FACTORS AFFECTING THE CONSUMER DECISION ON CHOOSING A SUPERMARKET FOR PURCHASING FRESH FOOD IN HUE CITY

Nguyen Thi Minh Hoa[1*], Nguyen Phuong Thao[2]
[1]College of Economics, Hue University
[2]Indochine Hotel

Abstract: The aim of the study was to determine factors affecting the consumer decision on choosing a supermarket for purchasing fresh food in Hue City. The proposed study model was developed based on synthesizing the results from similar previous researches in combination with qualitative studies. The reliability and validity of the scale were evaluated by Cronbach's Alpha and Exploratory Factor Analysis (EFA). Based on the data collected from 136 consumers who were buying fresh food in supermarkets, the results from a multi-linear regression analysis showed that there were three factors affecting consumer decision making for choosing a supermarket to purchase fresh food. Convenience of the location and arragement (0.368) was found to have the highest impact on consumer decision making, followed by convenience of services (0.318) and products (0.241).

Keywords: consumer decision making, supermarket(s), fresh food, EFA

1   Introduction

Vietnam economy has been developing steadily; its income per capita is increasing, which leads to a significant improvement in Vietnamese living standard. The demand for food increases along with the improvement of the national economy and per capita income. People desire to be provided with larger quantities of high quality food for their daily consumption. To meet the increasing demand of consumers, the number of supermarkets in Vietnam has significantly risen. Since the first appearance in Vietnam at the end of the 1990s, the number of supermarkets in 2013 peaked at 724 (SYB, 2014). However, the traditional market has always been a familiar place to Vietnamese people to make their purchase because it is convenient, time – saving and easily accessible with various types of goods that can be bought in large quantities. Typically, it is allocated across the city. The traditional market places are still the main markets for trading food, especially in Hue City where a majority of people have a habit of buying fresh food daily instead of reserving frozen food for weeks[1]. This is one of the reasons to explain why the num- ber of supermarkets in Hue City has decreased from 6 in 2012 to 2 (Coop.mart and Big C that are now still able to continue their business). How to attract consumers to the supermarkets for buying food? And which factors affect consumers' decisions to go to supermarkets for buying

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[1]Fresh food here means foods are still fresh like fruit, vegetable, meat, fish...

Corresponding: minhnhathoa@yahoo.com

fresh food? This paper focuses on indentifying and evaluating factors affecting the customer decision on choosing a supermarket for purchasing fresh food in Hue City[2].

2   Method

2.1   Development of Study Model

Literature of consumer behavior indicates that a consumer decision is influenced by internal and external factors. They may have a range of thoughts, feelings and experiences about the surrounding environment and the product itself which belong to the buying process. Chamhuri et al. (2013) found that Malaysian people feel more convenient and prefer shopping at modern retail outlets because of the various types of fresh food along with better display of goods. They also indicated that freshness, competitive price, good environment are the factors attracting consumers to purchase fresh meat in modern retail outlets. Dai Junyu et al. (2001) showed the importance of the price and quality in the study of the factors influencing consumer's preference for purchasing channels in Zhang Zhou City, China. Also, Zhou Yingheng, et al (2003) showed that consumers in Nanjing City choose to purchase in supermarkets because of quality, safety and brand reputation.

In Vietnam, there are a number of related researches. The study of Chu Nguyen Mong Ngoc and Pham Tan Nhat (2013) on factors affecting consumer decisions on choosing a supermarket channel for purchasing fresh food in Ho Chi Minh City indicated that the consumer's decision was influenced by product, package, place and price. According to Luu Thanh Duc Hai and Vu Le Duy (2014), the factors affecting consumers' different choices between traditional markets and supermarkets in descending order were age, reputation and service style, shopping space, average income, price and policies on consumer care, safety, quality and variety of goods. Defined influence factors from previous researches are used as foundation for this study model establishment. The factors affecting consumer decisions on choosing a supermarket from the finding of previous researches are demonstrated in Table 2.1.

Table 1. Summary of Previous Researches

Authors	Product	Price	Convenience	Promotion
Chu et al. (2013)	x	x		
Luu et al. (2014)	x	x	x	x
Chamhuri et al. (2013)	x	x	x	x
Dai et al. (2001)	x	x		
Zhou et al. (2003)	x			

Source: adapted from previous studies and authors' adjustment

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[2]The study focuses on factors affecting consumer decision making in choosing a supermarket rather than a traditional market for buying fresh food. Factors affecting consumer decisions on selecting a specific supermarket among others will not be mentioned here.

Combining the finding factors from previous researches with the results of qualitative researches and typical features of Hue people, the measurement scale was developed with 20 observation variables such as product (5), price (2), convenience (10) and promotion (3). The proposed study model is presented in Figure 1.
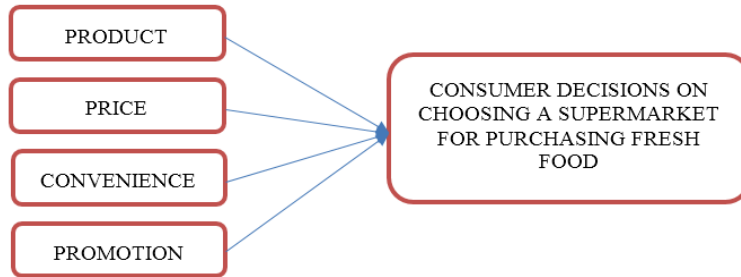

Fig. 1. Proposed Study Model

Source: adapted from previous studies and survey in 2015

The hypotheses to be tested in this study are as follows:

— H_1: product has a positive impact on consumer decision
— H_2: price (reasonable and comparable price) has a positive impact on consumer decision
— H_3: convenience has a positive impact on consumer decision
— H_4: promotion has a positive impact on consumer decision

2.2   Data Collection and Analysis

The survey was conducted in January 2015 at Coop.mart and Big C supermarkets with 150 consumers who come to supermarkets for purchasing fresh food (75 people from each supermarket), and lasted from 8am to 12am and 5pm to 9pm until achieving the number of samples needed. The convenience sampling was used in this study. Data were processed using SPSS 20.0. The reliability and validity of the scale were evaluated by Cronbach's Alpha and Exploratory Factor Analysis (EFA). Variables which did not meet the reliability, validity and convergence were eliminated to restructure the scale and readjust the research model and hypotheses. In addition, the multi-linear regression model was used to test the research hypotheses and determine the importance of components.

3   Results of the Study

3.1   Demographic characteristics of the respondents

The survey results showed that 136 respondents purchased fresh food from supermarkets, accounting for 90.7%. The remaining 14 respondents (9.3%) do not purchase fresh food in supermarkets. Therefore, the following tables and figures are presented based on the data collected from the former subset.

Table 2. Personal Information of Respondents

Characteristics	Items	Frequency	%
Gender	Male	13	9.6
	Female	123	90.4
		136	100.0
Age	< 26	10	7.4
	26 – 35	43	31.6
	36 – 45	46	33.8
	46 – 55	27	19.9
	>55	10	7.4
		136	100.0
Education	High school	9	6.6
	College	35	25.7
	University	82	60.3
	Postgraduate education	10	7.4
		136	100.0
Occupation	Officer, teacher	62	45.6
	Businessman	24	17.6
	Retiree	7	5.1
	Worker	29	21.3
	Housewife	8	5.9
	Other	6	4.4
		136	100.0
Monthly average income	< 3 million VND/month	14	10.3
	3 – 5 million VND/month	58	42.6
	5 – 7 million VND/month	34	25.0
	7 – 9 million VND/month	22	16.2
	>9 million VND/month	8	5.9
		136	100.0

Source: survey in 2015

Table 2 shows that most of the respondents are female, occupying 90.4%. It can be seen that females more frequently go to supermarkets for purchasing fresh food. The respondents whose age ranges from 36 to 45, comprise of the highest percentage (33.8 %), followed by the

age range from 26 to 35 (31.6%) and from 46 to 55 (19.9%). University degree is the highest education level of the respondents (60.3%). The proportion of the respondents who have education levels of college, post-graduation and high school is 25.7% (35 respondents), 7.4% (10 respondents) and 6.6% (9 respondents), respectively. The survey results discover that a majority of the respondents who go to supermarkets for buying fresh food are officers and teachers (45.6 %). The remaining is the group of company workers and businessmen (38.9%). Retirees and others account for 15.4%. Concerning the average income per month, most of the respondents earn between 3 million VND and 5 million VND (42.6%), followed by the people who have an income of 5 million VND to 7 million VND (25.0%), 7 million VND to 9 million VND (16.2%), less than 3 million VND (10.3%), and more than 9 million VND (5.9%).

3.2   Factors affecting consumer decisions on choosing a supermarket

In order to conduct the EFA, the entire study sample had to be tested for their fitness. The Cronbach's Alpha analysis was conducted for all variables. The results showed that 8 observation variables listed as reasonable price, preliminary treatment of fresh food, saving time, helpful staff, promotion programs, promotion policy towards regular consumers, updated promotional information and comparable price were eliminated step by step because the values of corrected item-total correlation are less than 0.3. The Bartlett's Test of Sphericity is significant at 0.000 (< 0.05) and Kaiser- Meyer – Olkin (KMO) value is 0.830 (> 0.5), so the survey data are suitable for factor analysis. There are 3 factors obtained with Cumulative Variance explaining 64.570 % (> 50%) of the sample total variance, which proves the suitability of factor formation (Table 3).

Table 3. Loading Factors of Consumer Decision in Choosing Supermarket Construct

New factors	Variables	Components		
		1	2	3
Product (F1)	Various types of products	0.812		
	Thorough packaging of products	0.796		
	Reliable origin	0.786		
	Clear classification	0.776		
	Good quality of products	0.750		
Convenience of location and arrangement (F2)	Short distance from home or office		0.790	
	Easy to access to stalls		0.776	
	Convenient entrance and exit		0.765	
	Rational arrangement of stalls		0.686	
Convenience of services (F3)	Quickly weighing and packing			0.823
	Clean and hygienic stalls			0.795
	Quick payment process			0.773

Source: survey in 2015

The first factor (F1) includes five variables such as various types of products, thorough packaging of products, reliable origin, clear classification, and good quality of products. These variables indicate the characteristics of fresh food products in supermarkets. Thus, this factor is labeled as original factor- "product". The second factor comprises of four variables (short distance from home or office, easy to access to stalls, convenient entrance and exit, rational arrangement of stalls). These variables are derived from the original factor of "convenience". It is closely related to the location of supermarkets and fresh food displays, so it is labeled as "convenience of location and arrangement". The third factor (F3) is separated from the original factor of "convenience". It consists of the variables concerning accompanied services for customers who buy fresh food in supermarkets like quickly weighing and packing, clean and hygienic stalls, quick payment process. It is labeled as "convenience of services".

Consumer decision (Y) is described by two variables to assess the customer's decision to choose a supermarket for purchasing fresh food. Cronbach's Alpha of variables is higher than 0.8, KMO is 0.53, the Barlett's test is significant at 0.000 and Cumulative Variance explains 79.105 % of the sample total variance, which also proves the suitability of factor formation.

After EFA, in order to ensure that new factors are reliable and internally consistent, Cronbach's Alpha test is implemented one more time. Cronbach's Alpha of F1, F2, F3 and consumer decision are 0.848, 0.797, 0.774 and 0.736, respectively. Corrected Item- Total Correlation values are higher than 0.3. It can be concluded that the measurement scale is completely good for other analysis.

The multi-linear regression is applied to examine the relationship between the dependent variable (consumer decision on choosing a supermarket for buying fresh food) and three independent variables (product, convenience of location and arrangement, and convenience of services). The regression model construction is as follows:

$$Y = \beta_0 + \beta_1 F1 + \beta_2 F2 + \beta_3 F3$$

in which, Y is consumer decision on choosing a supermarket for buying fresh food, F1, F2, and F3 are product, convenience of location and arrangement and convenience of services. β_0 is the expected value for the dependent variable if all of the independent factors are equal to 0 (constant). β_1, β_2 and β_3 are regression coefficients. Based on this regression, hypotheses for testing need to be adjusted as follows:

— H_1': product has a positive impact on consumer decision
— H_2': convenience of location and arrangement has a positive impact on consumer decision
— H_3': convenience of services has a positive impact on consumer decision

Results from the model suitability analysis show that R^2 is 0.459 and adjusted R^2 is 0.447. It means that 44.7% of consumer decision in choosing supermarket variation is generally explained by 3 observed variables. In addition, F is significant at 0.000, it means that the hypothesis H_0 (H_0: $\beta_1 = \beta_2 = \beta_3 = 0$) is rejected with statistical confidence interval of 95%.

Table 4. Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.048	0.325		0.148	0.883		
Product	0.231	0.063	0.241	3.653	0.000	0.944	1.060
Convenience of location and arrangement	0.392	0.080	0.368	4.905	0.000	0.730	1.370
Convenience of services	0.315	0.072	0.318	4.354	0.000	0.768	1.302

Source: survey in 2015

The regression result is presented in Table 4. There are three components/factors affecting the consumer decision on choosing a supermarket for buying fresh food. Three components (product, convenience of location and arrangement and convenience of services) are positively related to the consumer decision to choose a supermarket. It means that three components play an important role in the attraction of consumers coming to supermarkets for purchasing fresh food. Convenience of location and arragement have the highest impact on the consumer decision to choose a supermarket (0.368), then convenience of services (0.318) and finally product (0.241).

Table 4 also shows that the regression model has no multicollinarity because the tolerance of variables is larger than 0.1 and the Variance Inflation Factors (VIF) is less than 10. So, there is no autocorrelation of errors occuring (Hoàng Trọng & Chu Nguyễn Mộng Ngọc, 2008). Therefore, the regression model and all hypotheses (H$_1$', H$_2$', and H$_3$',) are accepted. Factors of product, convenience of location and arrangement, and convenience of services have positive impact on the consumer decision on choosing a supermarket for purchasing fresh food.

The proposed model included four factors affecting consumer decisions on choosing supermarkets, but price and promotion were removed. In fact, there is no noticeable difference of price between supermarkets and traditional markets. The price in supermarkets is fixed, there is no chance for bargains in the way that Hue consumers frequently do to select and have a good deal in buying fresh food in traditional markets. Supermarkets provide various promotion programs to attract consumers. However, it is recognized that very few promotion programs are for fresh food. Therefore, price and promotion do not affect so much the consumer decision on choosing a supermarket for buying fresh food.

Three factors shown in Table 4 create big differences between supermarkets and traditional markets. Firstly, as presented in Table 3, the factor of product includes various types of fresh food, thorough packaging of products, reliable origin, clear classification and good quality of products. These features of products cannot be seen in the traditional markets. Indeed, fresh food in supermarkets has reliable origin. Fresh food suppliers are selected carefully to ensure supermarket requirements. There are also procurement contracts between supermarkets and suppliers to guarantee the quality and quantity of fresh food. Information on suppliers and products is provided for consumers as required to satisfy their needs and increase the trust for them.

Regarding to convenience of location and arrangement, the supermarkets are located in key positions of two areas of the city where vehicular traffic is high and proximity to residential and office areas. The indoor parking lots are large and convenient with one-way system to ensure that the consumers' vehicles are protected from inclement weather. The fresh food stalls in the supermarkets are spacey, helping consumers with an easy access. In Coop.mart, it is located right on the first floor, above the parking lot, and in Big C the fresh food stall is on the second floor, next to the entrance. Products in the fresh food stalls of those supermarkets are arranged in a proper order that helps consumers easily find what they want.

Concerning the convenience of services in supermarkets, this is an exclusive feature that cannot be found in traditional markets. There is no doubt that supermarkets can satisfy consumers with a neat space along with a clean and hygienic fresh food stall, which instills consumers' trust in the product quality. The assistance from the supermarket staff makes consumers feel happy when they are standing at the counters waiting for their turn to pay. In fact, consumers feel comfortable shopping in the supermarkets.

4   Concluding remarks

The average income per capita of Vietnamese people in general and Hue residents in particular is increasing. Consumers are demanding higher quality of fresh food. Supermarkets are believed as one of the good shopping places for consumers to go buying fresh food. However, a majority of Hue people have a habit of buying fresh food daily from traditional markets. Attracting consumers to go to the supermarkets to buy fresh food is important to managers of the supermarkets in Hue. Based on the data collected from 136 consumers buying fresh food in supermarkets, the results of this study show that three factors affecting the consumer decision on choosing a supermarket for buying fresh food are product, convenience of location and arrangement, and convenience of services. Among these three factors, convenience of location and arragement (0.368) has the highest impact on consumer decision, the following are convenience of services (0.318) and product (0.241). The study results also indicate that a majority of consumers buying fresh food in supermarkets are females who are well educated officials/teachers within the age range from 26 to 45 years old and with a monthly income of 3 to 7 million.

Since Vietnam joined World Trade Organization (WTO), Trans-Pacific Partnership (TPP) and Asean Community, the number of supermarkets and convenient stores has increased considerably. In order to attract consumers to go to supermarkets for purchasing fresh food, it is neccesary to focus on the target market of females who rank high in incomes and education levels. In addition, supermarkets should take advantages of the infrastructure and prestigious suppliers to provide a high quality product mix of fresh food in a convenient and comfortable shopping environment.

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