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ACQUIRE KNOWLEDGE OF LOGISTICS FIRMS: EVALUATION OF RESPONDENTS

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Abstract
The number of logistics firms in Vietnam is also increasing rapidly. To date, there are over 3,000 domestic transportation and logistics enterprises and about 25 leading forwarding corporations in the world, providing services from goods transportation procedures to tax payment. Although Vietnam's logistics sector has a rapid growth rate and achieved positive results, the operations of logistics firms are still limited in terms of scale of operations, capital, human resources, and lack of experience. This paper aims at providing a comprehensive empirical examination regarding the acquisition of knowledge by logistics firms in Hanoi and neighboring provinces. By drawing the concept from the previous studies, the study explores the acquisition of knowledge by logistics firms in Hanoi and neighboring provinces as a business performance determinant. We used primary data from a survey of 250 employees working at logistics firms in Hanoi and neighboring provinces during 2022–2023, and there were 175 valid survey questionnaires included in the analysis, including reliability analysis of scales, EFA analysis, independent T-tests, and ANOVA analysis. Our findings suggest that the acquisition of knowledge by logistics firms is highly appreciated. Based on the research findings, our study emphasizes that the acquisition of knowledge by logistics firms needs urgent improvement to support their business performance.
Keywords: business performance, acquisition of knowledge, economics, business administration, logistics firms,
JEL codes: M10, B55, E23**,** D80, O15

1. INTRODUCTION

Logistics firms provide a chain of services for the delivery, distribution, and circulation of goods, contributing to linking activities in the global value chain (GVC). As the global market develops with technological advances, especially the opening of markets in developing and underdeveloped countries, logistics services are considered by managers as a tool and a means of communication linking different areas of corporate strategy. Logistics creates usefulness in time and place for business activities. Logistics development makes the national economy linked to the regional and world economies.

Logistics firms participate in the process of circulating and supplying goods to serve the needs of production and life, contributing to expanding the market in international trade, improving consumer enjoyment, and contributing to economic restructuring.

Market research provides important information about needs, trends, and market conditions, helping firms better understand the factors that influence their business operations. It also helps firms determine brand positioning, identify customer goals, and build appropriate marketing strategies to attract customers.

Many forms of transportation have an impact on the environment, with the logistics industry being one of the largest sources of carbon and greenhouse gas emissions. Therefore, the logistics industry has been implementing solutions to reduce impacts on the ecological environment.

The system of logistics firms in Hanoi and neighboring provinces has grown in number and scale, but there are still many shortcomings in business activities. Some firms still have many limitations in their capacity and ability to provide quality logistics services; their operations are fragmented, spontaneous, and lacking professionalism, and most only provide single, value-added services. Therefore, the topic of knowledge acquisition by firms requires research with both theoretical and practical significance.

2. LITERATURE REVIEW

The advantage of firms in the marketplace is their superior ability to create and transfer knowledge because the acquisition of knowledge opens up new production opportunities and enhances the ability to exploit these opportunities (Yli-Renko et al., 2001). Furthermore, a company's performance depends on the level of knowledge exploitation (Spender & Grant, 1996). Additionally, knowledge exploitation can be accumulated internally through organizational learning (Spender & Grant, 1996) or provided by external partners through the relationships in which they participate (Grant & Baden-Fuller, 2004). According to Lee et al. (2015), relationships between members within the firm need to be built effectively so that members share important knowledge about tasks without hesitation during implementation.

Knowledge includes the information, know-how, and skills of organizations. This knowledge is acquired through the use of social capital accumulated with the enterprise's external key customer relationships (Yli-Renko et al., 2001) as well as internal learning and research within the enterprise organization (Dai et al., 2015). According to Hult and colleagues (2007), knowledge development consists of four components: (i) knowledge acquisition; (ii) information distribution; (iii) shared meaning; and (iv) achieved memory. In particular, knowledge acquisition is an important component, first opening up new production opportunities and enhancing the ability to exploit these opportunities (Yli-Renko et al., 2001).

3. METHODOLOGY

This study was carried out through two methods: qualitative and quantitative. Qualitative research was used to complete the scale and design the questionnaire. We conduct in-depth interviews with experts and firm managers about the acquisition of knowledge.

Quantitative research is carried out using the technique of "questionnaire-answer." According to Hair et al. (2014), the minimum sample size is calculated according to the ratio 5:1 (number of observations/measured variables); 1 measurement variable needs at least 5 observations. This study has four observed variables, so the minimum sample size is 4*5 = 20 observations

(questionnaire). Logistics firms in Hanoi and neighboring provinces selected for the research sample were selected by a convenient method based on the available data of the author's group.

The number of questionnaires was collected, and the remaining 175 questionnaires were included in the analysis after screening.

Respondents to the questionnaire are employees of logistics firms in Hanoi and neighboring provinces. Respondents will assess the company's situation and answer contentious questions about the acquisition of knowledge.

The scales of research concepts are all multivariate scales. Observed variables are measured on a 5-point Likert scale (from 1: strongly disagree to 5: strongly agree). The statements on each scale are based on previous studies. The scale is adjusted to suit the conditions of ogistics firms in Hanoi and neighboring provinces based on the results of in-depth interviews with experts and firm managers.

Table 1. Respondents by job positions, marital status, career seniority, and work location

	Frequency	Percent	Cumulative Percent
Job positions			
Business staffs	63	36.0	36.0
Accountants	51	29.1	65.1
Forwarders	29	16.6	81.7
Other positions	32	18.3	100.0
Marital statuses			
Married	131	74.9	74.9
Single	44	25.1	100.0
Career seniority			
Less than 5 years	38	21.7	21.7
From 5 to 10 years	91	52.0	73.7
10 years or older	46	26.3	100.0
Work locations			
Countryside	64	36.6	36.6
City	111	63.4	100.0
Total	**175**	**100.0**	

Source: Prepared by the authors (2023) and SPSS software.

Information on the data collected is shown in Table 2. It shows that among the respondents, 36.0% were business staff, 29.1% were accountants, 16.6% were forwarders, and other positions accounted for 18.3%. Among the respondents, 74.9% of the participants were married, and 25.1% of the participants were single. Of these, 21.7% of respondents have career seniority less than 5 years, 52% have career seniority from 5 to 10 years, and 26.3% have career seniority 10 years or older. Among the respondents, 63.4% of the participants work in logistics firms in the city, and 36.6% of the participants work in logistics firms in the countryside.

4. RESULTS

Cronbach's Alpha

The acquisition of knowledge by logistics firms has been measured by Cronbach's alpha. The results of testing Cronbach's alpha for attributes are presented in Table 2 below. The results also show that attributes of the variables have Cronbach's alpha coefficients that are greater than 0.6,

and the correlation coefficients of all attributes are greater than 0.3. So, all the attributes of the variables are statistically significant (Hoang & Chu, 2008; Hair et al., 2009, Hair et al., 2014).

Table 2. Results of Cronbach's alpha testing of attributes and item-total statistics

Cronbach's Alpha	N of Items
.860	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AK1	12.48	3.573	0.745	0.805
AK2	12.35	3.711	0.706	0.821
AK3	12.41	3.922	0.658	0.841
AK4	12.34	3.650	0.715	0.818

Source: Prepared by the authors (2023) and SPSS software.

Exploratory Factor Analysis (EFA)

Next, tables 3, 4, and 5 show that exploratory factor analysis (EFA) was conducted through component analysis and variance.

The results of factor analysis in Table 4 show that KMO is 0.824, which is greater than 0.5 but less than 1. Bartlett's testimony shows sig. = 0.000 < 0.05, which means variables in the whole are interrelated (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014).

After implementing the rotation matrix, four components of acquiring knowledge of logistics firms with a factor load factor greater than 0.5 and eigenvalues greater than 1 were identified, and the variance explained was 70.430% (see tables 5 and 6). These statistics demonstrate that research data analysis for factor discovery is appropriate. Through the quality assurance of the scale and the test of the EFA model, we have identified four components of acquiring knowledge of logistics firms (Hoang & Chu, 2008; Hair et al., 2014).

Table 3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.824
Bartlett's Test of Sphericity	Approx. Chi-Square	307.069
	Df	6
	Sig.	.000

Source: Prepared by the authors (2023) and SPSS software.

Table 4: Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.817	70.430	70.430	2.817	70.430	70.430
2	0.472	11.805	82.236			
3	0.374	9.352	91.587			
4	0.337	8.413	100.000			

Extraction Method: Principal Component Analysis.

Source: Prepared by the authors (2023) and SPSS software.

Table 5: Component Matrix[a]

AK	Component

	1
AK1	0.866
AK4	0.846
AK2	0.840
AK3	0.805

Source: Prepared by the authors (2023) and SPSS software.

Independent T-test: marital status

A comparison of the results of the evaluation of the differences in acquiring knowledge in logistics firms in Hanoi and neighboring provinces with participants of different marital statuses (married and single) can be seen in Table 6. According to the results shown in Table 6, sig Levene's test is 0.655, which is more than 0.05. The variance between married and single is not different. Moreover, the sig value t-test is 0.442, which is more than 0.05, which means that there is no statistically significant difference in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between these different marital statuses (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014).

Table 6. Differences in acquiring knowledge in logistics firms with participants of different marital statuses - Independent Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AK	Equal variances assumed	0.200	0.655	-0.771	173	0.442	-0.08449	0.10954	-0.30069	0.13171
	Equal variances not assumed			-0.780	75.454	0.438	-0.08449	0.10830	-0.30022	0.13124

Source: Prepared by the authors (2023) and SPSS software.

Independent T-test: work location

A comparison of the results of the evaluation of the differences in acquiring knowledge of logistics firms in Hanoi and neighboring provinces with participants of different work locations (countryside and city) can be seen in Table 7. According to the results shown in Table 7, sig Levene's test is 0.555, which is more than 0.05. The variance between the countryside and the city is not different. Moreover, the sig value t-test is 0.634, which is more than 0.05, which means that there is no statistically significant difference in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between these different work locations (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014).

Table 7. Differences in acquiring knowledge in logistics firms with participants of different work locations - Independent Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AK	Equal variances assumed	0.350	0.555	0.477	173	0.634	0.04709	0.09877	-0.14786	0.24204
	Equal variances not assumed			0.471	126.505	0.639	0.04709	0.10004	-0.15088	0.24505

Source: Prepared by the authors (2023) and SPSS software.

ANOVA – Job positions

An ANOVA test was needed to make a comparison of the results of the evaluation of the differences in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between the four subjects, including participants who are business staff, participants who are accountants, participants who are forwarders, and participants who are in other positions. Table 8 shows that the sig Levene statistic of 0.788 is greater than 0.05, which means that the hypothesis of homogeneity of variance among the variable value groups (different job positions) has not been violated. Table 9 shows that sig. is 0.405, which is more than 0.05, which indicates that there is no statistically significant difference in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between the mentioned four groups of job positions (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014).

Table 8. Test of Homogeneity of Variances

Descriptions	Levene Statistic	df1	df2	Sig.
AK				
Based on Mean	0.352	3	171	0.788
Based on Median	0.197	3	171	0.898
Based on Median and with adjusted df	0.197	3	168.935	0.898
Based on trimmed mean	0.305	3	171	0.822

Source: Prepared by the authors (2023) and SPSS software.

Table 9. ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
AK					

Between Groups	1.156	3	0.385	0.977	0.405
Within Groups	67.446	171	0.394		
Total	68.602	174			

Source: Prepared by the authors (2023) and SPSS software.

ANOVA – career seniority

An ANOVA test was needed to make a comparison of the results of the evaluation of the differences in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between the three subjects, including participants who have less than 5 years, participants who have from 5 to 10 years, and participants who have 10 years or older. Table 10 shows that the sig Levene statistic of 0.866 is greater than 0.05, which means that the hypothesis of homogeneity of variance among the variable value groups (different career seniority) has not been violated. Table 11 shows that sig. is 0.387, which is more than 0.05, which indicates that there is no statistically significant difference in acquiring knowledge in logistics firms in Hanoi and neighboring provinces between the mentioned three groups of career seniority (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014).

Table 10. Test of Homogeneity of Variances

Descriptions	Levene Statistic	df1	df2	Sig.
AK				
Based on Mean	0.144	2	172	0.866
Based on Median	0.035	2	172	0.965
Based on Median and with adjusted df	0.035	2	160.945	0.965
Based on trimmed mean	0.116	2	172	0.890

Source: Prepared by the authors (2023) and SPSS software.

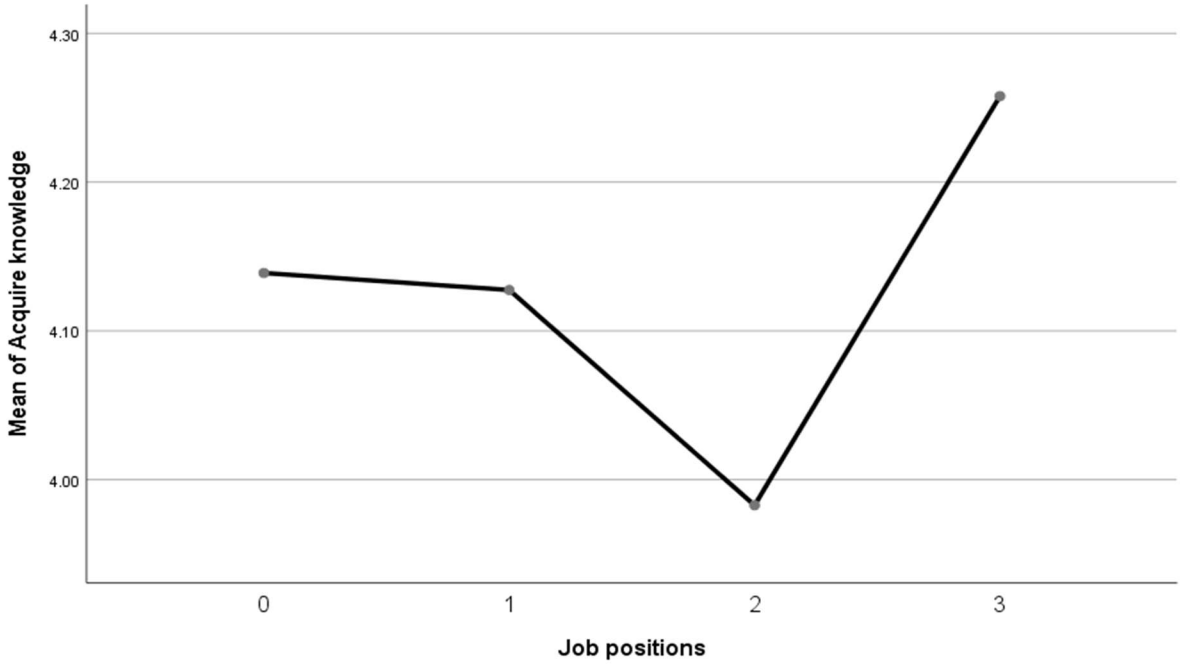
Table 11. ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
AK					
Between Groups	0.753	2	0.376	0.954	0.387
Within Groups	67.849	172	0.394		
Total	68.602	174			

Source: Prepared by the authors (2023) and SPSS software.

The relationship between acquiring knowledge in logistics firms in Hanoi and neighboring provinces - job positions

Next, the line graph shows the relationship between acquiring knowledge at logistics firms in Hanoi and neighboring provinces and each respondent's job positions (Figure 1). Figure 1 shows that the line tends to go down when the respondents' job positions are accountants and forwarders. But this line tends to slope up when the respondents' job positions are other positions.

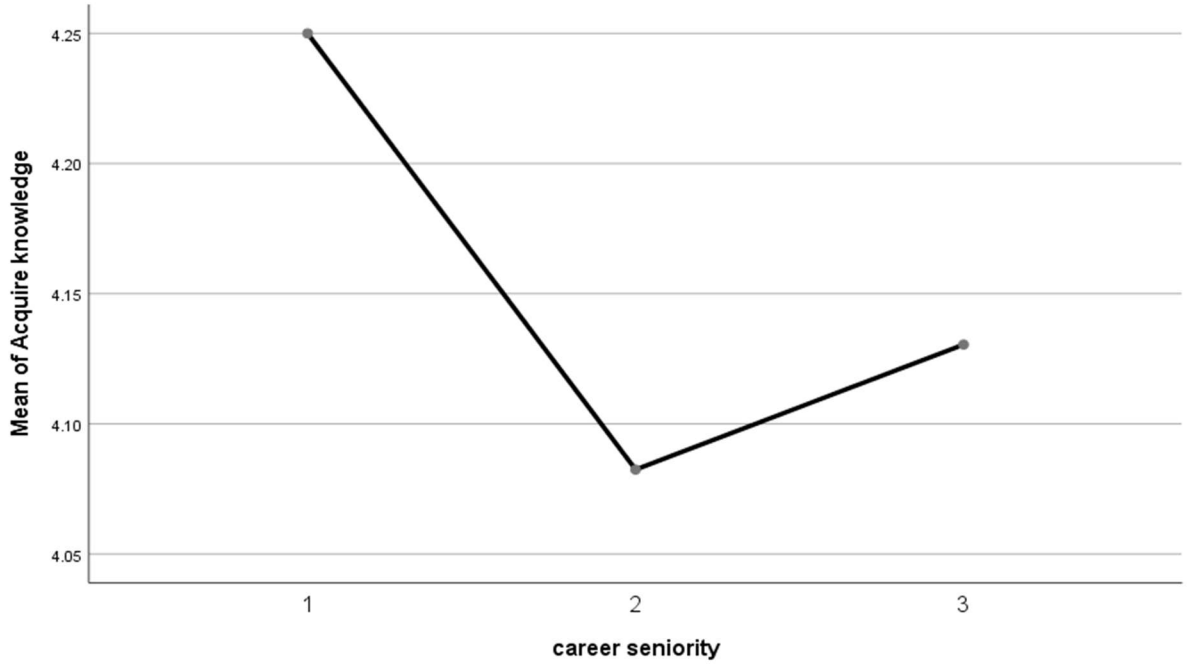


Source: Prepared by the authors (2023) and SPSS software.

Figure 1: The line graph shows the relationship between acquiring knowledge in logistics firms in Hanoi and neighboring provinces and each respondent's job positions

The relationship between acquiring knowledge in logistics firms in Hanoi and neighboring provinces - career seniority

Next, the line graph shows the relationship between acquiring knowledge in logistics firms in Hanoi and neighboring provinces and each respondent's career seniority (Figure 2). Figure 1 shows that this line tends to go down when the respondents' career seniority ranges from 5 to 10 years. This line tends to slope up when the respondents' career seniority is 10 years or older.



Source: Prepared by the authors (2023) and SPSS software.

Figure 2: The line graph shows the relationship between acquiring knowledge in logistics firms in Hanoi and neighboring provinces and each respondent's career seniority

5. DISCUSSION AND IMPLICATIONS

Labor productivity in logistics firms is calculated and determined to have its own characteristics to avoid duplication in calculations and accurately reflect labor productivity in the field of logistics.

Each logistics firm will use different research methods depending on specific goals, such as expanding the market, launching new services, implementing media campaigns, etc. However, in all situations, market research is a mandatory task to ensure the provision of accurate and complete information, from which firms can make reasonable strategic plans and achieve high business performance.

Before preparing to enter a new market, logistics firms will face many challenges and new things, along with risks that firms cannot predict. Therefore, this process requires an in-depth understanding of the economic situation, market needs, legal regulations, competitors, and target customers. Conducting market research will help firms minimize unnecessary mistakes.

Before launching services on the market, logistics firms should clearly understand the market and identify the right target customers. This will help firms determine customer needs and desires, thereby improving products to best meet customer expectations. It is extremely important to research the market and improve services before launching them. It helps logistics firms increase the chances of actual service success.

Market research through direct interviews should be conducted in densely populated areas with a large number of customers. The main goal of the direct interview method is product PR, helping to reach users more effectively. However, this approach requires a lot of effort, time, and money.

It is important for logistics firms to research and clearly understand their target market. Learn about customers, demographic characteristics, economic situation, consumption trends, and factors affecting customer needs. Create and conduct surveys to collect opinions and information from customers using online tools such as Google Forms and SurveyMonkey, or conduct surveys

directly with customers. Ask specific questions about the customer's needs, preferences, problems they are facing, and how they would like to be served better.

Logistics firms interact and communicate with customers through surveys, interviews, or discussion groups. Ask for opinions and listen to feedback from customers to better understand their needs, problems, and expectations. Set up direct communication channels such as a customer support system, online chat, or phone so customers can contact and share opinions, questions, and feedback. Through these conversations and interactions, logistics firms can understand customers needs and respond in a more personalized way.

Logistics firms collect feedback from customers after each transaction or after using the service. Logistics firms should provide feedback channels such as customer support systems, email, phone, or social networks so customers can share opinions, suggestions, and comments. This feedback will help firms better understand the needs and problems customers are facing. Listen and absorb feedback from customers sincerely. Evaluate and use this feedback to improve products, services, and customer experiences.

When using electric vehicles in road transport, logistics firms will save costs in the long run because electricity costs less than gasoline or diesel, and these vehicles also cost less to maintain, helping to reduce costs. This is one of the advantages for many firms because the cost savings still ensure that the supply chain is profitable while helping to meet environmental sustainability goals.

Maritime technology: logistics firms using maritime transportation software to predict ship performance and maritime conditions have become popular. This allows trips to be planned more precisely in terms of safety and environmental impact.

Sustainable development is the formula for success for every firm, as it opens the door to both meeting customer needs and improving partner building and the company's reputation. Logistics firms that promote sustainable services are becoming more attractive to not only society but also customers and investors.

Demand for professional logistics services: With the development of the economy and business, the demand for professional logistics services is increasing. This opens up opportunities for logistics firms to provide innovative solutions, from transportation and warehousing services to supply chain management.

The cost of equipment to serve the needs of goods processing is still high, and the cost of maintaining the equipment is high.

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