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THE FACTORS AFFECTING THE DECISION IN USING FUNCTIONAL FOOD OF VIETNAMESE CONSUMERS: A CASE STUDY OF HO CHI MINH CITY

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ABSTRACT

This paper conducted during the period from August 2014 to July 2015. The consumers' responses measured through an adapted questionnaire on a 5-point Likert scale and hard copy. The study was conducted to analyze the factors affecting the decision in using functional food of consumers in Ho Chi Minh city (HCMC). Qualitative and quantitative research methods were combined to survey 147 people with 27 observed variables for determining the factors, which influence the decision in using functional food of consumers in HCMC. The study results showed that there are seven factors affecting the group as following: services, social factor, personal characteristics, and impact of promotions, distribution density, price

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expectations, and product perception. The findings can meet the following objectives: First, to identify the factors affecting the decision using functional food of consumers in HCMC; Second, to determine the order of priority impact level of the factors affecting the decision using functional food of consumers in HCMC; Finally, to propose measures increasing the recommendation group to decide using functional food for consumers in HCMC.

Keywords: Decision theory, food, components, Vietnamese and HCMC.

INTRODUCTION

Vietnam's economic recovery is on a solid path as GDP growth increased to 6% in 2014, while inflation fell to a decade-low of 4.1%. Against this backdrop, the key themes for 2015 will include further strengthening of the foreign-invested manufacturing sector; sustained expansionary monetary policy stance; and continued slow pace of the restructuring process.

Functional food has blossomed in Vietnam over a decade. Consumers are especially interested in the qualities of functional food. They are not medicines; however, they can help add nutrients or treat diseases. Taking unfair advantage, many brands in Vietnam have been advertised their product excessively (exaggeratedly) to make many people think wrongly, misunderstand their real usages and cause problems to the management departments recently. According to the Food Safety Agency statistics – Vietnamese Health (Nguyen Thanh Phong, 7/2015), within the first half of 2015, advertising fines related to functional foods were 1, 6 billion VND in 77 businesses. Moreover, according to the Food Safety Agency, more than 10.000 current functional foods in Vietnamese market, only 50-60% of them are reliable, that means consumers can use them. The above results are that the surface of the iceberg because later authorities detected and seized dozens of tons of counterfeiting functional foods, with the famous brands that has caused confused to people. The above facts negatively affected the famous functional food brand. Therefore, functional food businesses should have the sustainable developing strategies to enhance their competitiveness. Combined with the practical requirements of the job, the researcher had chosen this title: ***The factors affecting the decision in using functional food of***

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Vietnamese consumers: a case study of Ho Chi Minh city as a paper applying in Business Administration.

LITERATURE REVIEW

Brown, P., J (1988); Ajzen and Fishbein (1975) stated in his “Action theory” consuming trends is the best forcast of consumer behavior. For more concerned about these factors to the trend of buying, customers’attitude and subjective standard are considered. Attitude is measured by awareness of the attribute of the product. Consumers will notice these attributes bringing the necessary benefits and different importance of the level. If the weight of the attributes is known, it is able to predict close results of consumer choices. In other words, "attitude" will affect the purchasing decisions of consumers.

Along with this view, Ajen (1985) raised his point in Theory of Planned Behaviour by adding “behavioral cognitive control" facotr in TRA model. Compositions of “behavioral cognitive control" reflects the ease or difficulty in performing acts. This depends on the availability of resources and the opportunity to perform acts. Thus, the "behavioral cognitive control" influences customers purchasing decisions. In his latter results, many authors changed the group name of factor “behavioral Cognitive control" into "Support Services" [Fick, GR and JRB Ritchie (1996), Driver, BL and RC Tocher (2002)].

Philip Kotler (2005) mentioned in “consuming behavior” model, consumers are affected by "external factors" such as marketing agents and other factors; "The internal factors" such as characteristics of buyers and purchasing decision process; and "Decision of the buyer". In the factors affecting consuming behavior model of Philip Kotler (2005), social factors (reference group, family, social role and status, erc.) can also affect consumers’ decisive thinking and action on a certain product. Thus, social factors also involve in the purchasing decisions of consumers. Brock and Durlauf (2001) also shared this point of view. They commented when social interactions are mentioned, benefit or bargaining of each individual received by his actions that depends directly on the individual’s choice in social groups that they belong to. These interactions have important economic significance since the personal choice may affect the

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others'choice with whom they related directly or indirectly. It also emphasized that the interaction does not operates through the market, a person will adjust his choice through observing others' actions, for instance mimic, spreading and propagating effects are usually seen in modern society.

Thus, it can be concluded that the factors affecting the decision in using functional food of consumers in HCMC are the following key points: (1) Awareness of the products, (2) Price Expectation (Expectation about the price), (3) Support Services, (4) social factors, (5) personal characteristics, (6) promotional activity and (7) the density distribution.

Awareness of the products: It is a set of interests, values, characteristics, distinction and aesthesia gives consumers emotion, feeling, and amusement and interests other people. [Ajen, (1985)]

Price Expectation: It is the currency of exchanging the value of the goods; the amount to be paid for a commodity, a service, or a particular asset; the measure of change revolving around the values. Prices are the supply and demand of one or a serie of comodity. Expected prices reflect and conform to the value of a certain goods with quality products [Arnould, E (2003)].

Support services: They are the process of supplying goods to consumers before, during and after sales as counseling, referral, billing, delivery, maintenance, warranty, linked insurance etc to increase the value and benefits for consumers [Herzberg, K. (1996); Oliver, R. (2000)].

Social factors: They are a standard and awareness concept, and mutual trust between an individual and an individual among team. Social factors also affect the level of perceived knowledge, perceptions and attitudes of individuals that create the effect altering motor stimulation, favorites such as wishes, interests and personal agencies may affect individual or a particular social group [Cole et al (1992), Corneo and Jeanne (1997)].

Personal Characteristics: Decisions of the buyer regardless of any time are influenced by personal characteristics, age, gender, occupation, economic circumstances, lifestyle, personality and conception [Arnould, E (2003)].

The Impact of Promotion: It is part of the marketing mix, a set of tools, instruments, props, musical instruments increasing art measures to inform customers about existing product or

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expectation of businesses to attract attention and decision using products of consumers [Fornell, C (2010)].

Distribution Density: It is the extent and intensity of a distribution business engaged in the supply chain system of transfering from the manufacturer to the final user [Herzberg, K. (1996)].

Research model for the factors influencing the decision in using functional food

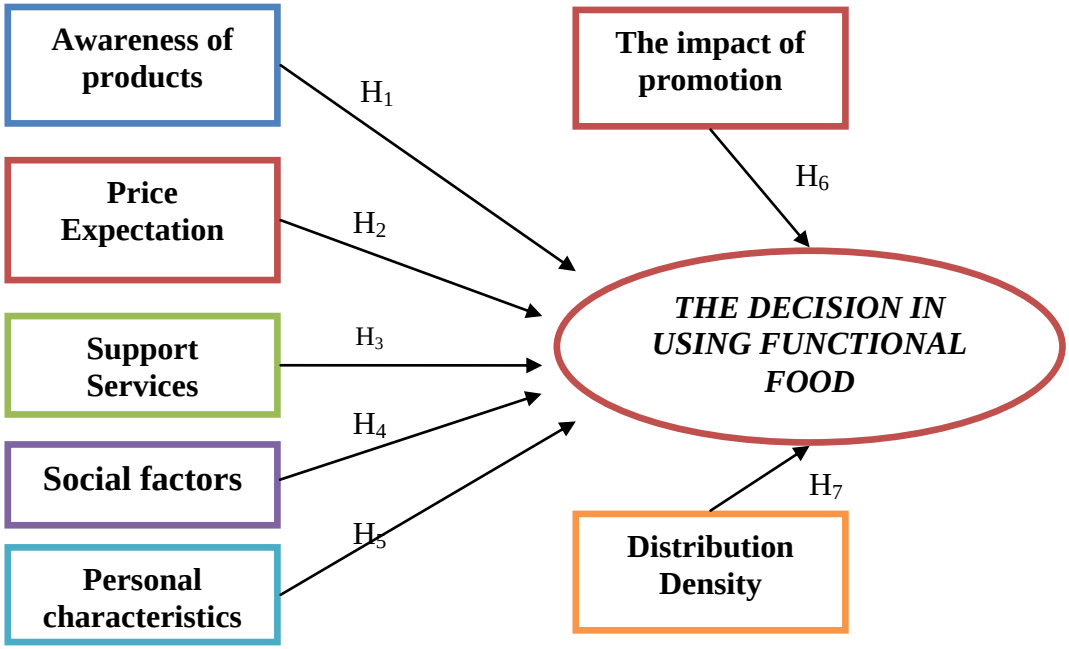

Figure 1: Research model for the factors influencing the decision in using functional food

Hypothesis:

- **H_1:** There is a positive relationship between Awareness of products and the decision in using functional food of consumers in HCMC.
- **H_2:** There is a positive relationship between Price Expectation and the decision in using functional food of consumers in HCMC.
- **H_3:** There is a positive relationship between Support Services and the decision in using functional food of consumers in HCMC.
- **H_4:** There is a positive relationship between Social factors and the decision in using

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functional food of consumers in HCMC.

H_5: There is a positive relationship between Personal characteristics and the decision in using functional food of consumers in HCMC.

H_6: There is a positive relationship between the impact of promotion and the decision in using functional food of consumers in HCMC.

H_7: There is a positive relationship between Distribution Density and the decision in using functional food of consumers in HCMC.

METHODS OF RESEARCH

The two major research methods, qualitative and quantitative research are focused, specifically; the research process has three stages:

Stage 1, Based on theory and the related results mentioned the above, qualitative research method was used for group discussing and leading expert's consultating to select the variables and observed variable groups.

Stage 2, Based on the factors affecting the group decided to use functional food of consumers in HCMC, the authors designed survey questionnaires and collected feedback from 147 consumers in HCMC. The research model includes 7 factors, 27 observed variables (questionnaires), using 5-point Likert scale (Likert scale with a 5-point), Distance value = (Maximum - Minimum)/n = (5 - 1)/5 = 0.8: 1. Completely disagree; 2. Disagree; 3. No opinion/ Normal; 4. Agree; 5. Completely agree. Survey results were entered SPSS 20.0 and Cronbach's Alpha coefficient was used to test reliability of the scale.

Stage 3, after testing the reliability using Cronbach's alpha coefficient, Exploratory Factor Analysis - EFA was analyzed to shrink and summarize the data of the scale (Hoang Trong Chu and Nguyen Mong Ngoc, 2005 "Quantitative Research SPSS"). This method is based on extraction ratio factor (Eigenvalue), under which only those factors having ration (Eigenvalue) greater than 1 will be kept, those smaller than one will not show information better than origin variable because after standardizing, each original variance is 1. The method of extracting the main components (Principal components) and original method of factor rotation (Varimax

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Procedure) were used to minimize the number of variables that have large coefficients for the same factor, which increases explaining the factors. The above results are used to analyze multiple linear regressions to test the assumptions of the model, which considers the impact level of these factors choosing to use in using functional food of consumers in HCMC.

RESEARCH RESULT

Descriptive Statistics for the various factors influencing the decision in using functional food

Table 1: Descriptive Statistics for the various factors influencing the decision in using functional food

QUESTIONS	N	Mean
NTSP1: Convenient, easy using design	147	3.31
NTSP2: Appropriate design	147	3.42
NTSP3: Good material products	147	3.35
NTSP4: Low cost products	147	3.35
MDG1: Quality suitable to the price	147	3.37
MDG2: Competitive price with other suppliers	147	3.41
MDG3: Price suitable to desired	147	3.39
DVHT1: Staffs consult and present product	147	3.31
DVHT2: Staff resolve customers' complaints and inquiries cheerfully, thoughtfully, and completely	147	3.30
DVHT3: Free, dedicated & professional delivery team	147	3.26
DVHT4: Product exchanging and returning policies	147	3.34
AHXH1: Family, friends use products so I try	147	3.35
AHXH2: Family, friends advise to use	147	3.40
AHXH3: Feeling good and suitable to social status when using products	147	3.40
DDCN1: Products suitable to the age	147	3.27

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DDCN2: Products suitable to the physical characteristics	147	3.27
DDCN3: Products suitable to the income	147	3.27
DDCN4: Products show the personality and lifestyle	147	3.34
HDKT1: Newspaper advertising is impressive	147	3.39
HDKT2: The leaflets introducing products Are attractive	147	3.35
HDKT3: Website introducing product is, impressive, attractive and easy to remember	147	3.35
HDKT4: There are many promotions	147	3.34
HDKT5: There are many activities and impressive charity events	147	3.41
MDPP1: There are many diverse forms of distribution	147	3.31
MDPP2: Distributing is coverage	147	3.36
MDPP3: distributing network is convenient	147	3.29
MDPP4: Products meet customer needs	147	3.35
Y1: I will use the products	147	3.41
Y2: I intend to use the product for long time	147	3.35
Y3: I intend to introduce it to friends and relatives	147	3.35

(Source: The researcher's collecting data and SPSS)

Table 1 showed that there were 30 items processed. The average results of auditing the scales showed that most of the scales are average and good from 3.27 to 3.42. Standard deviation (SD) value is around 1.0. This showed that the Data is very good for the testing of Cronbach's Alpha following.

The testing of Cronbach's Alpha for the factors influencing the decision in using functional food

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Table 2: The testing of Cronbach's Alpha for the factors influencing the decision in using functional food

Variables	Code	Factors	Hệ số Cronbach's Alpha
Independent variable	**NTSP**	Awareness of the Product	0.801
	MDG	price Expections	0.890
	DVHT	Support services	0.876
	AHXH	Social factors	0.834
	DDCN	Personal Characteristics	0.832
	HDKT	The impact of promotion	0.897
	MDPP	Distribution Density	0.847
Dependent variable	**Y**	The decision in using functional food	0.823

(Source: The researcher's collecting data and SPSS)

Table 2 showed that the test results of scales had pretty high accuracy on Cronbach's alpha coefficient were > 0.6 and the total correlation coefficients of the variables measurement met the standard (> 0.3). The scales were acceptable. Therefore, the scale would be better, there were 30 items observed left for analyzing factors explored in the next step.

Table 3: KMO and Bartlett's Test for the decision in using functional food (Independent variables)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.845
Bartlett's Test of Sphericity	Approx. Chi-Square	2146.008
	df	351
	Sig.	.000

(Source: The researcher's collecting data and SPSS)

Table 3 showed that the KMO coefficient value = 0.845 > 0.5 => logical factor analysis.

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Therefore, factor analysis reached the standard. Also worth sig. (Bartlett's test) = 0.000 < 0.05 => The variables are correlated in general. This Data is very good for regression analysis.

The results of EFA (Exploratory Factor Analysis) showed the total variance extracted is 72.354 % greater than 50 %. This means that the withdrawing factors would explain 72.354 % for model, 27.646 % is explained by other factors. Extraction ratio factor (Eigenvalue) is greater than 1 that is kept.

The research results show that the model of EFA (Exploratory Factor Analysis) is consistent with the data, calculated into 7 groups of factors and these results may be used for a multiple regression analysis.

Regression analysis for various factors influencing the decision in using functional food

Table 4: the results of Regression analysis for factors influencing the decision in using functional food

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.807	.651	.634	.30058	2.215

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.470	7	3.353	37.111	.000
	Residual	12.558	139	.090		
	Total	36.029	146			

Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients (Beta)	t	Sig.	Collinearity Statistics	
	B	Std.Error				Tolerance	VIF
(Constant)	-.781	.273		-2.856	.005		
X1: HDKT	.088	.060	.088	1.476	.142	.709	1.410

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X2: DVHT	.080	.049	.091	1.614	.109	.782	1.279
X3: DDCN	.235	.059	.245	3.980	.000	.662	1.511
X4: MDPP	.180	.052	.196	3.437	.001	.775	1.291
X5: NTSP	.234	.060	.214	3.897	.000	.834	1.198
X6: MDG	.220	.062	.223	3.549	.001	.635	1.575
X7: AHXH	.207	.062	.192	3.333	.001	.755	1.324

(Source: The researcher's collecting data and SPSS)

Table 4 showed the correlation coefficient adjustment: $R^2 = 0.634$ (verification F, sig. < 0.05); which means 63.4 % of the variable Y shift is explained by the six independent variables (Xi). Coefficient Durbin - Watson (d) = 2.215; some observers n = 147, parameter k = 8, the level of significance of 0.01 (99 %), in the statistical tables Durbin - Watson, dL (less statistical value) = 1.0 and dU (statistical value over) = 3.0. So (dL = 1.0) < (d = 2.215) < [4 - (dU = 3.0) = 2.275] proved that the model has no autocorrelation.

Table 4 showed that the ANOVA is to assess the relevance of the theoretical regression model. The test results F value = 37.111 and Sig. = 0.000 < 0.05 shows the building model is consistent with the data set and the variables included in the model are related to the dependent variable. Generally, regression analysis is 99 % reliability, corresponding to the selected variables with statistically significant at the p < 0.01; the results also show that all variables satisfy the demand. Verification of conformity of the model showed that multicollinearity phenomenon does not violate (VIF < 10).

The results of regression analysis showed five factors (X3: DDCN; X4: MDPP; X5: NTSP; X6: MDG and X7: AHXH) affecting the decision in using functional food. This finding is the basis for proposing solutions to improve the decision in using functional food in HCMC.

CONCLUSIONS

The research results showed that five factors that most influence the decision in using functional food of consumers in HCMC with significance level 5 percent and the degree of influence of

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each factor is different. According to the analysis, five factors have correlating impact on the decision in using functional food of consumers in HCMC, respectively: (1) Support Services; (2) The impact of the promotion; (3) personal characteristics; (4) The distribution density distribution; (5) Social factor. This is an important basis for enterprises to consider the developing strategy of their businesses.

RECOMMENDATIONS

Recommendation for support Services: Enterprises need to enhance the commitment to the customer on warranty, insurance and always comply with what has been committed. Information about products needs to be precise and easy to understand for customers such as terms to ensure product quality in order to avoid misunderstanding. Besides, the quality of the staff needs improving, including counselors, salespeople.

Recommendation for promotion: Enterprises should continue operating events such as Health counseling, distribution of gifts, promotions, discounts to attract more customers to be able to offer and convince customers better. Enterprises in Vietnam should quickly grasp the new marketing trends to make use of the Website, forums, social networks, especially to improve knowledge and skills of Digital Marketing team, Seo, Facebook Fanpage Management for expanding market.

Recommendation for Personal characteristics: Income, personality, occupation, age are the important factors in studying individual characteristics of the customers. Therefore, enterprises should also diversify the spectrum of products and their prices for the customers to choose. Psychological research for demand in consuming of customers should be improved in order to provide customers more choices. Understanding the customer is the first prerequisite and the most important in presenting new products to meet the needs and tastes of consumers that have been increasing.

Recommendation for Distribution Density: Enterprises need to enhance and develop distribution system successful, it takes a lot of time for business to study the psychological behavior, shopping habits of consumers in which look for optimal plan to fit the business.

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Distribution system is in parallel with the promotion strategy of business. Nationwide distribution system needs strengthening because it plays an important role to determine the willingness of customers to use such as expanding the wider system to retail outlets and dealers, and online sales channels.

Recommendation for social impact: Customers' relatives and references are external factors, which are out of the control of the enterprise. Relatives, colleagues, friends and online communities have a major impact on consumers' decisions. Thus, brand image should be built for strong reputation, expanding the influence for being well-known. This will increase the ability to recognize and spread the brand in the market.

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