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RESEARCH ARTICLE

FACTORS AFFECTING SUPPLEMENTARY SERVICES QUALITY: A CASE IN SOME SUPERMARKETS IN VIETNAM.

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Abstract

Vietnam's retail market is dramatically developing in the recent years through modern forms including convenience store, mini-supermarket, supermarkets, hypermarket, department store, discount stores, hard discounter, commercial centers etc. Among famous brands, Co.opmart Systems, for example, known as a leading retail brand in Vietnam, Top 500 retailers in Asia Pacific region in the years 2004-2008, has achieved plenty of success contributing to country development. However, it's difficult for Vietnamese businesses to stably stand in the market with fluctuations caused by the joining of Vietnam to WTO merely based on their previous experiences, especially the fierce competition among retail corporations, such as Giant, Tesco, and Walmart with intention to invest in Vietnam, those with strong financial resources, experiences in the field of retail management create threats of "devouring" local businesses, monopolizing the extremely potential retail market. Hence, the research aims to identify factor affecting supplementary services quality offered by supermarket via evaluation, feelings, and experiences of customers. Based on that research finding, the business has the foundations to design appropriate strategies to satisfy the increasing needs of the customers, and even to find the ways to protect the position and go ahead in the competition in the retail market.

Literature review

Supplementary services, which facilitate the sale of offerings for many retailers, have largely been ignored by researcher. However, in the fierce competition among supermarket representing in Vietnam market, supplementary services play an important role in differentiating the business from the others, engaging customers, creating competitive edge, and contributing to the overall image of an outlet.

Supplementary services either facilitate the use of the core service or enhance it. Facilitating or support services are taken for granted by customers (more likely by users) who expect these to be bundled with the core service and not be additionally charged. For example, installation, activation, registration, and technical support for the voice messaging service ensure its timely availability and uninterrupted use. Enhancing or rapport services provide consequences that are not expected by customers but which are appreciated enough that service providers may either charge for their provision or expect customer loyalty in return.

As Etzel (2014), the value of supplementary services has never been calculated, but it's truly important and significant to customers. Especially in retailing sector, supermarkets in particular, the supplementary services offered are various, check cashing, carry-out, grocery bagging, parking, returns, nutritional information, menu planning, coupon exchange, unit pricing, delivery, and credit, to name a few, which not only help business avoid

the destructive impact of price competition, attract customer in inelastic demand situation, but also provide access to market segments

Supplementary is defined as "the facilitating products are services or goods that must be present for the guest to use the core product" (Kotler, Bowen & Makens, 2010) and the supporting products are additional products that are provided in order to add value to the core product. These supporting products should help to differentiate the own service from the competitors' services (Kotler, Bowen & Makens 2010). As stated by Kotler, Bowen and Makens (2010) the augmented product consists of accessibility, atmosphere, customer interaction with the service organization, customer participation, and the customers' interaction with each other. "These elements combine with the core facilitating and supporting products to provide the augmented product". (Kotler, Bowen & Makens, 2010)

Etzel (2014) suggested kinds of supplementary services offered by retailers including credit, delivery, checking cash, telephone orders, lay away, drive-up windows, returns, alterations, parking, installation, mail orders, gift wrapping, rest rooms, evening or weekend openings.

Lovelock, Wirtz & Chew (2009) presented two kinds of supplementary services, which are facilitating supplementary services and enhancing supplementary services. Facilitating supplementary services include information, order-taking, billing, and payment. These elements are needed for the service delivery and help in the use of the core product (Lovelock, Wirtz & Chew 2009). Enhancing, or also called supporting, supplementary services include consultation, hospitality, safekeeping, and expectations. These elements, as already stated, add value to the service and can assist in differentiating from competitors (Lovelock, Wirtz & Chew, 2009).

This research was conducted in field of supermarket systems. Supermarket was defined as "self-service retail store" with an area of 400 to 2.500 square meters mainly selling grocery (Marc Benoun, 1991). In the United States, defined "Supermarkets are relatively large self-service store with low cost, less profit margin and huge sales volume, to fully satisfy customers' needs for foodstuff, washing powder, detergents and home care items and also more simply defined as "the supermarket is self-service store selling many items to meet daily needs, like beverage, home appliances and other necessary goods".

For such a long time, researchers have tried to define and measure service quality. For example, Lehtinen & Lehtinen (1982) said that the service quality must be judged on two aspects, (1) the process of providing service, and (2) the service results. Gronroos (1984) also suggested that the two components of service quality, which are (1) technical quality being what customers receive and (2) functional quality explaining how services are provided. However, when it comes to service quality, no one can deny the enormous contributions of Parasuraman et al (1998, 1991). Parasuraman et al (1988) defines service quality as the "degree of difference between the service expectations of the consumers and their perceptions of the service". The authors initiated and used qualitative and quantitative studies to build and test the scale of quality in the service sectors (called SERVQUAL scale). SERVQUAL scale was adjusted and tested in many different types of services.

The utilization of quality models and distance as the basis for the evaluation of service quality also had much debate (Carmen, 1990; Babakus & Boller, 1992; Cronin & Taylor, 1992). Cronin & Taylor, 1992 suggested that with SERVPERE model, the perception level of client for the implementing service of business was the best way reflecting service quality. This conclusion has been approved by other authors such as Lee et al (2000), Brady et al (2002). The SERVPERE scale also used 22 statements which are similar to questions about the customer perception in SERVQUAL model, ignoring the expectations.

In brief, there are a numbers of different definitions about services quality through various evaluation criteria. Every researcher has his/her own view on this topic through their studies. After studying literature review, previous researches, and others factor scales measuring supplementary services quality in field of retailing, the author oriented to select model by the following arguments. The inheritance and development of combining and selecting some theoretical basis and researches on factor scale of the previous researchers; it, however, should suit to the objectives of the research.

Foundation for six factors used in factor scale in research model: Delivery, Order and payment methods, Staff attitude, Time of processing orders, Amount to get free supplementary services, Quality of goods delivered.

Research method:

Qualitative research: Qualitative research is applied through group discussion based on the previous studies and theories to establish and develop variables used in definitions and measure scales, so that the definitions and measure scales systems are defined suiting for characteristics of supplementary services quality. In this step, the questionnaire is formed.

Quantitative research: Quantitative research is carried out by collecting data via interview, questionnaire designed in step 1. This research method is used to evaluate the measure scale, test the theoretical model evaluating supplementary services quality offered by supermarket. The factor measure scale is preliminary tested via Cronbach's Alpha and Factors analysis through SPSS18.0 for windows. The regression analysis is applied to test the research model and research hypothesizes.

Sample is selected in a convenient way to estimate the sample size n = 200. Besides, data analysis methods used in the study is the method of linear regression models require large sample size because it is based on a large sample distribution theory (Raykov and Widaman 1995). Thus, the estimated sample size of 200 is appropriate.

Research result:-

Factor analyzing:-

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
Bartlett's Test of Sphericity	Approx. Chi-Square	4714.557
	df	435
	Sig.	.000

The KMO value= 0.804> 0.5 => The factor analysis is suitable

Sig (Bartlett's Test) = 0> 0.05 => The variables are correlated in general.

There are six factors affecting supplementary services quality (Eigenvalues of these 6 factors = 2.347> 1) and these 6 factors can explain 70.265% of variation.

There are six groups of factors suitable to be included in this research model:

- Group GH (Delivery): GH1, GH2, GH3, GH4, GH5, GH6.
- Group DT (Order and Payment methods): DT1, DT2, DT3, DT4, DT5, DT6, DT7, DT8
- Group TD (Staff attitude): TD1, TD2, TD3, TD4
- Group TG (Time of processing orders): TG1, TG2, TG3, TG4
- Group MG (Amount to get free supplementary services): MG1, MG2, MG3, MG4
- Group CL (Quality of goods delivered): CL1, CL2, CL3, CL4

Testing reliability of factors

*** GH (Delivery) factor:**

Reliability Statistics

Cronbach's Alpha	N of Items
.955	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
GH1	17.8833	20.388	.839	.949
GH2	17.8167	20.217	.840	.949
GH3	18.0000	20.695	.866	.946
GH4	17.8333	19.361	.933	.938

GH5	17.7333	21.401	.826	.951
GH6	17.8167	20.435	.865	.946

Testing the group GH using Reliability Statistics Table, Cronbach's Alpha = 0.955> 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables GH1= 0.893, GH2= 0.840, GH3= 0.866, GH4= 0.933, GH5= 0.826, GH6= 0.865 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

*** DT (Order and Payment methods) factor:**

Reliability Statistics

Cronbach's Alpha	N of Items
.907	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
DT1	24.5417	34.894	.735	.893
DT2	24.4583	34.559	.726	.894
DT3	24.5000	37.038	.631	.902
DT4	24.4000	37.379	.624	.902
DT5	24.6167	34.380	.774	.889
DT6	24.8583	35.453	.730	.893
DT7	24.6833	34.142	.761	.890
DT8	24.4667	36.350	.638	.901

Testing the group DT using Reliability Statistics Table, Cronbach's Alpha = 0.907 > 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables DT1= 0.735, DT2= 0.726, DT3= 0.631, DT4= 0.624, DT5= 0.774, DT6= 0.730, DT7= 0.761, DT8= 0.638 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

***TD (Staff attitude) factor:**

Reliability Statistics

Cronbach's Alpha	N of Items
.908	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TD1	11.1542	6.382	.739	.899
TD2	11.0042	6.347	.772	.888
TD3	11.2833	6.020	.813	.874
TD4	11.2958	5.674	.848	.861

Testing the group TD using Reliability Statistics Table, Cronbach's Alpha = 0.908 > 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables TD1= 0.739, TD2= 0.772, TD3= 0.813, TD4= 0.848 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

*** TG (Time of processing orders):**

Reliability Statistics

Cronbach's Alpha	N of Items
.862	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TG1	11.3917	4.925	.666	.842
TG2	11.6125	4.448	.745	.810
TG3	11.5208	4.259	.677	.845
TG4	11.4750	4.635	.775	.801

Testing the group TG using Reliability Statistics Table, Cronbach's Alpha = 0.862 > 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables TG1= 0.666, TG2= 0.745, TG3= 0.677, TG4= 0.775 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

*** MG (Amount to get free supplementary services) factor:**

Reliability Statistics

Cronbach's Alpha	N of Items
.789	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
MG1	11.1750	6.354	.500	.781
MG2	11.1708	6.017	.537	.765
MG3	11.4833	5.079	.596	.740
MG4	11.4458	4.499	.780	.631

Testing the group MG using Reliability Statistics Table, Cronbach's Alpha = 0.789 > 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables MG1= 0.500, MG2= 0.537, MG3= 0.596, MG4= 0.780 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

***CL (Quality of goods delivered) factor:**

Reliability Statistics

Cronbach's Alpha	N of Items
.812	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CL1	10.1125	4.293	.573	.791
CL2	10.1500	4.011	.677	.741
CL3	10.0250	4.250	.696	.738
CL4	10.3250	3.969	.593	.786

Testing the group MG using Reliability Statistics Table, Cronbach's Alpha = 0.812 > 0.7. And the Item-Total Statistics table shows that Corrected Item-Total Correlation of variables CL1= 0.573. CL2= 0.741. CL3= 0.696. CL4= 0.593 which are all greater than 0.3. Therefore the measurement scale is reliable and statistically significant.

3.3 Inspection of reliability of general scale

Reliability Statistics

Cronbach's Alpha	N of Items
.727	30

Cronbach' s Alpha = 0.727 > 0.7 => The scale is reliable and statistically significantl.

3.4 regression equation:

- The correlation coefficient of Y and GH = 0.501 (Sig = 0 < 0.05) and Y is positively correlated with GH, the correlation is very close.
- The correlation coefficient of Y and DT = 0.520 (Sig = 0 <0.05) and Y is positively correlated with DT, the correlation is very close.
- The correlation coefficient of Y and TD =0.020. This factor is rejected because Sig = 0.380 > 0.05
- The correlation coefficient of Y and TG = -0.067. This factor is rejected because Sig = 0.150 > 0.05
- The correlation coefficient of Y and MG = -0.129 (Sig = 0.023 < 0.05) and Y is inversely correlated with GH, the correlation is very close.
- The correlation coefficient of Y and CL = 0.251 (Sig = 0 < 0.05) and Y is positively correlated with GH, the correlation is very close.
-

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.797[a]	.636	.626	.32811	.636	67.811	6	233	.000	2.002
a. Predictors: (Constant), CL, GH, MG, TD, TG, DT										
b. Dependent Variable: Y										

The research results shows:

• Adjusted R Square = 0.626. This means that 62.6% of the Y variation is caused by the above elements.

• Durbin-Watson coefficient = 2.002 lying in the range from 0 to 4, autocorrelation doesn't occur.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.801	6	7.300	67.811	.000[b]
	Residual	25.084	233	.108		
	Total	68.885	239			
a. Dependent Variable: Y						
b. Predictors: (Constant), CL, GH, MG, TD, TG, DT						

The above table shows

• F = 67 811 and Sig = 0<0.05.

• Adjusted R Square coefficient is 0.626> 0.5

• Regression (ESS) = 43.801

• Residual (RSS) = 25.084
• ESS > RSS
➔ Thus, the regression equation is appropriate to the sample and population.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.427	.266		1.606	.110	-.097	.950		
	GH	.297	.023	.519	12.996	.000	.252	.343	.982	1.019
	DT	.348	.025	.549	13.674	.000	.298	.399	.969	1.032
	TD	.028	.026	.042	1.049	.295	-.024	.079	.993	1.007
	TG	.017	.031	.022	.552	.582	-.044	.078	.978	1.023
	MG	-.064	.028	-.090	-2.245	.026	-.120	-.008	.980	1.021
	CL	.259	.033	.317	7.965	.000	.195	.323	.986	1.014

a. Dependent Variable: Y

- Removing TD and TG factor from the regression model (because Sig > 0.05)
- Sig of Beta coefficient of the GH, DT, MG, CL factors are less than 0.05
- The coefficients of VIF variance amplifier are respectively less than 10

So we conclude that among the independent variables GH, DT, MG, CL multicollinearity does not appear and groups of variables are suitable for the linear regression model. We have the linear regression model:

Y (Supplementary Services quality) = 0.427 + 0.519 GH + 0.549 DT + 0.317CL – 0.090 MG

Thus, the final result is composed of four elements:

Factor "Delivery" (GH) has the influence β = 0.519. To improve customer evaluation on supplementary services, the supermarket had better ensure the goods quality delivered by avoiding loading so many goods as well as letting goods outdoors too long. To do that, together with delivering by motorcycles, supermarkets could use trucks. Besides, increasing delivery staff for customers to be more proactive in delivery time and place help them receive the goods swiftly and certifying in time delivery for those with special requirements, delivering in a specific time. Goods delivering helps clients ensure their own safety as well as reduce transportation costs, thus the supermarket could focus on improving and diversifying forms of delivery.

Factor "Order and Payment methods" (DT) has the highest influence β = 0.549. The supermarket has deployed form of order via fax and phone supporting its customers. However, the supermarket should also apply the e-commerce in its business by implementing the order via email and website or using shopping for customers (like what Big C has done). Also, the supermarket should improve the form of payment to bring customers convenience. Most customers do not feel safe when carrying cash on their own, so the supermarket could accept payment through the POS system. Placing ATMs in the supermarket is one suggestion, so that customers could more conveniently withdraw their money. Furthermore, supermarkets should also implement the payment in foreign currency, making customers feel more convenient, especially overseas ones.

Factor "Quality of goods delivered" (CL) has the influence β = 0.317. The delivery by motorcycles makes some goods expose to sunlight too long and reduce their quality. Therefore, with some items such as fresh food, seafood, the supermarket should use refrigerated cars or trucks, limiting the sun exposure which reduces the goods quality. In addition, the use of mini trucks to transport instead of motorcycles would help reduce the torn, deformed and damaged packages because of being compressed, smashed and damaged. Moreover, the sensible distribution of human resources also helps make sure the goods to come in time.

Factor "Amount to get free supplementary services" (MG) has the influence β = – 0.090, which has the negative influence on customers' evaluation on quality of supplementary services. When the conditions and amount to get

free supplementary services is too complicated and too high, it will have the negative effect on customer's satisfaction. Hence, supermarkets should set up a rational minimum bill price so that customers could more easily take advantage of the delivery service. Besides, the supermarket should also implement customer supporting services. In case the bill is valued enough to use service delivery, with over 150,000 VND spent, customers would be refunded the bus tickets. Or in case customers have 2 bills below the minimum price, but the total value is over, the staff should also be flexible by tot up these receipts so that customers could use the delivery service. This should make the customers feel like being paid attention to and respected, and would be satisfied.

Exploratory Factor Analysis (EFA) reduced the number of observed variables and divided them into four components representing for factors impacting on quality of supplementary services offering by supermarkets. Linear regression analysis was implemented to give us linear regression equation as well as level of impact of factors. Result of regression analysis shows that there are 4 factors strongly impacting on supplementary services quality of the supermarket, including "Delivery", "Order and payment methods", "Quality of goods delivered", and "Amount to get free supplementary services" factors. Based on these results, we calculate and determine the impact of each factor that affects quality of supplementary services offering by supermarkets in order to design appropriate policies and methods to enhance customers' satisfaction- an effective way to boost their loyalty as well as strengthen its brand and position in marketplace.

Conclusion:

The research result is a reasonable base for businesses in general, and supermarket in particular to have some hints so as to enhance their supplementary services quality. Owing to opportunities as well as threats brought by the market changes, all businesses need moves to forestall, improve their profession in purchasing operations, distribution, and customer care to get a sustainable foothold in customers' minds. Keeping enhancing services quality to meet customers' satisfaction is the crucial and goal of not supermarkets but also all businesses determining businesses' survival, as well as finding the ways to protect their position in the retail market in future.

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