Factors affecting strategies for sustainable development of Viet Nam's retail supply chain

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Abstract:

This research was conducted to analyze factors affecting strategies for sustainable development of Viet Nam's retail supply chain. Qualitative and quantitative research were used to conduct a survey of 114 managers and experts working in supply chain management in Ho Chi Minh City. The results of the study showed that the strategy for sustainable development of Vietnam retail supply chain is influenced by the following six factors: Manufacturing, Inventory, Location, Transportation, Information and Supply Chain Relationships (Collaborative). Based on the results of the study, solutions were proposed to improve the efficiency of Viet Nam's retail supply chain in regional and global integration process.

Key words: Supply chain, supply chain management, retail management, competitive Strategy, service quality and Vietnam.

INTRODUCTION

Under Viet Nam's WTO Accession Commitment, starting January 11, 2015, Viet Nam's retail market would not have much restriction on retailers coming from abroad. A number of foreign retailers have been streaming into Vietnam, and many domestic retailers have developed and implemented strategies to keep and win market share, which has made a retail market more and more fiercely. In addition to traditional retail

channels such as markets, grocery stores in Vietnam, a modern retail market with three major "racetracks" has formed such as hypermarkets, supermarkets and mini supermarkets - convenience stores.

According to experts' calculations, an average of every 100,000 people needs a hypermarket, a trade center; every 10,000 people need a medium-sized supermarket; and 1,000 people need from 1 to 3 convenience stores. If it is calculated per capita, Vietnamese retail model only meets 1/5. Modern retail model in Viet Nam is still below 20%, much lower than other countries in the region. In Singapore, this ratio is 90%; in China 64%, in Indonesia 43%, in Thailand 46%, in Malaysia 53%. Therefore, many big retailers in the world have come to Vietnam such as Aeon (Japan), Central (Thailand), Big C (France), Lotte Mart (Korea), Metro (Germany) and Wal-Mart, the leading retailer in the world has also desired to invest in large supermarkets in Vietnam in the future.

The battle in the retail market of Vietnam is primarily among foreign retailers and local companies. The big foreign retailers, famous names with good and experienced warehouses in the world retail market are present in Vietnam, which is considered to be superior to local retailers in all aspects. Not only the challenge of large retail chains but also mini supermarkets - convenience stores of local businesses are being infringed by foreign investors. Many Vietnamese retail brands had to leave the "race" and transfer to large foreign corporations. The implicit risk is that with the expanding of foreign retail chains, domestic products will become increasingly unoccupied or difficult to integrate into these systems.

Although the chain of supermarkets and retailers in Vietnam has been improved and upgraded, it still lacks professionalism from supply chain management, warehousing, uncompetitive price, undiversified goods; and the level of quality control of goods has not met the requirements, the

network is not widespread and not commensurate with the varied needs of customers. The retail market in Vietnam exposes many defects; however, the biggest is the lack of linkage among the forces involved in the retail market and the lack of a leader in each business line, therefore every retailer has its way, competing with each other which leads to unequal and harmful development. Consequently, it is time for Vietnam to build a sustainable retail supply chain.

LITERATURE REVIEW

Many studies in the world have identified that the successful factors to supply chain are Inventory, Manufacturing, Location, Transportation and Information (Lee, 2000 and Michael Hugos, 2003). In study, Henry et al., (2012) also argued that the critical factors affecting the success of a supply chain are Enviromental Uncertainty, Information Technology, Supply Chain Relationships, Manufacturing, Business Management and Customer Satisfaction. Huam et al., (2011) also confirmed that the influence of information technology, performance measurement and collaborative are the most powerful factors to the success of the supply chain. In addition, many studies concluded that factors such as Management Support, Human Resource, and Strategy (Christian and Julia, 2015) also have a huge impact on the success of retail supply chains.

During the seminar on "Developing supply chain strategy for Vietnam" in Ho Chi Minh City in 2015, experts also strengthened that the factors affecting strategies for sustainable development of Vietnam's retail supply chain are influenced by the following six key factors: Manufacturing, Inventory, Location, Transportation, Information and Supply Chain Relationships (Collaborative).

Based on the research results of the scholars, the opinions of experts at the scientific workshop, it could identify the factors affecting strategies for sustainable development of

Vietnam's retail supply chain (variable Y) included Manufacturing, Inventory, Location, Transportation, Information and Supply Chain Relationships. Thus, the model of factors affecting strategies for sustainable development of Vietnam's retail supply chain includes 01 dependent variable and 06 independent variables.

Hypothesis:

H1: There is a close link between "Manufacturing" and factors affecting strategies for sustainable development of Vietnam's retail supply chain.

H2: There is a close link between " Inventory " and factors affecting strategies for sustainable development of Vietnam's retail supply chain

H3: There is a close link between "Location" and factors affecting strategies for sustainable development of Vietnam's retail supply chain

H4: There is a close link between "Transportation" and factors affecting strategies for sustainable development of Vietnam's retail supply chain

H5: There is a close link between "Information" and factors affecting strategies for sustainable development of Vietnam's retail supply chain

H6: There is a close link between "Supply chain Relationships" and factors affecting strategies for sustainable development of Vietnam's retail supply chain.

RESEARCH METHODOLOGY

The researcher focused on 02 major research methods as qualitative research and quantitative research, the specific research process undergone three stages as follows. *Stage 1*: Based on the review of relevant theories and results of scientific research regarding the research topic, the researcher used qualitative method for group discussing and consulting leading

experts to select and variables observed into appropriate factors groups. *Stage 2*: Based on the grouping of factors affecting strategies for sustainable development of Vietnam's retail supply chain, the researcher designed survey questionnaires to collect the opinions of 114 enterprises in HCMC. The research model included 06 scales, 22 observed variables (research questions), using Likert 5-point scale, Distance value = (Maximum - Minimum) / n = (5 -1) / 5 = 0.8. Specifically: 1 = Completely disagree; 2 = Disagree; 3 =. No opinion/Normal; 4 = Agree; 5 = Totally agree. Survey results are recorded using SPSS 20.0 and tested scale reliability using Cronbach's alpha coefficients. *Stage 3*: After testing the reliability by Cronbach's alpha coefficients, the researcher conducted Exploratory Factor Analysis (EFA) to "zoom out" and summarize the data of the scale. This method is based on extraction ratio factor (Eigenvalue), under which only those factors extraction ratio or Eigenvalueare greater than 1 will be retained, while the smaller ones will not work for better information summarizes of the original variables; because after the original standardized variance, each variable equals 1. The method of extracting the main components (principal components) and original method of factor rotation (Varimax Procedure) were used to minimize the number of variables having multiple large coefficients at the same factor, which increases the ability to explain the factors. The results then were used to analyze multiple linear regression to test the assumptions of the model, which consider the impact of factors affecting strategies for sustainable development of Vietnam's retail supply chain.

RESEARCH RESULTS AND DISCUSSION

The average test results of the scales show that most of the scales have a fairly high mean from 3,07 to 3,85. This shows that the agreement level of of the experts invited for comments were low. Among them, "Information" and "Supply chain

relationships" were rated worst by experts. The above results show that Vietnamese retail businesses need to step up their alliance, networking and communication activities.

Figure 1: Appearance frequency of retail businesses on networks, forums and online newspapers.
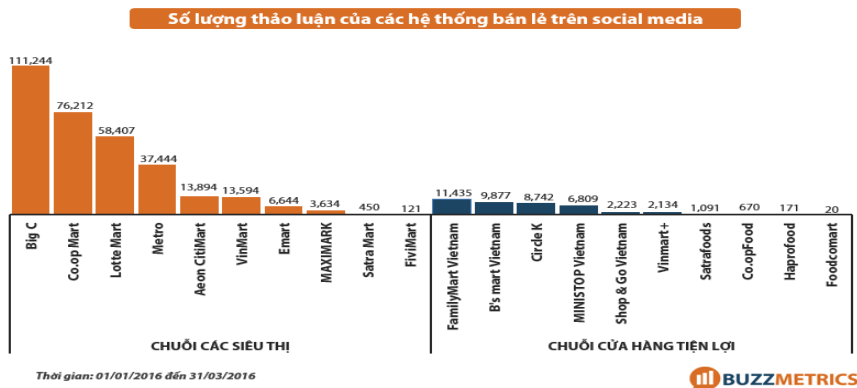
Source: Viet Nam Brands, 2016

In the era of information technology, digital and social networking have been developed quickly, retail enterprises in Vietnam also need to adapt, and make the best thing of information technology, digital and social networks to sell. Many businesses invest deeply in branding along with their customers' opinions on social media, conducting a number of forum posts to attract more and more customers. Looking at the statistics, the number of articles and discussion of supermarkets on social networking sites, forums and online newspapers exceeds that of convenience store chains. This helps consumers identify their brands better than their competitors. Only Coopmart retail brand of Vietnam strongly works on alliance, social networking and communication. This enterprise is also Vietnam's leading retailer of sales.

Figure 2: Activities of supermarket chains on social media
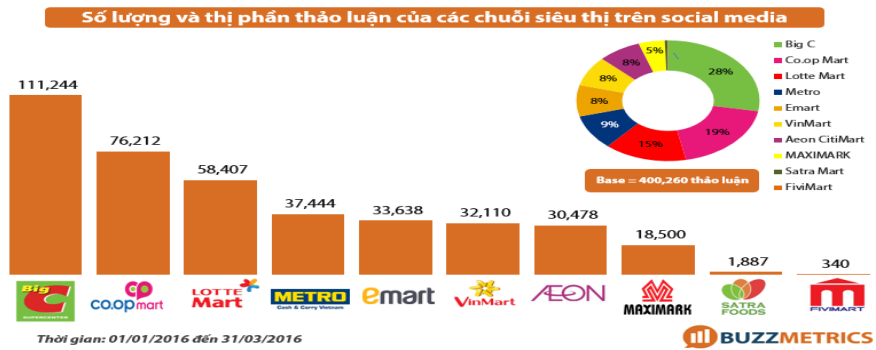
Source: Viet Nam Brands, 2016

Among the supermarket chains, Big C, Co.op Mart, Lotte Mart are the three supermarkets generating the most social talks. The activities of supermarket chains are largely focused on Facebook, in which Co.op Mart, Big C, Lotte Mart, Aeon mall have the most activities fanpage in the first three months of 2016. These positive activities also help businesses increase their sales and market share.

Table 1: Testing the results of reliability

Model	Code	Factors	Cronbach's Alpha
IDV	MA	**Manufacturing**	0,822
	LO	**Location**	0,861
	IN	**Information**	0,898
	IV	**Inventory**	0,827
	TR	**Transportation**	0,780
	SC	**Supply chain Relationships**	0,818
DV	**ST**	**Development strategies**	0,831

Source: The researcher's collecting data and SPSS

The test results scale shows that the scale has good accuracy with Cronbach's alpha coefficient > 0.7 and the correlation coefficients of the total variables of measurement variables meet the allowed standard (> 0.3), the scale will be accepted. The observed variables are used for factor analysis to discover in the next step.

Table 2: Exploratory Factor Analysis (EFA)
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	8312.116
	df	496
	Sig.	.000

Source: The researcher's collecting data and SPSS

The results of factor analysis show that KMO = 0,814 (0.5 <KMO <1), which suggests that factor analysis is appropriate. Sig coefficient of Bartlett's accreditation with sig. = 0.000 (<0.05), the observed variables are correlated in the whole.

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.357	26.117	26.117	8.357	26.117	26.117	4.249	13.277	13.277
2	3.185	9.954	36.071	3.185	9.954	36.071	3.398	10.619	23.895
3	2.471	7.722	43.792	2.471	7.722	43.792	3.321	10.378	34.274
4	2.298	7.182	50.975	2.298	7.182	50.975	3.225	10.079	44.352
5	1.686	5.268	56.243	1.686	5.268	56.243	2.815	8.798	53.150
6	1.311	4.096	**70.201**	1.311	4.096	**70.201**	2.300	7.188	**70.201**
7	.966	3.018	63.357						
8	.944	2.951	66.308						
9	.887	2.773	69.081						
10	.840	2.625	71.706						
11	.767	2.398	74.104						
12	.761	2.377	76.481						
13	.727	2.272	78.753						
14	.690	2.156	80.909						
15	.647	2.020	82.929						
16	.577	1.803	84.732						
17	.568	1.774	86.507						
18	.502	1.567	88.074						
19	.482	1.505	89.579						
20	.433	1.353	90.932						
21	.401	1.254	92.186						
22	.355	1.108	93.294						
23	.328	1.025	94.320						
24	.292	.913	95.233						
25	.273	.852	96.084						
26	.253	.791	96.876						
27	.226	.706	97.582						
28	.201	.629	98.211						
29	.162	.507	98.718						
30	.160	.499	99.216						
31	.132	.411	99.628						
32	.119	.372	100.000						

Extraction Method: Principal Component Analysis.
Source: The researcher's collecting data and SPSS

The results of the analysis show that the coefficient of Eigenvalue = 1.402> 1, the extracted factor has a good sognificance of summary information. Total variance deviation = 70,201 (> 50%). Thus, the six factors extracted were 60,339% variance of observed data.

Table 4: Analysis of multiple linear regression

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
,825ᵃ	,872	,747	,15651

a. Predictors: (Constant), X4, X2, X3, X1, X5,X6
Source: The researcher's collecting data and SPSS

The study results showed that adjusted R2 is smaller and used to assess the relevance of the model which will be safer because it does not exaggerate the relevance of the model. Thus, the compatibility of models with observations is great and dependent variable (Y) is explained by six independent variables in the model.

Table 5: Annova

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120,784	1	8,073	80,213	,000ᵇ
	Residual	5,421	110	,028		
	Total	126,205	112			

a. Dependent Variable: DGC
b. Predictors: (Constant), X4, X2, X3, X1, X5, X6
Source: The researcher's collecting data and SPSS

Accreditation ANOVA is to assess the relevance of the theoretical regression model. The test results F = 80,213 value 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 show that multicollinearity phenomenon does not violate (VIF <10).

Table 6. Factors affecting strategies for sustainable development of Vietnam's retail supply chain

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	9,0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-.221	.200		-2.571	.020	-.469	-.113		
X1	.179	.044	*199*	1.368	.000	.113	.124	.309	1.303
X2	.120	.019	*186*	3.675	.000	.104	. 926	. 670	1.416
1 X3	.108	.031	*315*	5.189	.000	.145	. 126	. 968	1.133
X4	.166	.032	*256*	4.201	.002	.071	. 916	.542	1.147
X5	.214	.036	*109*	3.494	.001	.055	.961	.946	1.283
X6	.231	.009	*419*	7.051	.000	.262	.117	.452	1.613

a. Dependent Variable: Y

Source: The researcher's collecting data and SPSS

The results of regression analysis show that the Tolerance coefficients are> 0.0001, so all variables meet the accepted criteria. The VIF variance magnification coefficients are <10, so there is no multi-collinearity. Sig coefficient of the 6 independent variables X1, X2, X3, X4, X5, and X6 are <0.05, all 6 independent variables were accepted. At the same time, the Beta coefficients> 0 shows that independent variables affects favorably with the dependent variable and and expressed the following priorities: (1) supply chain relations: $\beta = 0,419$; (2) Information: $\beta = 0,315$; (3) Inventory: $\beta = 0,256$; (4) Manufacturing: $\beta = 0,199$; (5) Location: $\beta = 0,186$; (6) Transportation: $\beta = 0,109$. The relationship among strategies for sustainable development of Vietnam's retail supply chain. (dependent variables) with variables such as Manufacturing, Inventory, Location, Transportation, Information and Supply Chain Relationships. The multivariate regressors are as follows: Y = 0,199X1 + 0,186*X2 + 0,315*X3 + 0,256*X4 +

0,109*X5 + 0,416*X6. So, that means when any factor increases, it will also make strategies for sustainable development of Vietnam's retail supply chain increase in a corresponding proportion. Therefore, all hypotheses H1, H2, H3, H4, H5, H6 in the model are accepted.

CONCLUSIONS AND RECOMMENDATIONS

Thus, the results of the study concluded that the strategies for sustainable development of Vietnam's retail supply chain is affected by the following factors: Manufacturing, Inventory, Location, Transportation, Information and Supply Chain Relationships. This result is similar to the results of the author's secondary research and summary of the comments of the previous workshop. The results of this study is the basis for strategies for sustainable development of Vietnam's retail supply chain in the coming time. And based on the results of this study, solutions are proposed to improve the competitiveness of Vietnam's retail supply chain in the future.

Vietnamese retail businesses need to have their own business strategy with key elements to attract customers such as upgrading the quality of goods and services, providing service and implementing innovation and creativity in marketing, bringing more value to customers. Vietnamese retailers make every effort to prove to consumers that their supermarkets, shopping centers are a reliable place to shop.

Enterprises need invest more for the relationship management of customer care in order to increase the interaction with the customer more. These companies need actively collecting data about customers. From this data base, businesses will understand more customers, thereby creating numerous changes to satisfy their increasing demand. Vietnamese enterprises should take advantage of Internet tools, forums and social networks to create opportunities and promote communication with customers.

Vietnamese Enterprises should invest in supply chain management activities. Strengthen testing and supervising, and require the parties to the supply chain are committed to ensuring product quality and safety products, such as maintaining hygiene and strict implementation of the regulations on the traceability of origin of the product, to avoid bad goods, hazardous or antibiotic residues, chemicals pass regulations allowing etc.

Vietnamese retail businesses must have more flexible accounting strategies. If they know how, they can still attract a lot of customers because there are a number of loyal customers. In addition, Vietnamese retail businesses can also "shake hands" with foreign competitors such as joint ventures, associate with them to win together. Vietnamese retail businesses have more financial resources, learn distribution experience, professionalism of retailers coming from foreign countries to increase market share and reinforce their position in the market. Foreign retailers make full use of the image and distribution network of Vietnamese retail businesses to reach customers more easily. Typically, the case of SaigonCo.op worka partnership with Ntuc FairPrice Singaporean retailer to open the hypermarkets in Viet Nam which has been successful in recent time.

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