CHAPTER 5

CONCLUSION

5.0   Introduction

This final chapter interprets the research that has been undertaken. Firstly, the overview of study will be presented, followed by the major findings of the study. Then, discussion of the findings was presented. In addition, the contributions of the study are explained in theoretical and practical terms. Finally, limitations of the study are provided and suggestions for future research are highlighted.

5.1   Overview of the study

The main objectives of this study basically to identify and explore the factors that influence Malaysian consumer's acceptance on online grocery shopping and willingness to buy groceries via online grocery store in future. Specifically, this study intends to investigate the effects of perceived convenience, perceived information accessibility, perceived order accessibility, perceived risk, perceived enjoyment and social factors on attitude towards online grocery shopping and future online grocery buying intention. The study also examines the mediating

effects of attitude towards online grocery shopping in the relationship between future online grocery buying intention.

The research framework is adopted from the study by Hansen T. (2005). The researcher established a framework for understanding consumer adoption of online grocery shopping to study the impact of future online grocery buying intention and consumer attitudes towards online grocery shopping in Sweden. The model suggested that perceived convenience (PC), perceived information accessibility (PIA), perceived order accessibility (POA), perceived risk (PR) are the factors that influence consumer attitude towards online grocery shopping (ATT) and future online grocery buying intention (FBI). Another two constructs which are perceived enjoyment (PE) and social factors (SF) have been proposed in the research framework as well.

The development and advancement of technology facilitate a lot of innovative online business. Internet helps online vendor to expand business and reach to different consumers in any of the geographical areas. In recent years, online shopping such as online ticketing are becoming very common and accepted by most of consumers due to time savings, convenience and other relevant benefits. However, for online grocery shopping, there was no concrete evidence showing that it has been widely accepted by the community although many consumers from western countries such as the US, various European countries and Australia are interested to purchase via online grocery (Spare, H. and Pulkkinen,

M., 1997; Schuster, A. and Sporn, B. 1998; Heikkila et al., 1999, Morgan, R., 2000). Furthermore, limited studies have been done to identify the factors and barriers that influence the acceptance of online grocery shopping especially in Malaysia.

The measurements of the constructs in this study were adapted from previous studies. All the scales were reported reliable and valid in previous studies. A total of 40 items were used to capture the consumer behaviours towards the six constructs which used in this study. All the items were measure using a seven-point Likert scale with 1=strongly disagree and 7=strongly disagree.

The survey questionnaire was developed and used as the research instrument in this study. The questionnaire contained 55 closed-ended questions. The questionnaire was divided to three sections with specific purpose. The first section consisting 8 questions which to identify the usage of internet among Malaysians. The second section consisting 40 questions to examine the consumer perception of the six constructs used in this study. The last section consisting 7 questions was designed to capture respondent's demographic characteristics.

Questionnaire was distributed by using non-probability sampling with convenience sampling techniques. At the same time, quota sampling techniques have been used as well by distributed the questionnaire based on 50:30:20 of

Malay, Chinese and Indian respectively. This is to ensure that the sample is similar to the actual ethic composition of the Malaysian population.

Survey questionnaire was mainly distributed to Klang Valley area which located at Penisular Malaysia. This is because Klang Valley considered as heartland of Malaysian's industry and commerce and total population was approximately 4 millions. These questionnaires were distributed randomly to the respondents in the University of Malaya, office areas or through friends, colleagues and family members network. A total of 370 questionnaires were distributed and only 312 questionnaires were returned. The number was then reduced to 302 after the data have been screened, checked and cleaned. The response rate was 84%.

Data analyses were conducted for this study. Firstly, descriptive analyses were used to identify demographic profile of respondents and consumer behaviour of online purchase. Secondly, factor analysis was conducted to reduce a large number of variables to a smaller set of underlying factor. It followed by reliability analysis which cronbach's alpha was performed to measure the reliability of each constructs. Then, assessment of model fit has to be analysed in SEM modeling to accept and reject models. Model modification also conducted to improve the model fit. A series of Pearson Correlation analysis were computed to investigate the relationship between attitude towards online grocery shopping and all independent variables. The relationship between future online grocery buying intention and all the independent variables was analysed by using Pearson

correlation. Multiple regression analyses were employed to examine most influential predictor among PC, PIA, POA, PR, PE and SF to attitudes towards online grocery shopping (ATT) and future online grocery buying intention (FBI). Finally, structural estimation modeling (SEM) was conducted to test hypothesis 1 to hypothesis 13.

5.2   Major findings

This section discusses about the findings of the statistical analyses in this study. The results of the initial analyses have interpreted support for the importance of the proposed research framework in determining the relationship among perceived convenience, perceived information accessibility, perceived order accessibility, perceived risk, perceived enjoyment, social factors, attitude towards online grocery shopping and future online grocery buying intention.

5.2.1   Profile of the respondents

Briefly, this survey had more female respondents (70%) than male respondents, (30%) because women were played a main role in household. The sample comprised approximately 50% Malay, 30% Chinese and 20% Indian which followed the race distribution in Penisular Malaysia. In terms of age, approximately 58% were between 21 to 30 and 31% in between 31 to 40. For education background of respondents, approximately 65% of respondents

reported had achieved degree and postgraduate level. In terms of monthly income, 37% of respondents had monthly income range from RM1,501 to RM3,000 and 38% of respondents had monthly income range from Rm3,001 to RM5,000 respectively. Overall, the sample size of population was young female, high educated and middle to high income group.

5.2.2 Consumer behaviour of online purchase

The study reveals that majority of Malaysian are internet users and they are ability to adapt online shopping since majority respondents at least have 1 to 2 times online shopping experiences. Majority respondents prefer to purchase travel related services, such as airline tickets via online. However, there is only one third of the Malaysian are interested to purchase the grocery products via online. Approximately 10% of respondents have online grocery shopping experiences because online grocery stores are very limited and not famous in Malaysia. In terms of monthly household expenses, 89.7% of respondent spend less than RM1,000 on grocery products.

5.2.3 Analyses of Measures

Prior to hypotheses testing, all scales with multiple items were factor analysed to reduce the number of items for each variables. There have 3 factors comprised 5 items which was perceived convenience (PC), perceived risk (PR) and perceived

enjoyment (PE). These 3 factors were selected with the factor loadings ranging from 0.664 to 0.797, 0.661 to 0.830, 0.642 to 0.785 respectively. On the other hand, perceived information accessibility (PIA) was selected where it comprised 4 items with the factor loadings ranging from 0.505 to 0.777. Furthermore, another 2 factors which were perceived order accessibility (POA) and social factors (SF) was selected where the factor loadings ranging from 0.539 to 0.775 and 0.518 to 0.821 respectively. For mediating and dependent variable, attitude towards online grocery shopping (ATT) and future online grocery buying intention (FBI) comprised five items with the factor loadings ranging from 0.806 to 0.867 and 0.563 to 0.868 respectively.

A reliability assessment was performed to assess the internal consistency validation of the variables. Cronbach's alpha with the range of acceptance from 0 to 1 was used to test all variables. The highest alpha value was attitude towards online grocery (0.927, 5 items), followed by future online grocery buying intention (0.867, 5 items), perceived enjoyment (0.863, 5 items), perceived convenience (0.839, 5 items), perceived risk (0.830. 5 items), social factors (0.807, 4 items), perceived information accessibility (0.693, 3 items) and the lowest is perceived order accessibility (0.640, 2 items).

5.2.4 Structural equation modeling – model fit

Based on the initial result of model fit, the model fails to fit because the chi-square of the model was 1485.451 (df=532, p<0.001) and ratio (χ^2 / df) is 2.792. The values of Goodness of Fit (GFI), Adjusted Goodness of Fir index (AGFI), Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) were lower than 0.9 , the model can be categorised as poor fit.

Model modification has been conducted to improve the model fit. In this study, item FPI40, POA14, PE24, PE21, ATT35, FPI35, PC4, PIA8 and ATT34 was removed to improve the goodness of model fit. After removed the poor fitting observed variables, the chi-square of the model was reduced to 589.554 (df=271, p < 0.001). The ratio (χ^2 / df) of model was 589.554 / 271 = 2.175. The value of Goodness of Fit (GFI) and Adjusted Goodness of Fit (AGFI) were increased to 0.869 and 0.830 separately. The value of Comparative Fit Index (CFI) was adjusted to 0.919 and Tucker-Lewis Index (TLI) was adjusted to 0.902. Since the values of CFI and TFI were more than 0.9, the model for this study can be categorised as good. The point estimate of Root Mean Square Error of Approximation (RMSEA) was 0.062 which is less than 0.08.

5.2.5 Correlation analysis

The result indicates that the correlation between perceived convenience (PC), perceived information accessibility (PIA), perceived order accessibility (POA), perceived enjoyment (PE) and social factors (SF) with attitude towards online grocery buying are positively significant and valid. However, the correlation between perceived risk (PR) and attitude towards online grocery buying are negatively significant and valid.

Furthermore, the results also show that all independent variables (PC, PIA, POA, PE and SF except for perceived risk (PR) are positively correlated with future online grocery buying intention. The relationship between perceived risk and future online grocery buying intention is negatively significant and correlated. Lastly, attitude towards online grocery buying is significant correlated with future online grocery buying intention.

5.2.6 Multiple regression analysis

Multiple regression analysis was conducted aimed to investigate the most influential predictor among perceived convenience (PC), perceived information accessibility (PIA), perceived order accessibility (POA), perceived risk (PR), perceived enjoyment (PE) and social factors (SF) to attitudes towards online grocery shopping (ATT) and future online grocery buying intention (FBI).

The results demonstrate that the relationship between dependent variable (ATT) and independent variables (PC, PR, PE and SF) are significant. However, the relationship of ATT with PIA and POA is not significant. We can conclude that the most influential predictor to attitudes towards online grocery shopping is social factors since the beta values is the highest (0.338)

For the future online grocery buying intention, all independent variables are significant except for perceived order accessibility. The most influential predictor to future online grocery buying is perceived convenience where the beta value is 0.289.

5.2.7 Hypotheses testing

The main objective of using structural equation modeling analysis in this study is to develop and evaluate a framework of consumer online grocery buying intention. The results indicate that the framework is capable of explaining a high proportion of the variation in consumer's attitude towards online grocery buying instead of in future online grocery buying intention. Below is the interpretation of hypotheses:

H1: Perceived convenience will positively influence attitude towards online grocery shopping

H1 is accepted where perceived convenience is positively influenced attitude towards online grocery shopping with estimates equal to 0.290 and p-value < 0.05. The outcome obtained from this study is consistent with studies of Hansen, T. (2005); Huang, Y. and Oppewal, H. (2006); Ramus, K. and Nielsen, N. A. (2005). Hansen, T. (2005); Kurnia, S. and Chien, A. J. (2003) found that perceived convenience was positively influenced attitudes towards online grocery shopping in Sweden.

H2: Perceived convenience will positively influence future online grocery buying intention

H2 is supported where the results presented that perceived convenience is positively influenced future online grocery buying intention with estimates equal to 0.374 and p-value < 0.05. If compare with the study which conducted by Hansen, T. (2005), H2 is rejected as perceived convenience is not significantly related to future online grocery buying intention. However, the result is consistent with Ramus, K. and Nielsen, N. A. (2005), which found that perceived convenience directly influenced consumer purchase intention.

H3: Perceived information accessibility will positively influence attitude towards online grocery shopping

H3 is rejected as perceived information accessibility (estimates=0.014, p-value > 0.05) was not significantly related to attitudes towards online grocery shopping. The result of this study is inconsistent with the study which conducted by Hansen, T. (2005), which found out that perceived information accessibility is positively influenced attitude towards online grocery shopping in Sweden.

H4: Perceived information accessibility will positively influence future online grocery buying intention

H4 is rejected as perceived information accessibility (estimates=-0.071, p-value > 0.05) was not significantly related to future online grocery buying intention. But, the result is not similar to the previous study which conducted by Hansen. T (2005), which found that perceived information accessibility is positively influenced future online grocery buying intention.

H5: Perceived order accessibility will positively influence attitude towards online grocery shopping

H5 is rejected where the results showed that perceived order accessibility (estimates = 0.014, p-value > 0.05) was not significant with positively influenced attitudes towards online grocery shopping. The finding of this study is supported the research of Hansen, T. (2005).

H6: Perceived order accessibility will positively influence future online grocery buying intention

H6 is rejected where the results indicated that perceived order accessibility (estimates=0.18, p-value > 0.05) was not significant with positively influenced future online grocery buying intention. The finding of this study is different with the study of Hansen, T. (2005) where found that perceived order accessibility is positively influenced future online grocery buying intention.

H7: Perceived risk will negatively influence attitude towards online grocery shopping

H7 is accepted as the results showed that perceived risk was negatively influenced attitudes towards online grocery shopping with estimates equal to -0.226 and p-value < 0.05. The findings of this study is supported by Hansen, T. (2005); Huang, Y. and Oppewal, H. (2006). Both study believed that perceived risk is negatively influenced attitude towards online grocery shopping.

H8: Perceived risk will negatively influence future online grocery buying intention

H8 is rejected with the results of estimates=-0.142, p-value > 0.05 which indicates that perceived risk is not significantly related to future online grocery buying intention. The finding of this study is inconsistent with Hansen, T. (2005), where the researcher found that perceived risk is negatively influenced future online grocery buying intention.

H9: Perceived enjoyment will positively influence attitude towards online grocery shopping

H9 is supported with the results showed that perceived enjoyment was positively influenced attitudes towards online grocery shopping as estimates equal to -0.373 and p-value < 0.05. The finding is supported by Huang, Y. and Oppewal, H. (2006) where perceived enjoyment is significantly related to attitude towards online grocery shopping.

H10: Perceived enjoyment will positively influence future online grocery buying intention

H10 is rejected since the results indicated that perceived enjoyment was not significantly related to future online grocery buying intention with estimates=0.219, p-value > 0.05. The result is inconsistent with study conducted by Huang, Y. and Oppewal, H. (2006), which found that perceived enjoyment is positively influenced future online grocery buying intention.

H11: Social factors will positively influence attitude towards online grocery shopping

H11 is supported with the results showed that social factors was positively influenced attitudes towards online grocery shopping as estimates equal to -0.649 and p-value < 0.05. The result is similar with the study conducted by Ramus, K. and Nielsen, N. A. (2005) and Hansen, T. et al. (2004). Both study

believed that social factors is positively influenced attitude towards online grocery shopping.

H12: Social factors will positively influence future online grocery buying intention

H12 is accepted as social factors was positively influenced future online grocery buying intention with estimates equal to 0.353 and p-value < 0.05. The finding is supported by Ramus, K. and Nielsen, N. A. (2005) and Hansen, T. et al. (2004), which found that social factors is positively influenced future online grocery buying intention.

H13: Attitude towards online grocery shopping will positively affect future online grocery buying intention

H13 is accepted as attitudes towards online grocery shopping was positively influenced future online grocery buying intention with estimates equal to 0.243 and p-value < 0.05. The finding is consistent with Hansen, T. (2005); Ramus, K. and Nielsen, N. A. (2005); Hansen, T. et al. (2004); Kurnia, S. and Chien, A. J. (2003), which found that attitude towards online grocery shopping is positively affect future online grocery buying intention.

The result are summarized in Table 5.1

Table 5.1   Summary of hypotheses testing

Hypothesis Number	Hypothesis	Results
H1	Perceived convenience will positively influence attitude towards online grocery shopping	Supported
H2	Perceived convenience will positively influence future online grocery buying intention	Supported
H3	Perceived information accessibility will positively influence attitude towards online grocery shopping	Not supported
H4	Perceived information accessibility will positively influence future online grocery buying intention	Not supported
H5	Perceived order accessibility will positively influence attitude towards online grocery shopping	Not supported
H6	Perceived order accessibility will positively influence future online grocery buying intention	Not supported
H7	Perceived risk will positively influence attitude towards online grocery shopping	Supported
H8	Perceived risk will positively influence future online grocery buying intention	Not supported
H9	Perceived enjoyment will positively influence attitude towards online grocery shopping	Supported
H10	Perceived enjoyment will positively influence future online grocery buying intention	Not supported
H11	Social factors will positively influence attitude towards online grocery shopping	Supported
H12	Social factors will positively influence future online grocery buying intention	Supported
H13	Attitude towards online grocery shopping will positively influence future online grocery buying intention	Supported

5.3   Discussion

In this study, the results showed that perceived convenience is positively influenced the consumer's attitude towards online grocery buying. Furthermore, perceived convenience is positively influenced the consumers on future online grocery buying. These results showed that consumers will consider purchasing groceries via online grocery store when it brings the convenience for everyone. Although most of the Malaysian do not have experience to purchase via online grocery store, but online grocery shopping can be considered as ideal concept for Malaysian since virtual grocery stores are open 24 hours and 7 days, simple,

relaxing, efficient and time saving. Respondents were agreed the advantages of online grocery shopping where it can influence their attitudes to accept and intend make future decision to purchase groceries via online grocery stores.

Conversely, the results reveal that perceived information accessibility is not significantly related to consumer's attitude towards online grocery buying and future online grocery buying intention. This believe that majority respondents do not have online grocery buying experiences and they were unable to identify the important of the information of the products, quality of the received products, the visibility of the website, interactions and process of online grocery shopping and procedures and barriers of ordering procedures when purchase via online grocery stores.

On the other hand, the findings also showed that perceived order accessibility is not significantly related to consumer's attitude towards online grocery buying and future online grocery buying intention. The results indicate that those consumers have the possibility not to purchase groceries via online if they are faced with poor online order accessibility. In this situation, as online vendors, they have to propose easier, effective, simple order procedures and not require high online navigation skills and effort.

The study proposed that perceived risk is negatively influence the consumer's attitude towards online grocery buying. However, perceived risk is not

significantly related to future online grocery buying intention. These results indicate that consumers reluctant to purchase groceries via online when they have to take risk on the security and privacy issues when make payment on the internet. Besides that, the risks will be increased when consumers have to accept and return products when they find out the products are not in good conditions and do not match with their expectation. With the above drawbacks, consumers in generally have negative concept and entrusted with the virtual stores. Based on the results, we understand that consumers may not consider online grocery shopping if they perceive it to be risks when compared to offline grocery shopping. According to Van den Poel, D. and Leunis, J. (1999), to encourage consumers have positive attitude on online buying, online vendors may provide online consumers with "risk relievers" in relation to specific online buying events. The risk relievers are including "complaint opportunities", "security-guarantees", "money-back-guarantees," and etc to reduce consumer's concerns, to build up the consumer's confidence and build trustworthy online retail store (Hansen, T., 2005).

Referring to results, it also suggested that perceived enjoyment also positively influence the consumer's attitude towards online grocery buying. On the other hand, the results also present that perceived enjoyment are not significantly related to future online grocery buying intention. The results point out the important of the design, layout, promotional tools and marketing activities which used in the website in order to create the interaction and interactivity between

online retailers and customers. Consumer's attitudes toward online grocery buying can be influenced by the elements of fun, interesting and enjoyment when navigate to particular website. However, there have some of the consumers like to shop via conventional stores because it brings a lot of excitement and fun on social lifestyles and recreation activities.

In additional, this study showed that social factors positively influence both attitudes towards online grocery buying and future online grocery buying intention. This implies that social groups such as friends, family members and acquaintances will directly influence consumer's attitude towards online grocery buying and make decision to purchase groceries via online. The recommendations and experiences from reference groups strongly influence among each others in one community. In this situation, word of mouth can be one of the advertising tools to influence the consumer's attitudes toward online grocery buying and in the same time affect their future online grocery buying intention.

Lastly, the study presented that attitude towards online grocery shopping is positively influenced future online grocery buying intention. The results indicated that strong correlation between attitude evaluation and behavioural intention (Thompson, K. E. et al., 1994).

5.4 Contributions of the study

The contributions of this study are significant based on theoretical and practical perspective. This study is expected to make the following contributions.

5.4.1 Theoretical contribution

In theoretical point of view, the major contribution of this study is on the development of research framework in online retail industry in Malaysia. The research on online shopping has been conducted by many researchers. However, there has been limited research on online grocery shopping especially in Malaysia. The study aimed to investigate the existing research frameworks with factors that influence online grocery shopping as well as future online grocery buying intention. The research framework helps to identify the consumer acceptance and behaviours of online grocery shopping, in Malaysia context. Hence, this study generally contributes to the online retailer studies in Malaysia because it represents the first attempt to investigate the relationship among perceived convenience, perceived information accessibility, perceived order accessibility, perceived risk, perceived enjoyment, social factors, attitude towards online grocery shopping and future online grocery buying intention in the Malaysian online retailing industry.

5.4.2 Practical contribution

Based on the findings of this study, online vendors should deliver the message about the advantages of online grocery shopping to their target customers. Online vendors should understand the customer needs or lifestyle where position to the customers who are busy working adults and unable to go conventional store to purchase the groceries. In the same time, customers believe that online grocery shopping can bring the benefits of convenience, save time and increase the effectiveness and efficiency.

Based on our findings, it imply that consumers may hesitate to purchase groceries via online when the order procedures is complicated. Online vendors should design user friendly websites where consumers are easily searching the products. Online vendors should simplify the order procedures, provide a systematic delivery services and fulfill the requirements of consumers.

Our findings imply that consumers are concern about the risk when purchase via online. To build the customer confidence and trust on the online grocery shopping, the online store (website) should secure, protect customer's privacy and credit information. Besides that, online vendors have to ensure that the quality of the products to built a good reputation and create word of mouth among the online shoppers.

In the same time, online vendors should create fun and excitement for online stores. Different advertising and promotional tools such as competition, rebates and etc should be implemented to attract customers to log on their online stores. Online vendors also can implement loyalty programmes to retain and encourage customers to purchase via online retail stores.

Online vendor should not ignore reference groups where they are the person to influence each others. Reference groups consist of family member, friend, acquaintances and people in the community. Since groceries products are for household, online vendors can be suggested to use 'family concept' as their advertising and promotional tools. In additional, the brand name of the online retail stores also important.

5.5   Limitation of the study

Obviously, there are several limitations to this study. Firstly, this study only involved a limited number of respondents with online grocery buying experience since there only have few online groceries offered and were not established and famous in Malaysia. Secondly, the scope of study only limited to respondents who currently located in Klang valley because limited of time and financial resources. Due to the small sample size, generalizations to other audience may not be valid and may not represent the whole Malaysian online grocery buying attitudes and behaviour. Everyone have different kind of attitudes towards online

grocery buying since they born from different states in Malaysia, family background, culture and other factors. A larger and more diverse sampling from different states of Malaysia of course will provide a better more generalize results.

Furthermore, this study basically used single respondents to be a household representative. The feedback and response from single respondents does not represent the household's opinion since grocery buying normally involve entire household. In the same time, this study only highlighted the consumer's attitude and behavioural intention in online grocery buying. The research does not include the actual usage of online grocery buying where it might lead to different results. According to Shim et al. (2001), the changes or developments in internet characteristics, consumer characteristics, product attributes, search conditions, situational factors, etc might be influenced the behavioural intention.

Finally, another possible limitation of the study is the truthfulness of the respondents when completing the questionnaire that might be influence the data accuracy. Based on Zikmund, W. G. (2003), this kind of the error called as social desirability error, where described as a form of response bias affected by the desire of the respondent, either conscious or unconscious, to gain status or to appear in a different social role.

5.6   Recommendations for Future Research

Refer to the study, it enable the online retailer to identify the important attributes to attract the customer to shop via online. However, the study not really figures out the ways to achieve or maximise the profitability when running online grocery stores. In generally, the study explored the consumer behaviour or demand-side of the shopping channel. Future research may wish to investigate how to increase the cost-effective in operation side and determine the consumer needs.

Meanwhile, the research only focused on interpreting one product category which is groceries. The results do not provide accurate guidelines for online retailers when online grocery stores involving in other product categories. Based on the research, it only provides overview of the online consumer behaviour instead of longitudinal study. The future research should be conducted it by time-to-time since the online grocery shopping trend in Malaysia is growing right now. The level of consumer's shopping behaviour will change based on the current shopping trend. At the same time, the research framework can be modified by adding new theories.

Furthermore, market segmentation is important issues for online retailers to consider. Future research might consider distinguishing the target respondents which is with or without online grocery shopping experiences in order to refine the significant factors that influences the attitudes towards online grocery

shopping and future online grocery buying intention. Future research could be performed to explore and better understanding on consumer's perception of online grocery buying based on different genders, ethnic groups, age groups, level of income and education.