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## Original Article

# Factors affecting marketing strategy of logistics business – Case of Vietnam

Pham Van Hong<sup>a</sup>, Thanh-Thuy Nguyen<sup>b,\*</sup>

<sup>a</sup> Vietnam National Institute for Science and Technology Policy and Strategy Studies, Vietnam

<sup>b</sup> School of Accounting, IT and Supply Chain, RMIT University, Australia

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## ABSTRACT

An efficient marketing strategy is a critical contribution in any business success including logistics services sector. Understanding the marketing strategies existed and their driven work in logistics enterprises will increase the company's performance. This study aims to examine a variety of factors to find out which factors have more impact on marketing strategy of logistics enterprises in emerging countries generally, and in Vietnam particularly. Using interviews, questionnaire survey and then Exploratory Factor Analysis (EFA) to check the unidimensionality of the scales and the structural value of the measurement, the study's results prove that the internal factors have a more significant impact than the external factors both in developing and implementing of marketing strategies of logistics enterprises in Vietnam, such as business network, human resources and existing marketing strategies. Meanwhile, the external factor having biggest impact on the company's marketing strategies, considered by the logistics enterprises, is logistics infrastructure.

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## 1. Introduction

A critical component for business achievement is having an efficient marketing strategy. There have been quite a few researches on the field of logistics and marketing with certain contributions in both theory and practice from different approaches. Mentioned by [Mentzer and Kahn \(1995\)](#) and [Stock \(1990\)](#), the importance of logistics sector highlighted the necessity to investigate in researches on logistics strategy, theoretically and empirically. All studies are finding different perspectives for the questions: which key criteria are most significant and attract most intention of a company in building their marketing strategies in different types of business?

This study addresses these questions however for logistics enterprises in emerging countries with Vietnam as a case study. It reviews the literature of marketing history to inform the current researches and practices in marketing, which advised strategic approaches into a logically coherent framework allowing managers in different management levels to select the most effective strategy among the achievable alternatives, based on the company's resources, to achieve goals of marketing management ([Shaw, 2012](#)). The study subsequently focuses on exploring the

fundamental factors or criteria affecting marketing strategies in logistics industry and analysing which criteria are considered as having more impact on the marketing strategy quality in a positively coherent context of logistics enterprises' performance. These criteria therefore are categorized in two main groups named external factors and internal factors. They are calculated by the weight of their impacts to the logistics company's marketing strategy.

## 2. Literature review leading to hypotheses

### 2.1. Marketing strategy – dimensions and concepts

Marketing strategy (MS) first was defined by different terms following different authors. Some original researches, for instance, [Borden, Frame, Gordon, and Smith \(1954\)](#) and [Borden \(1986\)](#) named it by the term "marketing mix". [Smith \(1956\)](#) defined it as "*product differentiation*" and "*market segmentation*" as alternative marketing strategies expression. [Dean \(1951\)](#) used the "*skimming*" and "*penetration*" conception to indicate alternative pricing, etc. In 1993, "6C model" was defined by [Wind and Lilien \(1993\)](#) which contains general six-factor MS, including "*Customers*", "*Channels of Distribution*", "*Competitors*", "*Company*", "*Culture*", "*Candidates for Cooperation*". This six-factor model was used to replace the previous 2C models (Company – Customers) and 3C model (Company – Customers – Competitors). In a later study, [Shaoming Zou and Cavusgil \(2002\)](#) revealed of major standardizations of global marketing strategy including product, promotion, channel

\* Corresponding author.

E-mail address: [ngthanhthuy@gmail.com](mailto:ngthanhthuy@gmail.com) (T.-T. Nguyen).

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structure, price, concentration of marketing activities, coordination of marketing activities, global market participation and integration of competitive move. [Corey \(2003\)](#) described MS as a unique and valuable position involving different types of activities, while the Business Dictionary defines it as a comprehensive plan combining all of marketing goals.<sup>1</sup>

Another research trend on MS is to examine the relationship between the marketing strategy and the company's performance. Typically, [Craven, Piercy, and Prentice \(2000\)](#) discovered that the marketing strategy provides a competitive advantage for the company by increasing value-added to the business' customers. Similarly, [Özsomer and Prussia \(2000\)](#) developed a marketing strategy based on three dimensions respectively, named: target market similarity, standardized marketing strategy, and centralized market structure, in which the authors proved that the MS is positively correlated with the performance of businesses. Also, the durable business structure and targets add extra value to the MS.

## 2.2. Marketing strategy – hypotheses for logistics enterprises

As being mentioned in introduction, even though quite a few studies worked on the topic of marketing in logistics industry, there have been a quantity of researches on marketing strategy theoretically and empirically. So far, it is assumed that these factors have the consistent impacts on logistics industry to build the hypotheses.

[Buzzell and Gale \(1987\)](#) and [Rumett \(1974\)](#) were ones of the first authors who proved that well-organized strategy leads to the success of the company's objectives as well as better economic performance. This statement shares the same content to the conclusions of [Özsomer and Prussia \(2000\)](#). [Cacciolatti and Lee \(2016\)](#) stated that the marketing capacities proposed a strong relation to performance and created organizational power. If taking company structure and targets to describe the business scale of a logistics company, some first proposed hypotheses are:

**H<sub>MS</sub>:** The marketing strategy quality (MSQ) is positively correlated with the performance of a logistics business;

**H<sub>OM</sub>:** Durable business scale is positively correlated with the MSQ;

Another discussing topic is about the connection between the competitors and marketing strategy performance. [Dess and Davis \(1984\)](#) and [Slater and Narver \(1994\)](#) tested this relationship by using empirical researches to examine company performance when using different competitive strategies and their implications. Similarly, [Jaworski and Kohli \(1996\)](#) and [Narver and Slater \(1990\)](#) described the prominence of competitors in a relation to competitive intelligence in marketing strategy of a company. The remarkable affiliation among competitive, marketing strategy and performance has also been recognized in the context of transport and logistics organizations, in which [Stock, Gries, and Kasarda \(1998\)](#) proposed a framework for empirical cases to test the relationship among the above-mentioned criteria. More recently, the impact of competitors on marketing strategy effectiveness was observed by [Brewer and Hensher \(2001\)](#), [Kharabsheh, Jarrar, and Simeonova \(2014\)](#), [Sahi, Gupta, and Lonial \(2016\)](#). Therefore, the following hypothesis is proposed:

**H<sub>CP</sub>:** The competitors in the logistics market are positively correlated with the MSQ

The vital role of customer and technological capabilities on the marketing strategy performance has been always considered in parallel but as supporting factors of each other. With the development of technology, firms can interact with customers more efficiently ([Gronroos, 1996](#); [Varki and Rust, 1998](#)). In addition,

[Gifford and Stalbrink \(2002\)](#) illustrated that the key issue for transportation organizations is the customer-oriented strategy when focusing on results and performance. [Chapman, Soonsay, and Kandampully \(2003\)](#) suggested that the logistics innovation should be paid attention to business's technology as one of most importance in three main ways. Likewise, [Lin \(2006, 2008\)](#) proved that logistics service providers (LSPs) can develop their marketing business strategies more effectively using their technological capabilities, in which the IT capacity includes all logistics software, EDI, e-platforms, etc., being used to share information. [Bidgoli \(2010\)](#) agreed that IT capability is one of most important business resources contributing to the success of MS. Discussing about the role of customers on MS, [Rust, Zeithaml, and Lemon \(2000\)](#) confirmed that the focus of MS is to increase long-term customer relationships in all sectors, while [Peterson and Crittenden \(2020\)](#) argued that customer orientation is integrated in marketing strategy of Mexican-American companies. [Brewer and Hensher \(2001\)](#) agreed that both information system and customers have positive impacts on logistics performance. Taking manufacturers, shippers and cargoes receivers as customers of logistics companies, this discover leads to hypotheses:

**H<sub>IC</sub>:** The IT capability is positively correlated with the MSQ

**H<sub>cs</sub>:** The customers in the logistics market are positively correlated with the MSQ

Another relating research direction is to emphasize on the important role of resource capabilities on logistics strategy, named *resource-based view*, in which the connection among resource-product-market strategies to be associated with enhanced performance was mentioned in [Lynch, Keller, and Ozment \(2000\)](#), [Panayides \(2004\)](#), [Nath, Nachiappan and Ramanathan \(2010\)](#) and [Kozlenkova, Samaha, and Palmatier \(2014\)](#), in which [Nath, Nachiappan and Ramanathan \(2010\)](#) even examined further the impacts of resources including all financial and facility potentials, on various measures of logistics enterprises' performance. On the same direction, [Brewer and Hensher \(2001\)](#) defined strategic capacity as stable resources and capabilities is potentially more sustainable than that based solely on product and market positioning. [Bidgoli \(2010\)](#) also believed that financial potential is a business resource for MS. These conclusions are in the lead to the next hypotheses, in which the "financial and facility potentials" include the equity, loan rate, financial resource, facilities available.

**H<sub>FIP</sub>:** The financial and facility potentials are positively correlated with the MSQ

**H<sub>EM</sub>:** The existing marketing strategies are positively correlated with the MSQ

Another factor having impact on marketing strategy performance, which were discussed by different authors, is the business network. [Morgan and Hunt \(1999\)](#) stated that relational resources consist the network between the "organization and its various external partners". Besides, [Rust, Zeithaml, and Lemon \(2004\)](#) illustrated that relationship equity is one of three factors that businesses should allocate their investments. [Miller, Terry, and Weber \(2010\)](#), [Shen, Chiou, Hsiao, Wang, and Li \(2016\)](#) confirmed that networking is a viable market strategy for marketing communication which increases the marketing performance. Both [Brewer and Hensher \(2001\)](#) and [Chapman et al. \(2003\)](#) suggested that the performance of logistics firms can be increased by network of work relations, which leads to the hypothesis:

**H<sub>BN</sub>:** The business network is positively correlated with the MSQ

Examining the correlation between the human resource capacity and the marketing strategy performance, [Day \(1994\)](#) and [Atuahen-Gima \(2005\)](#) discovered that capability building created a firmed foundation for market positioning of a company following the strategy direction ([Murray, Gao, & Kotabe, 2011](#)). [Brewer and Hensher \(2001\)](#) found the positive correlation between human resource and performance in logistics companies. [Bidgoli \(2010\)](#)

<sup>1</sup> <http://www.businessdictionary.com/definition/marketing-strategy.html>.

presumed that human resource is potential contribution to MS. In addition, the relationship of the top management with external parties increases the power sharing ([Jurkus, Park, & Woodeard, 2011](#)) and performance ([Buyl, Boone, Hendriks, & Matthysseens, 2011](#)). Gathering personnel capacity building, HR development and management power into a term "Human resource", theses outcomes indicated some conclusions of other previous mentioned studies and it brings an extra hypothesis:

**H<sub>HR</sub>**: The human resources are positively correlated with the MSQ

There are a couple of studies mentioning about the connection between the business environment and the company's performance. [Brewer and Hensher \(2001\)](#) discovered the positive correlation between the legal environment factor and the firm's strategy and performance. Lin (2016) demonstrated that the supporting legal environment created by the government brought positive impacts on IS infrastructure and therefore the company performance. Also, it is assumed that if the economy has a positive growth rate and low inflation rate, this economic environment generates more opportunities for firms' better performance ([Dinh & Nguyen, 2011](#)).

**H<sub>EE</sub>**: The economic environment is positively correlated with the MSQ

**H<sub>LE</sub>**: The legal environment is positively correlated with the MSQ

### 2.3. Marketing strategy of logistics enterprises in Vietnam context

Vietnam is an emerging economy in Southeast Asia, located within an enviable geographical position among the other ASEAN members (Association of Southeast Asian Nations). According to the World Bank's logistics reports and [BMIRESEARCH \(2016\)](#), Vietnam and other Asian emerging economies have continuing problems regarding fragmented logistics services provided at higher costs to the customers, including the critically underdeveloped logistics and supply chain IT infrastructure.

As stated by [VOV \(2017\)](#) and [VNA \(2017\)](#), Vietnam's logistics industry itself is rather small compared to other sectors in Vietnam with only 3200 enterprises in 2018 compared to a total of 700,000 enterprises throughout the country, despite the potential and the important role of this sector regarding trading activities in the ASEAN region in which Vietnam has the highest economic growth rate in Southeast Asia.

Though there is a huge potential for the logistics industry of Vietnam, the sector is still underdeveloped with small-size domestic logistics firms, high logistics costs, and limited logistics infrastructure ([Nguyen, 2016](#); [Trang & Ttie, 2013](#)). The next hypothesis therefore focuses on the relationship between logistics infrastructure (For instance, the transport system connecting to the network of warehouses and distribution centers which the firms can facilitate) and the MSQ. [Nguyen \(2016\)](#) discussed about the logistics infrastructure in Vietnam in relation to the performance of logistics companies. [Nguyen, Janduth, and Trinh \(2017\)](#) examined how the ownership of logistics business affected the logistics firms' performance in Vietnam. [Duy \(2007\)](#) with the study on developing strategy of APL Logistics Vietnam. [Son \(2010\)](#) discussed the marketing strategy of footwear companies in Hai Phong in his PhD dissertation. The results of these studies bring the last hypothesis:

**H<sub>LI</sub>**: The logistics infrastructure is positively correlated with the MSQ

To highlight the differences between this study and other previous researches, [Table 1](#) lists prior major studies examining the impacts of internal and external factors of marketing strategy on the performance of logistics enterprises. As the matter of fact, there has been quite a few publications recorded the context of marketing strategy in logistics enterprises but there are ones with relating

contents. It means, this study must use the results of researches working with other industries to build the list of hypotheses, under the assumption that these findings are likewise proper for logistics industry.

Assuming that high quality of the logistics strategies will create positive impact on the company performance, this study similarly generates both internal and external factors, however, with the hypotheses proposed based on prior studies on logistics and other industries in the literature review.

The external factors comprise four groups of factor named logistics infrastructure, the customers, the competitors and the environment (both economic and legal environment), while the internal factors contain six groups of factor called the existing marketing strategies, the human resources, the IT capability, the financial and facility potentials, the scale of organization, and the business network. Each group contains variety of factors as presented in [Table 2](#).

## 3. Research methodology

### 3.1. Research conceptual model

The research model is therefore presented in [Fig. 1](#), in which the external and internal factors will affect the MSQ and therefore have impacts on the performance of logistics enterprises.

From the literature review and the research model, the research hypotheses are rearranged following sequences of external and internal factors:

1. **H<sub>EE</sub>**: The economic environment is positively correlated with the MSQ.
2. **H<sub>LE</sub>**: The legal environment is positively correlated with the MSQ.
3. **H<sub>LI</sub>**: The logistics infrastructure is positively correlated with the MSQ.
4. **H<sub>CS</sub>**: The customers in the logistics market are positively correlated with the MSQ.
5. **H<sub>CP</sub>**: The competitors in the logistics market are positively correlated with the MSQ.
6. **H<sub>EM</sub>**: The existing marketing strategies are positively correlated with the MSQ.
7. **H<sub>HR</sub>**: The human resources are positively correlated with the MSQ.
8. **H<sub>CS</sub>**: The IT capability is positively correlated with the MSQ.
9. **H<sub>CF</sub>**: The financial and facility potentials are positively correlated with the MSQ.
10. **H<sub>OM</sub>**: The scale of organization is positively correlated with the MSQ.
11. **H<sub>BN</sub>**: The business network is positively correlated with the MSQ.
12. **H<sub>MS</sub>**: The MSQ is positively correlated with the performance of a logistics business.

### 3.2. Data collection and data sample size

The data were collected in Vietnam as the country of case study. The logistics enterprises selected for data collection are 2PLs and 3PLs companies. Both in-depth interviews and survey by questionnaires are conducted in which the interviews are fulfilled by either face-to-face meetings or through phone calls. Interviews are proceeded with only senior managers (from position of Deputy Director) of the logistics companies as well as representatives of Vietnam Logistics Association. Questionnaires are sent by emails to both managers and staff of the logistics companies.

**Table 1**  
Literature of factors affecting marketing strategy/logistics firms' performance.

No.	Authors	Year	Research Areas	Research scope	Factors	Categories	Objectives	Impact
1.	Nath et al.	2010	Impact of factors on logistics firms' performance	Modeling with assumed data	Marketing expenditure Intangible Resource Relationship expenditure Customer Base	Internal Internal Internal External	Firm's Performance	Positive Positive Positive Positive
2.	Lin, C.-Y	2006	Factors affecting in logistics information systems	Modeling, Taiwan	Human Resource Environment supported by government	Internal External	IS Performance	Positive Positive
3.	Panayides, P. M.	2004	Impacts of Marketing Strategies on Company Performanc	Empirical, North America, Europe	Absolute cost advantage Differentiation Market segmentation Market orientation Customers Competitors	Internal Internal Internal Internal External External	Firm's Performance	Negative Positive Positive Positive Negative Negative
4.	Chapman et al.	2003	Factors nurturing innovation in logistics services	Literature Review	Technology Knowledge Relationship Network	Internal Internal Internal	Firm's Performance	Positive Positive Positive
5.	Gifford and Stablerink	2002	Strategic partnership in transportation sector	Case study, USA	Strategic partnership	Internal	Firm's Performance	Positive
6.	Brewer and Hensher	2001	Impact of factors on logistics firm' strategy and performance	Empirical, Comparison between logistics firms and non-logistics firms	Information systems EDI Human resource Communication Customers Environment	Internal Internal Internal External External	Firm's strategy/performance	Positive Negative Positive Positive Positive Positive
7.	Lynch, D. F., Keller, S.B. & Ozment, J.	2000	Affects of logistics capacity & strategy on firm's performance	Empirical, USA and Canada	Cost leadership strategy Process capabilities Value-added service capabilities	Internal Internal Internal	Firm's Performance	Positive Positive Positive
8.	Stock et al.	1998	Role of logistics system on firm's performance	Conceptual	Competitive environment Logistics infrastructure Organization structure Organization strategy Logistics integration	External External Internal Internal Internal	Firm's Performance	No evaluation

Source: Literature Review.

**Table 2**

Factors analyzed in each group in the study.

No.	Group of factors	Studied factors
<b>External factors</b>		
EE	Economic environment	Economy's growth rate, FDI, inflation, exchange rate
LE	Legal environment	Policies, regulations on logistics services
LI	Logistics infrastructure	Transport systems, warehouse systems and connections
CS	Customers (2HP)	Manufacturers, shippers and receivers
CP	Competitors	Other logistics companies in the market
<b>Internal factors</b>		
EM	Existing strategies	Marketing strategies already worked on the market
HR	Human resource	Personnel capacity building, top management, HR policies
IC	IT capacity	e-platforms, EDI, logistics software
FIP	Financial & facility potentials	Equity, loan rate, financial resource, facilities available
OM	Scale of business	Companies' structure, targets, visions
BN	Business networks	Networks with local governments, business partners and customers

Source: Literature Review.

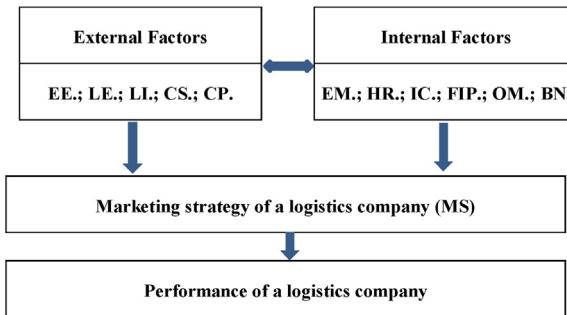


Fig. 1. The conceptual model.

As the number of logistics enterprises in Vietnam is about 3200 enterprises in 2018, the number of selected logistics businesses for the study is 318 companies in Ha Noi, Hai Phong and Ho Chi Minh city as three largest industrial cities of Vietnam (approximately 10% of total number of logistics companies), in which the representatives for in-depth interviews are 31 senior managers in 31 companies (approximately one per cent), the numbers of managers and employees designated for questionnaires are 318 and 636 persons, respectively, making 954 as the total of questionnaires departed. Total of the feedbacks collected is 573 in which there are 248 from managers (78%) and 325 from staff (51%). The number of feedbacks received is therefore moderately efficient for the analysis.

### 3.3. Data analysis

In this study, Cronbach's alpha is used to evaluate the reliability of each scale and assess the suitability of a set of items. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group, in which a "high" value for alpha does not imply that the measure is unidimensional. Additional analyses can be performed in addition to measuring internal consistency if an evidence that the scale in question is unidimensional is required to provide. Technically, Cronbach's alpha is not a statistical test, but it is a coefficient of reliability (or consistency).

Next step, the study uses Exploratory Factor Analysis (EFA) to check the unidimensionality of the scales and the structural value of the measurement. The unidimensionality of a scale is defined as the existence of just one construct in a set of observed variables (Garver & Mentzer, 1999), which is the degree to which a set of observed variables represents one and only one unique underlying concept. Unidimensionality of a scale is determined by factor loading of observed variables with the factor represented by those variables. 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  $\geq 50\%$  (Anderson & Gerbing, 1988) must be 0.5 and Bartlett Test of Sphericity must be statistically significant with sig value of less than 0.05.

### 4. Research findings

Academically, it is still under discussion that which value of alpha coefficient of each scale is considered good. Some researchers agreed with the scale from 0.7 to nearly 1, however, some other researchers suggested that the alpha coefficient of 0.6 or more is usable in case of a new concept, or it is still new to the respondents in the research context (Nunnally, 1978; Peterson, Gerald, & Richard, 1984). Therefore, this study considers that the alpha coefficient of 0.6 or more is adequate. In addition, when assessing the suitability of each item, the items with item-total correlation coefficient 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.

This study provides the Cronbach-alpha reliability coefficient from 0.706 to 0.916. Note that the observed variables in each scale have relatively high item-total correlation with the lowest level of 0.464, indicating that the observed variables in each scale have a good item-total correlation with the total of variables on that scale.

The result of testing scale with Cronbach's-alpha coefficient is presented in Tables 3–5. Besides, Cronbach-alpha coefficients if item deleted are lower than the current coefficient values, means there is no request to delete any observed variables in these scales. In conclusion, these scales have ensured reliability, with no observed variables deleted before further analysis.

In next step, the EFA uses the principal components method with varimax and breakpoint when extracting elements with Eigenvalue  $\geq 1$ .

In these tables, the test results display that all scales had relatively high.

#### 4.1. Factor analysis with independent variables

Test results of this study show that KMO coefficient =  $0.852 > 0.5$ ,  $\text{Sig} = 0.000 < 0.05$ ; means the factor analysis results had the ensured reliability. The rotated factor matrix represents 11 factors for analysis; these factors have a total variance explained of  $67.98 > 50\%$ , Eigenvalues coefficient =  $1.81 > 1$  at the eleventh factor; it therefore can be confirmed that there are 11 factors given by this analysis. These factors do not change the observed variables compared to the theoretical scales, which indicates a high convergence of observed variables representing scales as Table 6.

**Table 3**

Testing scale with Cronbach's-alpha coefficient for external factors.

Variables	Item-total correlation	Cronbach's Alpha if item deleted	Cronbach's Alpha
<b>Economic environment</b>			
EE1 (High economic growth rate)	0.743	0.903	0.916
EE2 (Large flow of FDI)	0.762	0.901	
EE3 (Low inflation rates)	0.725	0.906	
EE4 (Economic policies support the MSQ)	0.776	0.899	
EE5 (Stable foreign exchange rate)	0.792	0.896	
EE6 (Market structure/import/export products are mainly diversified and highly developed)	0.775	0.899	
<b>Legal environment</b>			
LE1 (Legal system is well completed)	0.751	0.843	0.880
LE2 (Regulations/policies are strictly complied with current legal provisions)	0.780	0.831	
LE3 (Int. practices/customs positively impact on MSQ)	0.741	0.846	
LE4 (Int. commitments/bilateral agreements affect MSQ)	0.693	0.865	
<b>Logistics infrastructure</b>			
LI1 (Infrastructure is well developed for smooth transports)	0.734	0.790	0.855
LI2 (Goods flows are well managed and controlled)	0.712	0.810	
LI3 (Warehouses system provides good storage and safety)	0.733	0.790	
<b>Customers</b>			
CS1 (Growth market demand at present)	0.608	0.776	0.804
CS2 (Increased volume of cargoes throughput)	0.659	0.723	
CS3 (Growth market demand in future)	0.686	0.695	
<b>Competitors</b>			
CP1 (Increased number of logistics businesses)	0.650	0.818	0.846
CP2 (Increased competition from foreign enterprises)	0.691	0.801	
CP3 (Foreign enterprises are better in business management)	0.679	0.806	
CP4 (Foreign enterprises have better technology, capacities)	0.711	0.792	

**Table 4**

Testing scale with Cronbach's-alpha coefficient for internal factors.

Variables	Item-total correlation	Cronbach's Alpha if item deleted	Cronbach's Alpha
<b>Existing marketing strategies (EM)</b>			
EM1 (EMS bases on actual business practices)	0.644	0.841	0.861
EM2 (EMS bases on based on experience of individual leaders)	0.673	0.833	
EM3 (No issue of budget to build EMS)	0.717	0.822	
EM4 (Sufficient tools to build EMS)	0.605	0.850	
EM5 (Core values and competitiveness are well managed)	0.759	0.812	
<b>Human Resource</b>			
HR1 (Appropriate scale of HR)	0.717	0.873	0.892
HR2 (A qualified number for positions of HR)	0.740	0.868	
HR3 (All employees are hard workers)	0.731	0.870	
HR4 (Employees are trained/retrained regularly)	0.743	0.867	
HR5 (HR has good working experience)	0.750	0.866	
<b>IT capability</b>			
IC1 (Effective websites)	0.627	0.766	0.812
IC2 (Effective business e-platform)	0.691	0.735	
IC3 (Preferable IT in management)	0.594	0.782	
IC4 (Specialized software for business)	0.612	0.773	
<b>Financial &amp; facility potentials</b>			
FIP1 (Good equity & good facilities for business)	0.715	0.896	0.908
FIP2 (Easily mobilize credit capital and high-tech platform)	0.719	0.895	
FIP3 (Loan rate is supportive to full technology-bases launched)	0.724	0.895	
FIP4 (Information of financial resource is well-managed)	0.711	0.896	
FIP5 (Financial and operational systems are always stable)	0.707	0.896	
<b>Scale of organization</b>			
OM1 (Organizational structure is relatively reasonable in terms of scale)	0.643	0.808	0.840
OM2 (Targets & vision are clearly stated in writing)	0.669	0.801	
OM3 (Well managing skills of managers)	0.639	0.809	
OM4 (Clear instructions/guidance for employees)	0.634	0.811	
OM5 (Positive uphold the assessment, inspection and control)	0.634	0.811	
<b>Business network</b>			
BN1 (Good reputation in the business network)	0.686	0.822	0.856
BN2 (Wide and good social relations of leaders)	0.723	0.806	
BN3 (Good business position with potential development)	0.708	0.813	
BN4 (Well-known for loyalty to customers/partners)	0.678	0.825	

**Table 5**

Testing scale with Cronbach's-alpha coefficient for MSQ and performance.

Variables	Item-total correlation	Cronbach's Alpha if item deleted	Cronbach's Alpha
<b>Marketing Strategy Quality</b>			
MS1 (Compliance with the characteristics of the log. market)	0.517	0.626	0.706
MS2 (Well linked among components of mixed marketing)	0.464	0.659	
MS3 (Advantages over competitors' marketing strategy)	0.467	0.658	
MS4 (Ensures the targets of logistics business)	0.517	0.627	
<b>Performance</b>			
LP1 (Businesses scale increase relatively to business's targets)	0.658	0.803	0.838
LP2 (Businesses scale increase relatively to logistics industry)	0.580	0.818	
LP3 (Businesses' profits increase relatively to businesses targets)	0.588	0.817	
LP4 (Businesses' profits increase relatively to profits of logistics industry)	0.557	0.823	
LP5 (Businesses' market share increases relatively to the targets)	0.662	0.802	
LP6 (Businesses' market share increases relatively to average market share of logistics industry)	0.638	0.807	

**Table 6**

Factor analysis with independent variables.

Variables	1	2	3	4	5	6	7	8	9	10	11
FIP3	0.790										
FIP4	0.788										
FIP2	0.782										
FIP1	0.781										
FIP5	0.778										
EE5		0.856									
EE4		0.847									
EE6		0.845									
EE2		0.832									
EE1		0.816									
EE3		0.801									
HR4			0.834								
HR5			0.830								
HR2			0.825								
HR3			0.825								
HR1			0.798								
EM5				0.857							
EM3				0.835							
EM2				0.786							
EM1				0.756							
EM4				0.734							
OM2					0.800						
OM1					0.763						
OM3					0.760						
OM5					0.753						
OM4					0.749						
LE2						0.88					
LE1						0.858					
LE3						0.847					
LE4						0.818					
BN2							0.844				
BN1							0.816				
BN3							0.815				
BN4							0.794				
CP4								0.838			
CP1								0.819			
CP3								0.811			
CP2								0.787			
IC2									0.822		
IC1									0.777		
IC4									0.761		
IC3									0.758		
LI1										0.870	
LI3										0.866	
LI2										0.855	
CS3											0.851
CS2											0.841
CS1											0.799
Average variance extracted (AVE)	9.699	18.046	24.934	31.303	37.391	43.201	48.688	54.094	59.192	63.782	67.988
Eigenvalues	7.011	4.223	3.771	3.231	2.959	2.8	2.612	2.371	2.043	1.843	1.81
KMO = 0.852	Sig = 0.000										

**Table 7**  
Results for MSQ factor.

Variables	Factor loading	Coefficient	Value
MS1	0.753	Average variance extracted	53.170
MS4	0.752	Eigenvalues	2.130
MS3	0.706	KMO	0.730
MS2	0.703	Sig	0.000

**Table 8**  
Results for the performance factor.

Variable	Factor loading	Coefficient	Value
LP5	0.785	Average variance extracted	55.382
LP1	0.781	Eigenvalues	3.323
LP6	0.766	KMO	0.870
LP3	0.721	Sig	0.000
LP2	0.713		
LP4	0.693		

#### 4.2. Factor analysis with dependent variables

When tested for the MSQ factor, the test results explain that KMO coefficient = 0.73 > 0.5, Sig = 0.000 < 0.05, means the factor analysis results have ensured reliability. The results of factor analysis are given to only one factor, with the total variance explained of 53.17 (>50%), Eigenvalues coefficient = 2.13 (>1), it therefore can be confirmed that there was one factor given by this analysis (**Table 7**).

When tests for the performance factor, the test results illustrate that KMO coefficient = 0.870 > 0.5, Sig = 0.000 < 0.05; means the factor analysis results have the ensured reliability. They also mean there is one factor given by this analysis with the total variance explained of 55.382 > 50%, Eigenvalues coefficient = 3.323 (>1). Thus, the dependent variables prove that the analytical results from the observed variables for the two dependent variables have all one factor, with high convergence, as in **Table 8**.

Finally, the research hypothesis is tested by Correlation and Regression Analysis (CRA), in which the correlation between the independent variables and dependent variable is relatively clear when the correlation coefficient reaches above 0.267 and statistical significance level is high. This result indicates that the factors in the regression model have a good correlation. The correlation of the independent variables is quite low, when the correlation coefficients of most factors are not significant, with the correlation coefficients is quite low compared to level of 0.2. However, significant correlation of dependent variables statistically demonstrates that there may be multicollinearity in the regression analysis, so the VIF multicollinearity test should be used to eliminate inappropriate factors.

The regression results indicate that the corrected R-coefficient was high at 0.725, meaning 72.5% of variation in the assessment of the marketing strategy quality is reflected in the assessment of internal and outside facilities of businesses in the process of developing the marketing strategies.

The VIF test results also present the coefficients of less than two, indicating that the factors in the model do not have the multicollinearity. The Sig coefficient of the factors all reached the level of 0.000, means these factors all show the influence on the dependent variables – marketing strategy quality. These results prove that the regression model ensures to meet the requirements of test, and no factors had been deleted from the model. The analysing results of the impact of factors affecting marketing strategy of logistics businesses are presented in the **Table 9**. The Durbin-Watson coefficient = 1.980, approximately to two, illustrates that there is no autocorrelation among independent variables.

The regression equation therefore is presented as below:

$$\begin{aligned} \text{Marketing strategy quality} = \\ 0.273 * \text{Business network} + \\ 0.237 * \text{Human Resources} + \\ 0.186 * \text{Existing marketing strategies} + \\ 0.184 * \text{Financial\&infrastructure potentials} + \\ 0.174 * \text{IT capability} + \\ 0.160 * \text{Scale of organization} + \\ 0.158 * \text{Logistics Infrastructure} + \\ 0.153 * \text{Customer} + \\ 0.136 * \text{Economic environment} + \\ 0.133 * \text{Competitor} + \\ 0.129 * \text{Legalenvironment} \end{aligned}$$

The results of the analysis confirmed that internal and external factors created different impact on MSQ development for logistics businesses in Vietnam market. Taking internal factors into consideration, the most important factor to be considered is the business network which has a highest coefficient of 0.273, indicating the greatest influence. Similarly, another factor which is rated relatively high to become a second importance factor for developing the MSQ is the human resources with the coefficient of 0.237. The less and less important factors to marketing strategy development for logistics businesses in Vietnam relatively are the existing marketing strategies (0.186), the financial and facility potentials (0.184), the IT capability (0.174). Unexpectedly, the scale of organization having the lowest coefficient of 0.160, which demonstrates that the Vietnamese logistics businesses have underestimated the importance of the scale of organization, which could be deserved higher attention by experienced international logistics businesses.

Discussing on the impacts of external factors relating to the MSQ of logistics businesses, the logistics infrastructure has the deepest impact with the coefficient of 0.158, following by the customer factor (0.153), the economic environment (0.136) and the competitor factor (0.133). Surprisingly, the legal environment has the lowest influence with the coefficient of 0.129 only, which partly reveals an incomplete transparency of legal system in supporting the businesses.

The results correspondingly display the situation that in Vietnamese market the internal factors create a slightly greater impact than external factors in developing the marketing strategy for logistics businesses, even though this extra impact is not significant.

**Table 9**  
Correlation analysis.

Factor	Economic environment	Legal environment	Logistics infrastructure	Customer	Competitor	Human Resources	Financial & facilities potentials	IT capability	Existing marketing strategy	Scale of organization	Business Network	Marketing Strategy	Performance
Economic environment	1	0.061	0.013	.165**	.090**	.079*	.092**	.068*	.117**	.155**	0.062	.291**	.260**
Legal environment	0.061	1	.161**	.102**	.078*	0.013	.087*	.123**	0.065	.104**	0.04	.267**	.190**
Logistics infrastructure	0.013	.161**	1	.134**	.134**	.096**	.131**	.158**	0.051	.095**	.115**	.347**	.245**
Customer	.165**	.102**	.134**	1	.175**	.106**	.091**	.117**	.123**	.120**	.093**	.361**	.266**
Competitor	.090**	.078*	.134**	.175**	1	.144**	.144**	.122**	.088**	.108**	.122**	.349**	.282**
Human Resources	.079*	0.013	.096**	.106**	.144**	1	.185**	.097**	.124**	.196**	.121**	.434**	.304**
Financial & facilities potentials	.092**	.087*	.131**	.091**	.144**	.185**	1	.087*	.121**	.126**	.074*	.381**	.312**
IT capability	.068*	.123**	.158**	.117**	.122**	.097**	.087*	1	.078*	.181**	.318**	.424**	.324**
Existing marketing strategy	.117**	0.065	0.051	.123**	.088**	.124**	.121**	.078*	1	.154**	.085*	.359**	.248**
Scale of organization	.155**	.104**	.095**	.120**	.108**	.196**	.126**	.181**	.154**	1	.173**	.399**	.303**
Business network	0.062	0.04	.115**	.093**	.122**	.121**	.074*	.318**	.085*	.173**	1	.473**	.290**
Marketing strategy	.291**	.267**	.347**	.361**	.349**	.434**	.381**	.424**	.359**	.399**	.473**	1	.689**
Performance	.260**	.190**	.245**	.266**	.282**	.304**	.312**	.324**	.248**	.303**	.290**	.689**	1

\* Correlation at significant level of 5%.

\*\* Correlation at significant level of 1%.

## 5. Theoretical and practical implications

### 5.1. Theoretical implications

Theoretical contribution is presented in the study within the area of marketing strategy performance in logistics enterprises using insights from the literature to enrich this topic in a logistics business context.

On the one side, the study results are consistent with those in the previous studies which highlighted the importance of several specific factors or in another words, resources, to support the marketing strategy quality under the perspectives of the local logistics industry. Those factors include both internal and external ones, in which the internal factors supporting MS are: (1) the business network as the most important factor affecting MS and therefore the logistics enterprises performance, which is consistent with the previous studies conducted by Chapman et al. (2003) and Gifford and Stalbrink (2002); and (2) human resource as a second importance factor for developing the MS in this study, which shares the same vision with Lin (2006) and Brewer and Hensher (2001).

Discussing about the external factors which are vital to marketing strategy in logistics enterprises, there has been controversial opinions from literature. The study shares a similar approach with Nath, Nachiappan, and Ramanathan (2010) and Brewer and Hensher (2001) that customers-factor contributes remarkably to the firm performance. However, note that Panayides (2004) did not agree this conclusion. Another factor recognized as high contribution to the firm performance in many researches is the business environment, due to Stock et al. (1998), Lin (2006), Brewer and Hensher (2001) and the outcome of this study. Nevertheless, this study even goes further to separate and investigate two types of environment named "economic environment" and "legal environment", in which it found that only the former one adds more value to MS in Vietnam logistics industry. In addition, the study agreed with Panayides (2004) that the competitor factor did not contribute significantly to MS and therefore the firm's performance.

On the other side, the study promotes the theory by adding more insights into the other essential factors promoting the marketing strategy quality in logistics industry in emerging countries, with Vietnam as the case. Surprisingly, different from other researches this study found out that the factor of financial & facility potentials and the factor of IT capacity are less essential factors in MS of logistics enterprises and so far the firm performance. This outcome is incongruent with the literature in which IT and finance capacities play as most important roles in the firm's performance.

Finally, these above insights enrich the literature of MS in logistics firms by offering a conceptual framework for analysing a list of factors internally and externally affecting the MS development, reconciling the existing different perspectives in the literature.

### 5.2. Practical implications

The study presents several practical implications regarding considerations on MS in logistics firms in Vietnam particularly and emerging countries generally.

Firstly, the study provide a rank of priority of each factor internally and externally in which marketing managers in logistics sector may consider to before launching their company's marketing strategy. However, this suggestion should always be taken with a notification that being subject to each typical market, the most important factors driving the MS development might be dissimilar, though they can always be analyzed by the methodology provided in the study.

Secondly, in terms of practical implications, managers in logistics businesses always can evaluate the attractiveness of various key regions or markets to develop the MS for the company. Also, in

case that the company is doing business in emerging markets, managers on the one hand should try to enlarge and integrate different business networks into the company's marketing strategy development for logistics businesses. On the other hand, they should be aware of the incomplete transparency of legal environment in emerging economies.

Business network is highly recognized as a significant influence on MS in this study, which means logistics firms are suggested to establish tighter collaborations and networks with their business partners, government and customers to enhance the business performance. Small and medium size logistics firms may consider the option to collaborate together or join in different associations to enhance their business networks and business practices.

As point out in this study, it seems that the Vietnamese logistics businesses have underestimated the important role of IT and finance capacity, which have been reserved higher attention by experienced international logistics businesses. This outcome partly reflects the actual situation of logistics business in developing countries generally and in the Vietnam context individually, where a good business network and human resource are considered as the most vital factors contributing to MS. This can be explained by another study of Pham, Nguyen, McDonald, and Tran Kieu (2019) in which it said "Due to the concern of information leakage, organizations become more reluctant in deciding to invest in an integrated information system".

## 6. Conclusions and future works

The study provides a considerable support for a variety of factors influencing marketing strategy development in logistics businesses. Being consistent to other studies in literature, the findings of this study affirm the fundamental supporting relationship between the marketing strategy and performance of logistics businesses generally and in Vietnam context specifically. However, different from the literature, the study discovered that the internal factors create a slightly greater impact than external factors in MS of logistics industry in Vietnam. Besides, business network and human resource are most critical factors while factors of IT and finance capacities were less crucial than those in other researches.

The study contains several limitations which should be noted and argued on the need for further researches. Firstly, the composition of the internal and external factors could be defined slightly different depending on the selection of literature review, which might lead to different directions and perspectives of marketing strategy development for logistics enterprises. Secondly, the research design is not quite longitudinal. Furthermore, because the information attained from the anonymous questionnaire-survey, it might be challenging to determine the authenticity of the information. Therefore, future works should be considered adopting a more longitudinal design to test the causal order of the factors.

## Conflict of interest

There is no conflict of interest.

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