As we know, in this advance technology environment, younger generations are more expert in computing compare to last generations; most of them process a greater experience with internet since in a young age. They understand how miracle the internet could help them to explore the world with just one click (Hubona and Kennick, 1996).

Other than that, a study discovered that several factors could contribute to online shopping in term of convenience attributes. Those involved are average number of items per product menu listing, amount of links get into the site, amount and kinds of different shopping methods, and type of product lists (Lohse and Spiller, 1998).

Unlimited space to display image of products encourage wide range of products and services to be offering in online store. Customers will found out they could even purchase a Taiwan's product from Facebook based online store. More choices and reasonable prices that may not able to get from physical stores could get from online stores. We can believe that online shopping via Facebook could help online users to improve their living.

2.2.2 Perceived Ease of Use

According to David (1989), perceived ease of use defined as a person believes degree level used a particular system that would be free to effort, represent the nation that effort to limited resource that a person will assign to several activities. Focus groups in F-Commerce are those existing Facebook users, they should be familiar with the Facebook functions and they know how the online business works. It's always a useful social network for them to communicate and link with online stores in Facebook.

A difficulty use system is less expected to be perceived as convenient tools, when people not enjoying the facilities further lead to reduced consumption (Elliot & Fowell, 2000). Example if the order dispensation complicated and take time, customers might become unsatisfied and surrender to do online purchase (Lohse and Spiller, 1998). So, must make sure the order process should be easy for customers, after the order forms completed by customers, the online retailer has to confirm receiving of orders to customers via e-mail or instant message.

One of the popular reasons why customers choose to shop through internet is ease of research. Consumers assume that searching information of products by online browser much more effectively and efficiently compared to traditional channels. Online users could achieve information research by browsers and intelligent search agents to compare products prices and other comparison across multiple online retailers (Khatibi et al, 2006). First stage in customer buying process is information searching, they will try to understand the details about the selective products from the information given by online retailers. To give a good impression, online retailers have to make sure the information seeking provide in more structured format, somehow they could consider about comparison prices charts with the data contribute by other online retailers. But, not to enter that information may harm to the business such as data about the other retailers who offer a lower price in better or same qualities. Try to avoid from overwhelming

of information because if customer feel suffer with too much of information and increases negative impacts.

In Facebook, once the customer tagged on the product's photo, his/her friends can view the photo too. Hence, the information easily to share around with a shared link, by clicking the URL, one can enter to the online store's owner page to get further information. Owners should be available most of the time, with a quick respond to assist their customers. Without doubt, commitment between seller and buyer are important to make the transaction goes smoothly. Satisfied customers will continue to be loyalty customers after they experience the process with the online store and everything might be automatically for next transactions.

2.2.3 Perceived Risk

“Risk is the subjective expectation of a loss” (Stone and Gronhaug ,1993). The issues of customer privacy, risk, and reliability toward online shopping have received much attention for e-business. This issue is one of the harmful barriers to online retailers. Many new online shoppers not dare to make any purchase decision because lack of trust. Seller or retailer have their own policies especially on third party payment verifiers and buyer protection policies that could increase customers level of confidential on seller reputation (Ranganathan and Jha, 2007).

Past experiences play an important role to motivate intention, can request customers to post a photo when the stock received to their hands or give a review on the wall of web page. These bring positive injection to reinforce potential customers to trust on the online store.

Financial information and detailed personal of the customers should be keep securely by the dealers because they believed that their personal information was fully under protect (Chaffey et al. 2009).

Confidence in the internet privacy and security highly linked with the trustiness of one customer. The important concerns about secrecy and lack of trust were among the most important factors that lead customers to drop out of the online business (Lohse et al,2000). Uncertainty from the customers leads a major risk and business risks. The increasing level of satisfaction make the online retailers to maximize their best to resolve problem and able to respond any questions in time. No respond from the online sellers would worry the customers whether the payment and transaction are done properly.

Consequently buyers must rely on products facts that provided by merchants before they make any purchase decision such as credit reports and trade records (Li et al, 2009). Customers might pay a close attention to online store's information to avoid uncertainty risks. Disclosure online information by

providing some necessary details such as company legal name, contacts of retailer, proven for individual information and approve confirmation once orders received (Hussin et al, 2004). As explanation, reliability is an important criterion consumers utilize where appears when the customer observes that high possibility that provider will deliver what is being promised in time and internet purchases of tangible goods present unique challenges (Dillion & Reif, 2004).

Facebook connected people around the world, when the customer not satisfied to the transaction and report for the spam of the online store, it will be a threat for the business. Example, a customer purchase a voucher from Facebook based online store with credit card payment. But after done the transaction, he didn't receive any confirmation or verified voucher from the retailer; it could be a doubt of the safety in transaction.

2.2.4 Perceived Enjoyment

A study by Monsure et al. (2004) defined that enjoyment means preference is the degree to which person feels good, joyful, happy or satisfied in online shopping whereas arousal is the degree to which a person feels stimulated, active or alert during the online shopping experience. Common sense, we know optimistic attitudes towards online shopping will be completely influence consumer intention to do online purchasing. Enjoyment motivates customers to perform a behavior that enhance the performance on activities in order to achieve specific goals. Virtual customer's actions influenced by design, emoticons, events and other past experiences during the time they interact with certain online store.

Customers in Malaysia especially young generation well doing in processes of searching, browsing, finding, selecting, comparing and evaluating information for a detail scopes. At the same time, customers in Malaysia believe online shopping save their time on shopping and would make their life easier. If the customer enjoys the online shopping experience, they are more likely to adopt the internet as a shopping medium (Monsure et al., 2004).

Web experience is important but if for new potential customers, online dealers have to pay attention to aesthetic element where to present the artistic and creative elements to grab the customers' attention. Beautiful views stop one to focus on the thing, good web design send positive motivation to customers to interact with the dealer. Playfulness and the awareness of fun take into account the shopper's overall satisfaction with the shopping involvement (Dillion & Reif, 2004). Same as traditional shoppers, first impression about the sale outlet also influences online shoppers to visit a web page not.

To design a nearly perfect online store, T. Andrew et al stated that 7C Framework should concern as the model for understanding the main role by each of the seven interface design fundamentals in web based system. The seven

components are including context, content, community, customization, communication, connection and commerce. Context is how the site to be design, content is what kind of information to be provide, community to make sure there is some ways to let users link with one to another. While customization discuss about site customizable, communication is how the both interaction work, connection is external sites to outsource context, last but not least, commerce is how the e-commerce support by various aspects.

2.3 Other issues

According to Wu (2003), age, gender, and ethnicity of demographic characteristics are examples of background characteristics. Deeply understandings enforce effective interactions. Younger is well dealing with IT but older lack of IT experience and resistance to change. From other studies showed that major Facebook users in Malaysia are those young adults aged 18-24, they are active users and adopt online store as one of the medium. Hence, business environment in Malaysia could go further in this trend generated by young generations.

Men and women own different perceptions and thinking. Men are more pragmatic, they only buy what they need and seldom do impulse purchasing. Even though women are emphasize in sense of touch and consider many issues once they do online purchasing, but some other nature characteristics of women push up their intention to shop online (Sun and Zhang, 2006). That is why many of the online products are related to women's use such as bags, cosmetics, D.I.Y stuffs, clothes, accessories and other small items to attract them to buy more.

Higher incomes are willing to take risks and observe lower implicit risks in online shopping. Therefore, this category of people contributes higher demands on product or service offers in internet. Low profits not encourage into online transaction due to their capability to deal with expected financial crisis. Financial status plays a role in affecting one's perceptions and intentions toward online shopping.

3. RESEARCH METHODOLOGY

3.1 Primary Data

Primary research generally is that information collected from original data such, and researcher has to find out the answers by own research. For this method, researcher was using electronic questionnaires to be primary data in order to obtain the factors influence customer perceptions toward online purchasing via Facebook throughout Malaysia.

The study conducted web-based surveys to targeted Facebook users within Malaysia, researcher chooses to use electronic questionnaires to do the survey because was suggested that online field surveys have much advantages over traditional paper-based mail-in survey (Hsu and Lu, 2004). Through this method, researcher able to save much time to do distribution of surveys, environment-lover concerns which go green, faster respond from respondents, and this survey makes everyone a win-win situation.

3.2 Secondary Data

Secondary data is gathered from the existing information that others have already put together. This helps researcher to have a basic understanding on the problem and give ideas to improve it. As a base for future primary data, secondary data provide information for literature reviews. Collecting secondary data would be the very first to do in the process.

Researcher obtains that information from electronic commerce books, journal articles, reports and blog articles. After gather enough related journals and articles, researcher starts to do a summary for each articles found. Essences of the summaries are use for further analysis and assumption to use that information effectively. To investigate more, researcher had look through some comments of online shoppers where posted on certain Facebook online stores' wall.

3.3 Sampling population and profiles

For the research, 500 respondent profiles would be the most suitable amounts to analyze. Targeted current Facebook users who did or planning to do online purchasing. Major target respondents would be Facebook users aged between 18-35 years old since as statistics studied show young adults in Malaysia are most active in the social networking.

3.4 Instrumentation and Data Collection

For the efficiency, questionnaire might send through electronic survey tool to around 750 respondents whose Facebook friends of researcher and friends of friends, expected to get back at least 500 set of completed survey. This study has focus within Malaysia but not certain states because of the advance technology, Facebook users could be from any states in Malaysia.

Four sections divided to form the questionnaire. Firstly about demographic information, selective personal information of respondent makes researcher easier to identify the respondents. Common questions will be given for this section such as age, gender, marital status, employment status, income, states, education levels, and how often log in Facebook a day. As studied from literature review, demographic issues also sort of important information to find out the

customer perceptions toward online shopping and it is source of the beliefs and behaviors of customers.

Following by the second section, is about the satisfaction of experienced online shoppers, it is used to measure perceptions of those existing consumers whether their last experiences would bring them to future purchase. This section also uses to investigate usage of the respondents toward Facebook social network. Third section researcher is concentrate on the independent variables shows in Figure 3 which extended of Technology Acceptance Model. Researcher could measure the more accurate details which influence by the four major factors. Lastly is about customer perceptions of existing online shoppers or future potential online users. At the same time to know what reasons make respondents intend to do online purchase through Facebook. From that, researcher could treasure out what's kind of thinking in the different customer's minds easily. Questionnaire will be in close-ended method for those sections but mix with an open-ended method for last section. For close-ended method based on five-point linker scale which five indicates given each factor. From 1 indicate represent least integration forward to 5 indicate represent most integration. Open-ended method is to let the respondent to give their own opinions on the problems studying, and these blankets are optional for respondents to fill it up.

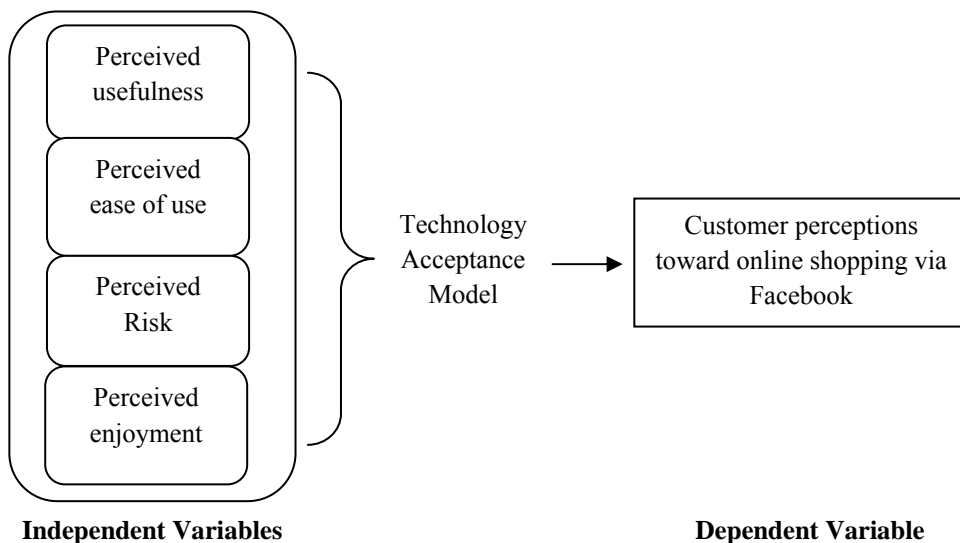


Figure 3: Schematic Diagram of the Theoretical Framework

Theoretical Framework shows by Figure 3 can be identified that the dependent variable is customer perceptions toward online purchasing via Facebook, and four major independent variables which are perceived usefulness, perceived ease of use, perceived risk and perceived enjoyment. Four hypotheses to be tested to determine the relationship among these factors that could influence the customer

perceptions toward Facebook commerce and other aspects of online purchasing. The hypotheses for the study would be:

H1: Perceived usefulness has positively significant relationship on customer perceptions toward F-Commerce.

H2: Perceived ease of use has positively significant relationship on customer perceptions toward F-Commerce.

H3: Perceived risk has positively significant relationship on customer perceptions toward F-Commerce.

H4: Perceived enjoyment has positively significant relationship on customer perceptions toward F-Commerce.

4. RESULTS

4.1 Introduction

Through this chapter, Statistical Package for Social Sciences (SPSS) software to be main tool to run the data collected and various statistical techniques are used in the data analysis to seek more accurate results. At first, frequency distribution analysis was used to test the demographic profile of the survey respondents and frequency of the Facebook-online-purchase which stated in first and second sections. Secondly, measure accuracy of variables by using factor analysis and reliability analysis. Followed by the process of descriptive statistic, is to present the mean and standard deviation between all variables. Moreover, the hypotheses from the proposed model were tested through regression analysis then end with a summary about the findings.

4.2 Overview of Data Gathered

Table below shows the sample profile of the questionnaires survey. Researcher used electronic survey tool to distribute the survey, about 700 questionnaires were answered randomly by Malaysia's Facebook users. But there was only 500 questionnaires were completed and collected back, which cover 78.95% of total questionnaires distributed. These collected back data were completed and tested by using SPSS software.

Table 1: Sample Profile

| | |
|--|--------|
| Number of Questionnaires Distributed | 700 |
| Number of Questionnaires Collected Back | 500 |
| Response Rate | 78.95% |
| Number of Questionnaires Used for Analysis | 500 |

4.3 Data Presentation

Demographic data of respondents for this study showing by Table 2, with several variables including gender, race, age category, marital status, education level, employment, income level, location, and condition of area. At the same time, the frequencies and percentages of those items also present by this table.

Table 2: Demographic Characteristics of Respondents

| Variables | Categories | Frequency | Percentage |
|-----------------|---------------------------|-----------|------------|
| Gender | Male | 250 | 50.0 |
| | Female | 250 | 50.0 |
| Race | Malay | 50 | 10.0 |
| | Chinese | 410 | 82.0 |
| | Indian | 14 | 2.7 |
| | Others | 26 | 5.3 |
| Age Category | 18-20 | 30 | 6.0 |
| | 21-29 | 384 | 76.7 |
| | 30-39 | 77 | 15.3 |
| | 40-49 | 7 | 1.3 |
| | 50 above | 2 | 0.7 |
| Marital Status | Single | 450 | 90.0 |
| | Married | 50 | 10.0 |
| Education Level | Secondary school or lower | 27 | 5.3 |
| | Some college | 130 | 26.0 |
| | Bachelor degree | 324 | 64.7 |
| | Master degree | 17 | 3.3 |
| | Doctoral degree | 2 | 0.7 |
| Employment | Part time | 30 | 6.0 |
| | Full time | 170 | 34.0 |
| | Looking for work | 24 | 4.7 |
| | Student | 276 | 55.3 |
| Income | RM1000 or below | 294 | 58.7 |
| | RM1001 – RM2500 | 65 | 12.7 |

| | | | |
|----------------|---------------------|-----|------|
| | RM2501 – RM4000 | 77 | 15.3 |
| | RM4001 – RM5500 | 26 | 5.3 |
| | Above RM5501 | 30 | 6.0 |
| Location | Peninsular Malaysia | 470 | 94.0 |
| | East Malaysia | 30 | 6.0 |
| Area condition | Urban | 320 | 64.0 |
| | Suburban | 144 | 28.7 |
| | Rural | 36 | 7.3 |

From that 500 questionnaires collected back, result showed an equal gender statistic which there is 50:50 of male and female. Due to multi-race in Malaysia, we have 410 of the respondents were Chinese which majority cover 82% of the total, 50 (10%) were Malays, 14 (2.7%) were Indians, and 26 (5.3%) were other races.

In this study, respondents were categorized into 6 levels of age group, which include the range of age less than 17, 18-20, 21-29, 30-39, 40-49, and 50 above. But no respondents under aged 17, thus it is not showed in the table as well. From the table 4.2, the majority respondents were aged 21-29 years old which comprises 76.7% followed by 15.3% was aged between 30-39 years. Besides of these, 6.0% of the respondents were range within 18-20 years old, 1.3% was 40-49 years old and finally very small percentage 0.7% respondents is from the range above 50 years.

For the marital status, we can see that most of the respondents 450 (90%) of them were still single and only 50 (10%) respondents were married. As for education level, the greater number of respondents were holders of bachelor degree (64.7%), 130 (26%) were under some college levels such as diploma or foundation program, 27 (5.3%) were secondary school or lower, 17 (3.3%) were master degree, and the only one respondent (0.7%) was a PhD. Employment status for the 500 respondents, 55.3% were still a student, 34% were full time employing, 6% were doing part time jobs, and the rest 4.7% were still looking for a job yet.

About the income level, 58.7% of the respondents only have RM1000 or below a month, 14.7% were from RM2501 to RM4000, 14.7% were from RM1001 to RM2500, 96% were above RM5501, and there were 5.3% were from RM4001 to RM5500. About 94% of the respondents located at Peninsular Malaysia while only 6% from East Malaysia. And the most describe about condition of the area they located were urban (64%), 28.7% were in suburban, and the last 7.3% were rural condition.

Table 3 below dedicated about frequency of the Facebook usage of the respondents for this study.

Table 3: Frequency of Facebook Usage

| Log In | Frequency | Percentage |
|----------|-----------|------------|
| Daily | 440 | 88.00 |
| Weekly | 40 | 8.00 |
| Monthly | 10 | 2.00 |
| Annually | 10 | 2.00 |

Typically, most of the respondents will log in to their Facebook account at least once in a day which covered 440 (88.00%) of the total. Followed by 40 respondents who sign in weekly (8.00%), for those non-active users only check in once a month or even annually, have the same responds which are 10 (2.00%).

Table 4 below noticed researcher about the frequency of purchasing through F-Commerce within this 12 months.

Table 4: Frequency of Purchases

| Purchases | Frequency | Percentage |
|--------------------|-----------|------------|
| Never | 307 | 61.33 |
| 1-5 times | 163 | 32.67 |
| 6-10 times | 17 | 3.33 |
| 11-15 times | 3 | 0.67 |
| More than 15 times | 10 | 2.00 |

Review from the data showed 307 of the respondents was never done any purchases from Facebook online stores. The percentage was covering more than half of respondents; we can see that F-Commerce is still not so popular among Malaysians. 32.67% respondents had tried to purchase through Facebook for 1 to 5 times, 3.33% respondents were purchased 6 to 10 times, only 0.67% respondent was online purchased 11-15 times, while 2% of the respondents consider as loyal customers that purchased more than 15 times within this 12 months.

Table 5 presents the factors that encourage existing and potential customers to make the purchases through Facebook Commerce.

Table 5: Results of Customer Perceptions

| Factors | Frequency | Percentage (%) | Ranking |
|----------------------------------|-----------|----------------|---------|
| Convenience | 91 | 21.16 | 1 |
| Cheaper prices | 66 | 15.35 | 2 |
| Wider selections | 53 | 12.33 | 3 |
| Ease of side by side comparison | 43 | 10.00 | 4 |
| Can get latest items | 39 | 9.07 | 5 |
| Influences of friends and family | 37 | 8.60 | 6 |
| Fun/Entertaining | 34 | 7.91 | 7 |
| Trendy | 30 | 6.98 | 8 |
| Credibility | 29 | 6.74 | 9 |
| Impulse | 8 | 1.86 | 10 |

Customer perceptions can be influenced by variety of factors and this information was useful to determinate intention of customers toward Facebook commerce. From the result above shows that convenience (21.16%) can strongly affect the intention of a respondent. Convenience become main factor to encourage customers do buying through online stores in Facebook. The best part of this online shopping service is that Facebook users can do shopping no matter where they been and the products that customer ordered will be available right at his/her doorstep.

Followed by cheaper prices (15.35%), this is another factor which highly concerned by online customers was the prices of products, expected that they could get cheaper deals from online stores because the products may come directly from factories and the online sellers able to offer a lower price of products since they have no extra expenditure on virtual store.

The rest of the factors that influence customer perception toward F-Commerce would be wide selections (12.33%), ease of side by side comparison (10.00%), can get latest items (9.07%), influences of friends and family (8.60%), fun or entertaining (7.91%), trendy (6.98%), and credibility (6.74%), while the lowest rate was impulse (1.86%).

4.4 Reliability Analysis

To ensure all items used in each variable were free from error, reliability analysis ran to measure the accuracy of the results. Make sure the Cronbach Apha for each variable reached to a number at least 0.500 to prove that results considered acceptable.

Table 6: Results of Reliability Test

| Variables | Number of Items | Items Dropped | Cronbach Alpha |
|-----------------------|-----------------|---------------|----------------|
| Customer Perceptions | 4 | - | 0.794 |
| Perceived Usefulness | 3 | - | 0.823 |
| Perceived Ease of Use | 3 | 1 | 0.726 |
| Perceived Risk | 4 | 2 | 0.792 |
| Perceived Enjoyment | 4 | - | 0.795 |

Cronbach Alpha for each variables show by Table 6, dependent variable named as Customer perceptions with four major items to support the dependent variables which are perceived usefulness, perceived ease of use, perceived risk and perceived enjoyment. The Cronbach’s coefficients alpha values for all factors consider good inter-item since the range were from 0.726 to 0.823.

4.5 Descriptive Analysis among All Variables

Table 7 describes the mean and standard deviation for dependent variable and independent variables of the study.

Table 7: Descriptive analysis

| Factors | Mean | Standard Deviation |
|-----------------------|--------|--------------------|
| Customer Perceptions | 3.3633 | 0.60242 |
| Perceived Usefulness | 3.2933 | 0.74076 |
| Perceived Ease of Use | 3.1583 | 0.76436 |
| Perceived Risk | 2.9100 | 0.68314 |
| Perceived Enjoyment | 3.1267 | 0.67353 |

According to the results showed by Table 7, mean for all variables range between 2.9100 to 3.3633. The mean and standard deviation for customer perceptions which represent the dependent variable are 3.3633 and 0.60242. Meanwhile, mean that measures for independent variables include perceived usefulness is 3.2933, perceived ease of use is 3.1583, perceived risk is 2.9100, and perceived enjoyment is 3.1267. Standard deviations for those variables are 0.74706,

0.76436, 0.68314, and 0.67353 respectively. As a conclusion for this analysis, customer perceptions have the highest mean (3.3633) while perceived ease of use has the highest standard deviation (0.76436).

4.6 Factors Affecting Customer Perceptions

Based on results of regression analysis showed by Table 8, those factors could be determined whether have a direct significant effect on customer perceptions toward F-Commerce or not.

Table 8: Regression Analysis on Customer Perceptions

| Variables | Beta | t-Ratio | Sig. t |
|---|-------|---------|--------|
| Perceived usefulness | 0.132 | 1.891 | 0.061 |
| Perceived ease of use | 0.140 | 2.371 | 0.019 |
| Perceived risk | 0.186 | 3.016 | 0.003 |
| Perceived enjoyment | 0.531 | 7.473 | 0.000 |
| R square = 0.519 Durbin-Watson = 1.895 F = 39.036 Sig. F = 0.000 Condition Index = 18.276 | | | |

The regression analysis indicates that perceived usefulness was found to have no significant effect (sig. t = 0.061) on customer perceptions toward online purchasing through Facebook. This shows that perceived usefulness has a negative effect on customer perceptions. Malaysians don't seem to view Facebook as a place to buy things; they have adopted Facebook as a useful social networking more than a shopping platform. This implies that Malaysians are preferred to use nature shopping-driven sites and online auction sites to do their purchasing activity. The hypotheses H1 which stated perceived usefulness has positively significant relationship on customer perceptions toward F-Commerce is not supported.

Perceived ease of use was found to be significantly affect (sig. t = 0.019) with a positive beta of (0.140). Evidently, Malaysian Facebook users are already familiar with this social network and understand how it works. Yet, local site search box with scan columns that offer by Facebook makes the process of navigation much easier for the users. Hence, hypotheses H2 which stated that perceived ease of use has positively significant relationship on customer perceptions toward F-Commerce is supported. Regression result shows perceived risk has a significant positive effect to build customer perceptions about F-Commerce with (sig. t = 0.003) and positive beta of (0.186). A secure online transaction environment enhances the customer trustiness that their security and

privacy information could be protected by online retailers. Therefore, hypotheses H3 which stated that perceived risk has positively significant relationship on customer perceptions toward F-Commerce is supported at the significance level of $p < 0.01$.

This analysis also done to determine that perceived enjoyment was important impact (sig. $t = 0.000$) and positive relationship (beta = 0.531) with customer perceptions. Facebook is an interesting social network that could make the users addicted on it, this can prove by Table 4.3 that most of the respondents will check with their Facebook account daily and often browse for enjoyment habitually. Moreover, Malaysian users enjoy the services provided by Facebook where they can social with friends and family while navigate for products to purchase. From these, hypotheses H4 which stated that perceived enjoyment has positively significant relationship on customer perceptions toward F-Commerce can be fully supported.

Perceived usefulness, perceived ease of use, perceived risk and perceived enjoyment can only explained 51.9% (R square = 0.519) variation of customer perceptions. Durbin-Watson fell within the accepted range of 1.895 showed that there was no auto correlation problem with the data. Multi-collinearity problem doesn't exist in this regression model since none of the condition index, VIF, and tolerance out from the accepted range (Condition index = 18.276, VIF = 1-10, tolerance = 0.10-10). This histogram indicated that data used in this study is normally distributed and F-value is found to be significant at 1% significance level (sig. $F = 0.000$). This concludes that the regression model used in this study is fit.

The results of hypothesis tested were summarized in Table 9 as what the analysis was carried out.

Table 9: Results of Hypothesis Testing

| No of Hypotheses | Statement of Hypothesis | Results |
|------------------|---|----------|
| H1 | Perceived usefulness has positively significant relationship on customer perceptions toward F-Commerce | Rejected |
| H2 | Perceived ease of use has positively significant relationship on customer perceptions toward F-Commerce | Accepted |
| H3 | Perceived risk has positively significant relationship on customer perceptions toward F-Commerce | Accepted |
| H4 | Perceived enjoyment has positively significant relationship on customer perceptions toward F-Commerce | Accepted |

Beside of the hypothesis tested, factors that have greater associated with customer perceptions toward Facebook commerce in Malaysia are convenience, cheaper prices, wide selection, and ease of side by side comparison.

5. CONCLUSION

Researcher had facing several problems during the process to complete this study. Main limitation that researcher faced is complicated to distribute the questionnaires. The survey was conducted by survey tool electronically, fast shared by the Facebook users after the link of the survey was posted by researcher. Respondents from different areas share a different range of internet coverage, slow or bad coverage influence the feedback of respondents. Some of them couldn't proceed to next questions, the survey answered didn't saved in the data collected, and partial survey collected. Second limitation is many of the respondents were never online purchased through Facebook, so most were just simply filled up with "Neutral" as their answer. From this, researcher couldn't measure the credibility of results.

(Usefulness) F-commerce is still regarded as fairly new e-commerce platform in Malaysia. Malaysians prefer to use those online trading platforms such as eBay, Amazon.com, Lelong.com, Alibaba and Mudah.com to search for the tangible or intangible needs. Facebook is designed as a social interaction, so it might not immediately occur to anyone to use Facebook to do online shopping instead of just social networking.

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