A Study of Factors That Affect the Marketing Strategy of Logistics Businesses: A Case Study of Vietnam

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Abstract- **The study focuses on analyzing the factors that affect the developmentof marketing strategies by logistics businesses in Vietnam. The study uses qualitative and quantitative methods, through the field survey and correlative regression analysis with selected variables. Research results show that the internalbasesof businesses have a stronger impact than the external baseson the development and implementation of marketing strategies by logisticsbusinesses, especially invisible potential factors such as networks, relationships, logistics technology and system administration capabilities. In addition, the study also shows that businesses are interested in logistics technology infrastructure as external bases have the greatest impact on the development and implementation of marketing strategies of logistics businesses.**
Keywords: Logistics, Marketing Strategy, External Bases, Internal Bases, Logistics Business

I. INTRODUCTION

In fact, there have been many studies directly or indirectly related to logistics and marketing, with certain contributions in both theory and practice with many different approaches [1]. Overseas studies contribute significantly to the theory. Studies have more or less provided the basis for developing marketing strategies for businesses in different business sectors including logistics, and at the same time, some studies have quantified the relationship between marketing strategy and performance of businesses [2, 3]. The study can inherit the theories of foreign studies on the basesto develop marketing strategies, performance scale of businesses, the relationship between marketing strategy and performance of businesses [4]. In addition, domestic studies mainly contribute to practice of the logistics industry at the micro perspective [5]. There has not been any domesticstudy focusing directly on marketing strategies forlogistics businesses in particular. Therefore, the work focuses on studyingthe factors or the bases for development of marketing strategies and quantify the relationship between the bases to develop marketing strategies of logistics businesses in Vietnam. The main contributions of the study are:

Firstly, the study has given two groups of bases to develop marketing strategies for logistics businesses: (i) Bases to develop marketing strategy within logistics businesses: existing marketing strategies, human resources, information technologyapplication capability, financial potential and technical facilities, scale of management and organization, invisible potential [6, 7]. (ii) Bases to develop marketing strategy outside logistics businesses: economic environment, legal environment, logistics technology infrastructure, customers of logistics services, competitors in the logistics market [8].Secondly, the study has also discovered and demonstrated the impact of bases to develop marketing strategies on the quality of marketing strategies, the relationship between marketing strategies and performance of logistics businesses in Vietnam [9].Thirdly, through the division and quantification of the relationship between bases to develop marketing strategies and marketing strategy with performance of logistics businesses that help Vietnamese logistics businessesaware of the importance of marketing strategy to the performance of logistics businesses as well as strengths, weaknesses, opportunities and challenges to Vietnamese logistics businesses so that basescan be made to effectively develop marketing strategies for logistics businesses [10, 11].

The research results will be an important contribution both in theory and practice to the logistics industry in Vietnam on both corporate and state management aspects.

The study focuses on answering the following two key questions:

(1) On what bases do logistics businesses develop their marketing strategies?

(2) What is the relationship between bases to develop marketing strategy, and the performance of Vietnamese logistics businesses?

II. METHODOLOGY

Bases to develop a marketing strategy include external and internal basesoflogistics businesses.

External bases of a logistics business include objective factors, outside the logistics business, which create opportunities as well as threats encountered bythe business, directly or indirectly affect marketing strategy parameters and performance of the business.

Upon studying the external bases to develop marketing strategy of a logistics business, the business should pay attention to the following five factors: (1) Economic factor (economic environment); (2) Legal factor (legal environment); (3) Logistics technology infrastructure; (4) Customers of logistics services; (5) Competitors in the logistics market.

Internal bases to development marketing strategy of a logistics business are the assessments of the actual state and the fluctuation trend of subjective factors/potentials of businesses on the basis of comparing the position of businesses in the industry market. The purpose of internal bases analysis is to correctly assess the strengths, weaknesses of a business and competitive advantages to develop an appropriate marketing strategy for the business.

From that point of view, the study considers the actual state and the movement trend of the factors that are the basesto develop a marketing strategy within logistics businesses including:(1) Existing marketing strategy; (2) Human potential (Human resources); (3) IT application capability; (4) Financial potential and facilities; (5) Process of organization and management; (6) Network of work relations.

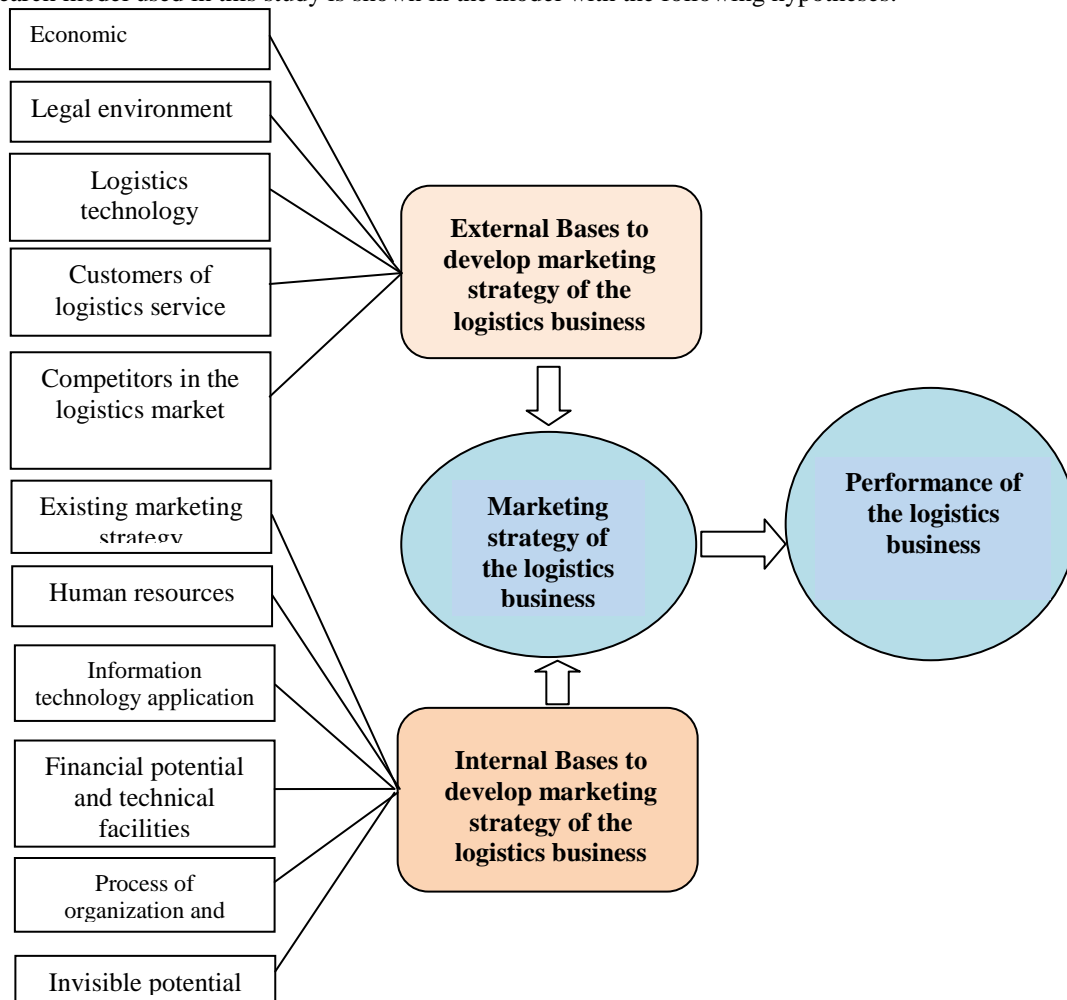The research model used in this study is shown in the model with the following hypotheses:

Fig 1: Research model of study

From the above research model, the authors make the research hypotheses including:

H1: Economic environment is positively correlated with the marketing strategy quality.

H2: Legal environment is positively correlated with the marketing strategy quality.

H3: Logistics technology infrastructure is positively correlated with the marketing strategy quality.
H4: Customers of logistics services are positively correlated with the marketing strategy quality.
H5: Competitors in the logistics market are positively correlated with the marketing strategy quality
H6: Existing marketing strategy is positively correlated with the marketing strategy quality.
H7: Human resources are positively correlated with the marketing strategy quality.
H8: IT application capabilityis positively correlated with the marketing strategy quality.
H9: Technical facilities and financial potential are positively correlated with the marketing strategy quality.
H10: The scale of management and organization is positively correlated with the marketing strategy quality.
H11: The invisible potential is positively correlated with the marketing strategy quality.
H12: The marketing strategy qualityis positively correlated with the performance of a logistics business.

2.1 Data collection methods
Data collection is done flexibly in many ways: face-to-face interviews, phone calls, via mail or e-mail. The data is screened before being included in the analysis.
Selection of research sample: The optimal sample size depends on the expectation of reliability, the method of data analysis, the method of estimating parameters and the distribution rule of the set of options (interviewees' answers). According to the authors' statistics, currently the number of logisticsbusinesses that are operating in Vietnamis552. On this basis, the authors calculated and identified 318 logistics businessesin the total of 552 logistics businesses in Vietnam (Slovin.1984) to conduct the study. Direct interviews were conducted to senior leaders, managers, and one or two employees who are directly involved in the development and of marketing strategies, these employees come from specialized marketing departments or positions of the businesses.

2.2 Analysis method
The methods of data analysis are applied in the study as follows:
Descriptive statistics and inference statistics:Descriptive statistics allow researchers to present data obtained in the form of structure and summation. Descriptive statistics used in this study to analyze and describe data include analysis criteria such as frequency, ratio, average value and standard deviation.
Evaluating the reliability and value of the scale:Reliability is the degree to which the scale is considered consistent and stable. In other words, the reliability of a measurement is the degree to which the measurement avoids random errors. In this study, to evaluate the reliability of each scale, assess the suitability of each item, the Coronbach's Coefficient Alpha shall be used.
Cronbach's Coefficient Alpha is a test of statistics on the degree of strictness that the items in the scale correlate with each other, this coefficient evaluates the reliability of a measurement based on the calculation of each item's variance and the score correlation of each item with the score of the remaining items of the measurement. Cronbach's Coefficient Alpha is calculated by the following formula:

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k}\sigma_i^2}{\sigma_T^2}\right)$$

Where:

α : Cronbach's Coefficient Alpha
k   : Number of items in the scale
σ_T^2 : Variance of the total scale
σ_i^2 : Variance of ith item

Many researchers agree that the alpha coefficient of each scale from 0.8 or more tonearly 1 is good, from 0.7 to nearly 0.8 is usable. There is also a researcher who suggested that the alpha coefficient of 0.6 or more is usable in case the concept being studied is new or new to the respondents in the research context [12]. Therefore, for this study, the alpha coefficient of 0.6 or more is acceptable.
When assessing the suitability of each item, the items with item-total correlationcoefficient of greater than or equal to 0.3 are considered as items with guaranteed reliability, items with item-total correlation coefficient of less than 0.3 will be removed from the scale.

Exploratory Factor Analysis (EFA),Exploratory Factor Analysis (EFA) method is used to check the uni-dimensionality of the scales and the structural value of the measurement.

In this study, the EFA usesthe principal components method with varimax and breakpoint when extracting elements with Eigenvalue ≥ 1. During the EFA of items, the unsatisfactory scales will be rejected. The selection criteria are that the items must have a factor loading of> 0.5, Total Variance Explained of $\geq 50\%$, the coefficient of the KMO test (Kaiser-Meyer-Olkin of Sampling Adeqacy)must be 0.5 or more and Bartlett Test of Sphericity must be statistically significant with sig value of less than 0.05.

Multivariate regression analysis,After the scale of the factors is tested, the next step is to run a linear regression and test with a 5% significance according to the following model:

$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_3 + \ldots + \beta_i * X_i$

Where:

Y: marketing strategy quality of a logistics business

X_i: bases to develop marketing strategy of a logistics business (external and internal bases, $i = 1, 2, \ldots, 11$)

β_0: constant

β_i: regression coefficients ($i > 0$)

Univariate regression analysis,After the scale of the factors is tested, the next step is to run a linear regression and test with a 5% significance according to the following model:

$Y = \beta * X$.

Where:

Y: Performance of a logistics business

X: Marketing strategy quality of a logistics business

β: regression coefficient

The results of the regression analysis will show whether there is an influence of the impact factors generated from the original research model, on the two dependent variables which are the marketing strategy quality and performance of the logistics business, respectively.

III. RESULTS AND DISCUSSIONS

Testing scale with Cronbach's-alpha coefficient, Handled-data survey scales should be tested to verify the reliability of these scales. The method used is the Cronbach-alpha coefficient test.

Test results showed that all scales had relatively high Cronbach-alpha reliability coefficient from 0.706 to 0.916. The observed variables in each scale had relatively high item-total correlation with the lowest level of 0.464, indicating that the observed variables in each scale had a good item-total correlation with the total of variables on that scale. Besides, Cronbach-alpha coefficients if item deleted were lower than the current coefficient values, so there was no need to delete any observed variables in these scales. In summary, these scales have ensured reliability, with no observed variables deleted before further analysis.

Factor analysis, With survey scales that had ensured reliability, the next test used was the EFA (Exploratory Factor Analysis) to determine the convergence of variables in the scales.

Factor analysis with independent variables,Test results showed that KMO coefficient = 0.852> 0.5, Sig = 0.000 <0.05; so the factor analysis results had the ensured reliability. The rotated factor matrix represented 11 factors for analysis; these factors had a total variance explained of 67.98> 50%, Eigenvalues coefficient = 1.81> 1 at the eleventh factor; it therefore could be confirmed that there were 11 factors given by this analysis. These factors did not change observed variables compared to the theoretical scales, which indicated a high convergence of observed variables representing scales.

Factor analysis with dependent variables

For marketing strategy factor:

Test results showed that KMO coefficient = 0.73> 0.5, Sig = 0.000 <0.05, so the factor analysis results had ensured reliability. The results of factor analysis were given only one factor, with the total variance explained of 53.17> 50%, Eigenvalues coefficient = 2.13> 1, it therefore could be confirmed that there was one factor given by this analysis.

Table 1: Results of marketing strategy factors

Variable	Factor loading	Coefficient	Value
CCL1	0.753	Average variance extracted	53.17
CCL4	0.752	Eigenvalues	2.13
CCL3	0.706	KMO	0.73
CCL2	0.703	Sig	0.00

For performance factor: Test results showed that KMO coefficient = 00.870>0.5, Sig = 0.000<0.05; so the factor analysis results had the ensured reliability. They also showed there was one factor given by this analysis with the total variance explained of 55.382>50%, Eigenvalues coefficient = 3.323>1. Thus, the dependent variables showed that the analytical results from the observed variables for the two dependent variables had all one factor, with high convergence, as follows:

Table 2: Results of performance factors

Variable	Factor loading	Coefficient	Value
HS5	0.785	Average variance extracted	55.382
HS1	0.781	Eigenvalues	3.323
HS6	0.766	KMO	0.870
HS3	0.721	Sig	0.00
HS2	0.713		
HS4	0.693		

IV. CORRELATION AND REGRESSION ANALYSIS

Correlation analysis:The correlation between the independent variables and dependent variable was relatively clear when the correlation coefficient reaches above 0.267 and statistical significance level was high. This showed that the factors in the regression model had a good correlation. The correlation of the independent variables was quite low, when the correlation coefficients of most factors were not significant, with the correlation coefficients was quite low compared to level of 0.2. However, statistically significant correlation of dependent variables showed that there may be multicollinearity in the regression analysis, so the VIF multicollinearity test will be used to eliminate inappropriate factors.

Regression analysis, The regression results showed that the corrected R-coefficient was high at 0.725, indicating that 72.5% of variation in the assessment of the marketing strategy quality was reflected in the assessment of internal and outside facilities of businesses in the process of developing the marketing strategies.Durbin-Watson coefficient = 1.980, approx. to 2 showed that there is no autocorrelation between independent variables. The VIF test results also showed that the coefficients were less 2, indicating that the factors in the model did not have the multicollinearity.

The Sig coefficient of the factors in the model all reached the level of 0.000; these factors so all showed the influence on the dependent variable - marketing strategy quality. These results presented that the regression model ensured to meet the requirements of test, and no factors had been deleted from the model. Below is the regression equation:

Marketing strategy quality = 0.273* Invisible potential + 0.237* Human Resources + 0.186* Existing marketing strategy + 0.184* Technical facilities and financial potential + 0.174* IT application capability + 0.160* Process of management and organization + 0.158* Technology infrastructure + 0.153* Customer + 0.136* Economic environment +0.133* Competitor + 0.129* Legal environment.

V. CONCLUSIONS AND IMPLICATIONS

The analysis results also showed that forces to build strategies within logistics businesses had a greater impact than those to build external marketing strategies in influencing the marketing strategy quality. Therefore, it can be said that logistics businesses of Vietnam highly appreciate internal forces than external business conditions. However, the difference is not significant. This can also be considered as their positive optimism in the context of international integration.

For internal factors, the most important one which should be considered during developing the marketing strategy is a network of work relations (invisible potential) with a very high score indicating the greatest influence, with a coefficient of 0.273. This on the one hand demonstrates a part of incomplete transparency of legal system in supporting the procedures to businesses. Other factors were also rated highly proving that these were the importance factors for developing the marketing strategy including the human resources with the coefficient of 0.237, existing marketing strategy showing its third largest influence with the coefficient of 0.186 and followed by the technical facilities and financial potential with the coefficient of 0.184. With today technology-based economy on technology, the fact that Vietnam logistics companies only ranked the IT application capability with the 4th important position is a limitation to overcome with the next influence level of 0.174. The Process of management and organization was the lowest position in internal forces to build the marketing quality of logistics businesses with the coefficient of 0.160. This presents that the Vietnamese logistics businesses have underestimated the importance of Process of management and organization. It should be overcome especially for large businesses.

For external factors to develop the marketing strategies of logistics businesses, the technology infrastructure had the largest impact with the coefficient of 0.158, followed by customer factor with the coefficient of 0.153 followed by the economic environment with the coefficient of 0.136; the competitor factor had the next influence with the coefficient of 0.133 and the lowest influence was the legal environment with the coefficient of 0.129.

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