SUCCESS MODEL OF LOGISTICS SERVICE PROVIDERS IN THAILAND

SOMRAT KAMOLWEKIN [1], TANAPOL KORTANA [2], BUNDIT PUNGNIRUND [3] and CHOMPOO SAISAMA [4]

[1,2,3,4] Suan Sunadha Rajabhat University, Thailand.
Email: [1]s 60484945013@ssru.ac.th, [2]tanapol.ko@ssru.ac.th, [3]bundit.pu@ssru.ac.th, [4]chompoo.sa@ssru.ac.th

Abstract

Thailand's logistics industry heavily relies on land transportation and parcel delivery, which are considered urgent modes of transportation with high demand. This demand is further amplified by the expansion of the e-commerce business both domestically and globally. However, due to the outbreak of COVID-19, there has been a significant increase in the number of logistics businesses, leading to intense competition in the market. It is crucial for entrepreneurs to study the success patterns of logistics service providers to ensure stability in this field. This study aims threefold: 1) to examine the level of relationship quality, service quality, quality of logistics operations, service innovation, and efficiency of non-financial logistics companies. 2) To investigate the impact of relationship quality, service quality, quality of logistics operations, and service innovation on the efficiency of non-financial logistics companies. 3) To develop a success model for logistics service providers in Thailand. A mixed research method comprising quantitative and qualitative research was employed to achieve these objectives. The quantitative research involved a sample size of 360 logistics service providers in Thailand, selected through a multi-stage sampling method. The sample size was determined using a criterion of 20 times the observed variable, and data was collected through questionnaires. Structural equations were used to analyze the data. In qualitative research, the in-depth interview method was used to gather information from 20 key informants and experts in Thailand's logistics industry. The research results show that, firstly, relationship quality, service quality, quality of logistics operations, service innovation, and logistics companies' efficiency in Thailand are at a high level. Secondly, the study found that relationship quality, service quality, quality of logistics operations, and service innovations significantly impact the efficiency of logistics companies in Thailand at the 0.05 level. Thirdly, the study developed a success model for logistics service providers in Thailand, known as the External Logistics Success Model (ExLSM). The qualitative research findings suggest that logistics service providers in Thailand need to drive innovation that meets the diverse needs of each customer group and use information systems that support the rapidly changing needs of modern customers. The production costs must be managed, especially through the use of intelligent logistics technology from abroad, to respond more efficiently to customer needs. These research findings can serve as guidelines and policies for business operations to promote the sustainable and competitive success of logistics service providers in Thailand.

Keyword: Service Quality / Service Innovation / Efficiency / Relationship Quality.

INTRODUCTION

Logistics activities involve the transportation of goods from manufacturers to consumers based on orders and consumer requirements. This includes the movement, storage, and handling of products, materials, raw materials, and documents from one location to another within a specified timeframe. The objective is to manage these activities efficiently to minimize overall costs, making it a crucial process in global transportation (Moryadee et al., 2019). .Additionally, logistics management, such as warehouse management, product distribution, inventory management, packaging, shipping, and various information and information

systems, facilitates convenient transportation services for businesses of all sizes - small, medium, and large. It serves as a comprehensive logistics service provider that consolidates logistics management according to customer needs. Managing the movement of various types and sizes of goods, ranging from small packages to heavy machinery, and items for various projects, logistics transportation utilizes multiple modes including land, sea, rail, pipeline, and air (Moryadee et al., 2019)

In recent times, Thailand Post has been actively supporting logistics transportation, especially due to the increasing trend of e-commerce business. To enhance the level of logistics services and provide convenience to users, Thailand Post has focused on advancing its comprehensive warehouse capabilities through strategic supply chain management plans. This effort is particularly directed towards online merchants, aiming to expand services to various provinces. One significant initiative involves transforming postal spaces into sub-warehouses, utilizing postal areas to augment storage facilities. Additionally, Thailand Post has increased the capabilities of border post offices, with a specific emphasis on the international shipping market. This is achieved by establishing storage and product management facilities that can accommodate imports and exports through an automated system. The initial implementation is carried out in special economic zones that witness a substantial influx of goods, catering to both domestic and international businesses. To strengthen its international logistics services, Thailand Post has formulated marketing strategies and services tailored for the international market. This includes targeting new customer segments through pricing strategies and collaborating with partners to elevate the standard of cross-border services. According to logistics service reports in January 2013, the total number of package delivery service users from all companies amounted to 1,796,299 transactions (Office of Trade Strategy, 2022).

The postal and parcel delivery services have undergone strategic adjustments to align with the rapid development of information technology, particularly the significant growth in internet usage, modern communication devices, and smartphones. This surge in E-commerce transactions has led to a continuous increase in online buying and selling activities. Analyzing the business trends from 2022 to 2024, the road freight transport services are projected to grow at an average rate of 3-5% per year. This growth is fueled by factors such as the expansion of manufacturing, trade, and public infrastructure investment, including the increasing trend in online transactions. There is a notable rise in investments in new technologies to enhance transportation efficiency, and efforts are being made to expand partnership networks to provide comprehensive transportation solutions (Krungsri Research, 2022).

The competitive landscape is intensifying due to the presence of a significant number of operators. The transport of goods plays a crucial role in distributing products both domestically and internationally. Service providers are responsible for moving goods through each stage of the supply chain. The five primary forms of freight transport services are Road Transport, Rail Transport, Pipeline Transport, Water Transport and Air Transport.

These transport services collectively contribute to the efficient distribution of goods, catering to various business needs (Krungsri Research, 2022; Office of Trade Strategy, 2022).

LITERATURE REVIEW

Relationship Quality

Relationship quality is a variable that many scholars believe can impact the effectiveness of logistics businesses. When customers are satisfied with the services provided by logistics businesses, they are more likely to return for repeat services (Sorkun et al., 2020). The efficiency of logistics business services results from the relationship customers have with the business, encompassing both satisfaction and confidence in the business's adherence to customer expectations (Gatenholm et al., 2021; Chen et al., 2020). Quality customer service fosters customer loyalty, encouraging them to continue using the services in the future (Kim et al., 2020). The relationship between customers and businesses can be established by adjusting business services to align with customer needs, creating confidence for customers to recommend the business to others with a positive perception (Gatenholm et al., 2021; Sorkun et al., 2020).

Service Quality

Service quality is a crucial aspect that fosters customer loyalty and can enhance the efficiency of a business to meet market demands. When customers experience fast service, convenience, and efficient responsiveness to their needs, it instills confidence in them to continue using the services efficiently, leading to increased customer retention and acceptance of the business (Thongkruer & Wanarat, 2021). High-quality service generates customer satisfaction and helps create a competitive advantage in the market (Tukamuhabwa et al., 2023). Additionally, the service quality in logistics businesses can effectively manage business service risks for customers (Giuffrida et al., 2021). Service quality, coupled with attentiveness, can meet customer needs and impact the efficiency of logistics businesses (Noorliza, 2021).

Logistics Operational Quality

Logistics operational quality is a crucial variable for bringing success to a logistics business through customer service and efficient operations (Noorliza, 2021; Giuffrida et al., 2021). The operations must adhere to the market standards accepted by customers and trading partners, generating confidence by aligning with the industry practices. It involves establishing clear, convenient, straightforward, and efficient operational guidelines, along with risk reduction measures, to deliver customer value with satisfaction (Lin et al., 2021; Giuffrida et al., 2021). Logistics businesses need to create customer satisfaction by implementing effective service policies defined by clear objectives. Business processes significantly impact logistics efficiency, influencing the dedication of logistics service providers and customer satisfaction, thus promoting customer relationships with the logistics business (Kalubanga & Namagembe, 2022; Giuffrida et al., 2021).

Innovation Services

Innovation services are a critical variable for the success of logistics businesses because adopting new ideas and methods using technology to enhance business operations and customer service can increase customer satisfaction and acceptance of the business (Chhabra

et al., 2022; Kerdpitak et al., 2022). Moreover, applying knowledge to create innovative services for customers is a way to differentiate and customize services according to customer needs (Giuffrida et al., 2021). Several scholars have provided insights into service innovation, such as Kouhizadeh et al. (2022), who believe that incorporating technology into logistics business services can significantly improve service efficiency. Similarly, service innovation utilizing knowledge to craft services aligned with customer needs can impact the efficiency of logistics businesses (Karia, 2022; Giuffrida et al., 2021). Leveraging knowledge in business operations can enhance the efficiency of logistics businesses, resulting in success through innovative service creation (Kouhizadeh et al., 2022; Chhabra et al., 2022).

Logistics Efficiency

Logistics efficiency involves creating effectiveness for both financial and non-financial aspects of logistics companies. This can be achieved by establishing relationships with customers that lead to customer satisfaction in services meeting their expectations. When customers experience satisfaction, they develop trust in the business's service efficiency, creating a bond with the company and choosing to retain business that can efficiently meet their service needs in the future. Additionally, when a business customizes its services to align with customer requirements, it results in increased customer satisfaction, recommendations, and positive word-of-mouth. This aligns with the concept presented by Liu and Lee (2018), asserting that customer satisfaction fosters stronger customer bonds with businesses. In contrast, Aharonovitz et al. (2018) state that business efficiency stems from customers' confidence in a business's ability to adapt its services to meet their needs, generating customer satisfaction.

Moreover, the quality of the customer-business relationship, encompassing satisfaction, trust, confidence, and service customization, contributes to building customer loyalty. Sorkun (2019) suggests that service quality involving personalization and attentiveness leads to increased customer confidence in logistics businesses. Similarly, Manikas et al. (2019) found that speedy, convenient, and accurate services build customer confidence in using the services repeatedly.

In essence, the quality of logistics business services needs to be responsive to customer needs and establish customer trust. When discussing service quality in logistics businesses, it involves responding to customers with personalized service and care, creating customer confidence, and encouraging them to return for repeat services.

Bag et al. (2020) argue that business operations in logistics, aligned with marketing policies and standards, enable businesses to operate according to set goals. Efficient logistics business operations should follow clear, convenient, rapid, and accurate processes, reducing operational risks and providing customers with satisfactory value (Chhabra et al., 2022; Li et al., 2022).

Furthermore, the application of innovation and technology in logistics businesses enhances service efficiency and customer satisfaction. Leveraging knowledge to create new, customer-aligned services fosters customer acceptance and satisfaction (Kouhizadeh et al., 2022). Knowledge application in business operations can enhance logistics business efficiency through innovative service creation, leading to overall success (Li et al., 2022).

The research hypotheses are as follows.

H1: Relationship quality has a direct influence on logistics efficiency.

H2: Service quality has a direct influence on logistics efficiency.

H3: Logistics operational quality has a direct influence on logistics efficiency.

H4: Innovation services have a direct influence on logistics efficiency.

METHODOLOGY

The mixed methods research, with Embedded Design, was conducted by integrating quantitative and qualitative research methods.

The study primarily began with quantitative research, involving a literature review and analysis of documents and research works related to variables influencing (non-financial) logistics efficiency.

These variables included relationship quality, service quality, logistics operational quality, and innovation services. Data was synthesized and summarized into specific research definitions.

The population was the users of every logistics service business in Thailand which had a total of 1,796,299 uses.

The quantitative research sample was determined from the proportion of observed variables by considering the number of observed variables (Nunnally et al., 1967).

It was obtained by estimating the size of 20 times greater than the number of observed variables (Hair et al., 2011).

In this research, there were 18 observed variables, so the researchers determined a sample size of 360 by using a multi-stage sampling from the users of logistics service businesses in Thailand.

Measurement indicators for variables were defined within the research conceptual framework.

Subsequently, these indicators were used to develop a questionnaire based on a 5-Point Likert scale (Likert, 1932).

Prior to data collection, the validity and reliability of the measurement tools were tested. The collected data were then subjected to statistical analysis using Structural Equation Modeling (SEM) technique.

For qualitative research, the researchers employed in-depth interview methods with 10 users of logistics service businesses in Thailand and 10 experts in logistics service businesses in Thailand, totaling 20 key informants.

Purposive sampling was used. The qualitative data was then organized, categorized, analyzed, interpreted, connected, concluded to enable detailed and reasoned explanations in the quantitative analysis.

RESULTS

The normal distribution of the 18 observed variables studied in the structural equation model (n=360) was examined, using the chi-square test (χ^2).

The statistical significance at the .05 level represented non-normally distribution of such variables.

On the other hand, if it was found to be not statistically significant (P-value > .50), it revealed normal distribution of such variables, as shown in Table 1.

Table 1: Descriptive Statistics Observed Variables (n=360)

Variables	M	S.D.	%CV	Sk	Ku	χ^2	P-value
SATF	4.17	.87	20.86	-3.233	-1.810	13.727	.001
CFREL	3.71	.86	23.18	-1.397	-.563	2.269	.322
COMOG	3.64	.88	24.18	-1.862	-.888	4.258	.119
ADJCM	3.87	.90	23.26	-1.987	-.779	4.556	.102
FEEL	3.72	.83	22.31	-1.378	-.228	1.951	.377
RELIA	3.63	.78	21.49	-.709	-.199	.542	.763
RREP	4.00	.78	19.50	-2.012	-.990	5.028	.081
CGQUL	3.91	.72	18.41	-1.492	.653	2.652	.266
EMPT	4.03	.73	18.11	-1.808	-1.147	4.584	.101
MKSRD	3.77	.82	21.75	-1.259	-.744	2.140	.343
POLC	4.02	.77	19.15	-2.061	-1.472	6.417	.040
PCSS	3.83	.88	22.98	-2.174	-1.984	8.663	.013
TECN	3.93	.84	21.37	-1.974	-2.018	7.969	.019
KNOW	3.90	.71	18.21	-1.144	-.220	1.357	.507
RETB	3.81	.70	18.37	-.962	-.234	.981	.612
PSVT	4.19	.80	19.09	-3.385	-2.136	16.020	.000
RCTO	4.02	.75	18.66	-1.934	-.386	3.889	.143
ICUS	4.10	.77	18.78	-1.991	-.871	4.722	.094

Note: chi-square (χ^2) with statistical significance (P-value <.05) indicates a non-normal distribution

The researchers have checked the quality of the variables studied in the model by testing construct validity of each latent variable using the Confirm Factor Analysis technique by considering the greater than .30 standardized factor loadings to confirm a good observed variable.

It was considered from the R^2 to check reliability of the empirical variables as well as directly examining the Construct Reliability (ρ_c>.60) of the latent variables and Average Variable Extracted (ρ_v>0.50), as shown in Table 2.

Table 2: Factor Loadings (n = 360)

Variables	Factor Loading (λ)	Error (θ)	t	R^2
Relationship quality (RELTQ)				
Satisfaction (SATF)	.62	.32	10.79	.68
Confidence/reliance (CFREL)	.66	.36	11.69	.64
Commitment to the organization (COMOG)	.65	.38	11.44	.62
Adjustment to the customers (ADJCM)	.60	.33	10.57	.67
Service quality (SERQL)				
Feeling (FEEL)	.42	.22	7.11	.78
Reliability (RELIA)	.58	.26	10.43	.74
Responsiveness (RREP)	.50	.25	8.87	.75
Confidence (CGQUL)	.74	.25	13.53	.75
Empathy (EMPT)	.74	.25	13.51	.75
Logistics operational quality (LGOPR)				
Marketing standard (MKSRD)	.46	.28	6.76	.72
Policy (POLC)	.64	.29	7.97	.71
Process (PCSS)	.59	.25	7.67	.75
Innovation services (INOSV)				
Technology (TECN)	.96	.07	24.91	.93
Knowledge (KNOW)	.40	.44	7.61	.56
Logistics efficiency (LGEFF)				
Return to buy (RETB)	.58	.36	11.37	.58
Preservation (PSVT)	.71	.30	14.56	.71
Recommendations to others (RCTO)	.82	.33	17.62	.82
Increased use of services (ICUS)	.88	.23	19.45	.88
ρ_c= .88 ρ_v = .65				
Chi-Square=2.63, df=2, P-value=0.26876, RMSEA=0.030				

Table 3: Direct Effect, Indirect Effect, and Total Effect (n=360)

Dependent variables	R^2	Effects	Independent variables			
			Relationship quality (RELTQ)	Service quality (SERQL)	Logistics operational quality (LGOPR)	Innovation services (INOSV)
Logistics efficiency (LGEFF)	.85	DE	.45*(6.38)	.42*(7.68)	.46*(5.24)	.63*(8.45)
		IE	-	-	-	-
		TE	.45*(6.38)	.42*(7.68)	.46*(5.24)	.63*(8.45)
χ^2= 212.60 df = 115 p-value = .00000 , χ^2 / df = 1.84, RMSEA = .049, RMR = .028, SRMR = .043, CFI =.98, GFI = .94, AGFI = .91, CN = 255.62						

*statistical significance at the .05 level

Note: In parentheses, they were the t-value. If the value was not between -1.96 and 1.96, it was statistically significant at the .05 level. DE=Direct Effect, IE=Indirect Effect, TE=Total Effect
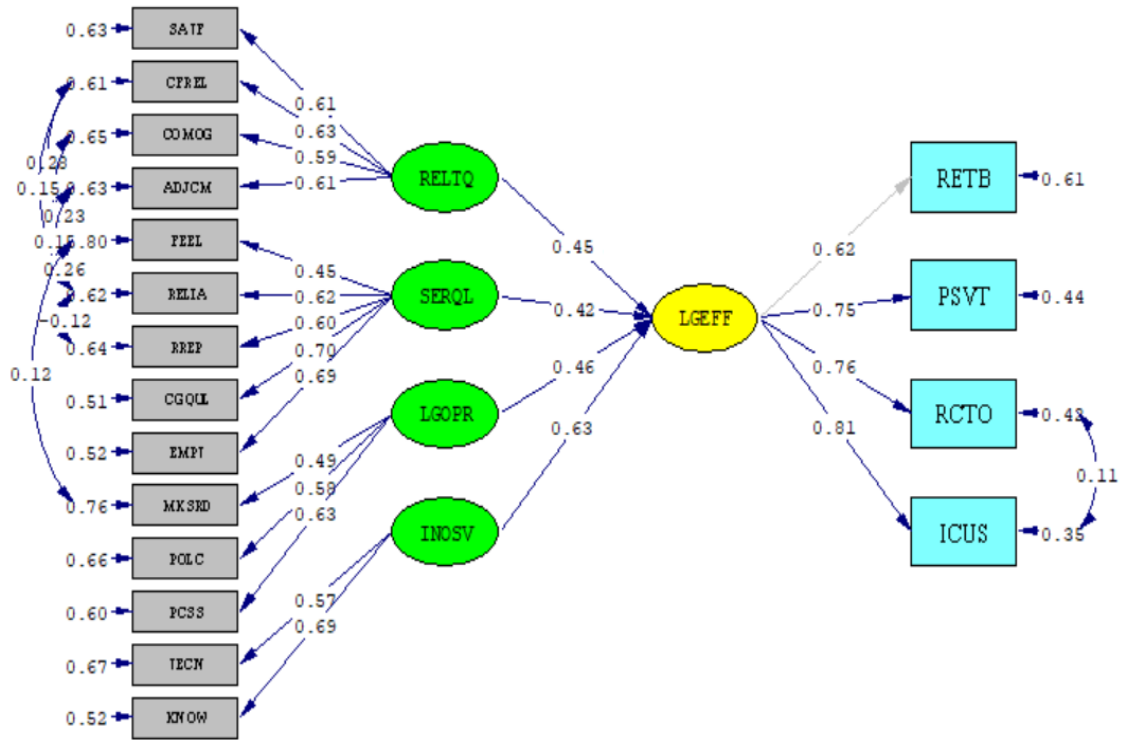
Chi-Square=212.60, df=115, P-value=0.00000, RMSEA=0.049

Figure 1: Adjusted Structural Equation Model (n=360)

The results of the data analysis indicated that the model was fit with the observational data by allowing the variance of standard errors (θ) of the 10 pairs of observed variables to have a relationship, with degrees of freedom (df) before adjustment being 125 and df after adjustment being 115, it was found that the adjusted model fitted well with the observational data. This conclusion was based on fit indices as follows: χ^2= 212.60, df = 115, p-value = .00000, χ^2 / df = 1.84, RMSEA = .049, RMR = .028, SRMR = .043, CFI =.98, GFI = .94, AGFI = .91, CN = 255.62, as shown in Table 3 and Figure 1.

The results of the goodness-of-fit index revealed that χ^2= 212.60, df = 115 p-value = .00000, not meeting the statistical significance criterion (P-value > .05). However, the χ^2 was sensitive to sample size. The χ^2/df of 1.84<2.00 within an acceptable range was considered. Other acceptable fit indices are as follows: RMSEA = .049<.05, RMR = .028<.05, SRMR = .043<.05, CFI = .98>.90, GFI = .94>.90, AGFI = .91=.90, and CN = 255.62>200.00. Based on these goodness-of-fit indices, it concluded that the adjusted structural equation model fitted well with the observational data. The parameter estimates in the model were considered acceptable.

CONCLUSION

The results found that the adjusted structural equation model of factors influencing logistics efficiency of logistics service businesses in Thailand was fit with the empirical data at an acceptable level, which was considered from the fit Indexes as follows: χ^2= 212.60, df = 115, p-value = .00000, χ^2 / df = 1.84, RMSEA = .049, RMR = .028, SRMR = .043, CFI =.98, GFI = .94, AGFI = .91, CN = 255.62. The model's estimates are presented as follows:

1. Relationship Quality (RELTQ) has a direct influence on Logistics Efficiency (LGEFF) with an effect coefficient of .45*(6.38) and statistical significance at the .05 level. Thus, hypothesis 1, relationship quality has a direct influence on logistics efficiency, is supported.

2. Service Quality (SERQL) has a direct influence on Logistics Efficiency (LGEFF) with an effect coefficient of .42*(7.68) and statistical significance at the .05 level. Thus, hypothesis 2, service quality has a direct influence on logistics efficiency, is supported.

3. Logistics Operational Quality (LGOPR) has a direct influence on Logistics Efficiency (LGEFF) with an effect coefficient of .46*(5.24) and statistical significance at the .05 level. Thus, hypothesis 3, logistics operational quality has a direct influence on logistics efficiency, is supported.

4. Innovation Services (INOSV) have a direct influence on Logistics Efficiency (LGEFF) with an effect coefficient of .63*(8.45) and statistical significance at the .05 level. Thus, hypothesis 4, innovation services have a direct influence on logistics efficiency, is supported.

5. Relationship Quality (RELTQ), Service Quality (SERQL), Logistics Operational Quality (LGOPR), Innovation Services (INOSV) can jointly predict Logistics Efficiency (LGEFF) by 85 percent.

References

1) Aharonovitz, M.C.S., Vidal Vieira, J.G., & Suyama, S.S. (2018). How logistics performance is affected by supply chain relationships. *The International Journal of Logistics Management*, *29*(1), 284-307.

2) Bag, S., Gupta, S., & Luo, Z. (2020). Examining the role of logistics 4.0 enabled dynamic

3) capabilities on firm performance. *The International Journal of Logistics Management*, *31*(3), 607-628.

4) Chen, J.-S., Tsou, H.-T., Chou, C.Y., & Ciou, C.-H. (2020). Effect of multichannel service delivery quality on customers' continued engagement intention: A customer experience perspective. *Asia Pacific Journal of Marketing and Logistics, 32*(2), 473-494.

5) Chhabra, D., Singh, R.K., & Kumar, V. (2022). Developing IT-enabled performance monitoring system for green logistics: a case study. *International Journal of Productivity and Performance Management, 71*(3), 775-789.

6) Gatenholm, G., Halldórsson, Á., & Bäckstrand, J. (2021). Enhanced circularity in aftermarkets: logistics tradeoffs. *International Journal of Physical Distribution & Logistics Management*, *51*(9), 999-1021.

7) Giuffrida, M., Jiang, H., & Mangiaracina, R. (2021). Investigating the relationships between uncertainty types and risk management strategies in cross-border e-commerce logistics. *The International Journal of Logistics Management, 32*(4), 1406-1433.

8) Hair, J.F., Ringle, C.M., & Sarstedt, M. (2011) PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice, 19, 139-151.*

9) Huma, S., Ahmed, W., Ikram, M., & Khawaja, M.I. (2020). The effect of logistics service quality on customer loyalty: case of logistics service industry. *South Asian Journal of Business Studies, 9*(1), 43-61

10) Kalubanga, M., & Namagembe, S. (2022). Trust, commitment, logistics outsourcing relationship quality, relationship satisfaction, strategy alignment and logistics performance – a case of selected manufacturing firms in Uganda. *The International Journal of Logistics Management, 33*(1), 102-140.

11) Karia, N. (2022). Halal logistics: practices, integration and performance of logistics service Providers. *Journal of Islamic Marketing, 13*(1), 100-118.

12) Kerdpitak, C., Aunyawong, W., Yen, W-H, & Chantranon, S. (2022). Effect service innovation stimulus, employee engagement, and service innovation on marketing performance of pharmacy retail business in Thailand. *Journal of Positive School Psychology, 6*(5), 2224-2233.

13) Kim, G.-S., Lee, S.-W., Kim, C.-S., & Seo, Y.-J. (2020).Evaluation of Logistics Service for Multimodal Transport via the Trans-Siberian Railway: A Perspective of Shippers in South Korea. *Journal of International Logistics and Trade, 18*(4), 169-180.

14) Kouhizadeh, M., Zhu, Q., Alkhuzaim, L., & Sarkis, J. (2022). Blockchain Technology and the Circular Economy: An Exploration. In Bals, L., Tate, W.L., & Ellram, L.M. (Ed.) *Circular Economy Supply Chains: From Chains to Systems.* (pp. 189-213). Emerald Publishing Limited, Bingley.

15) Krungsri Research. (2022). *Business / Industry Trends 2022 - 2024: Road Freight Transport Business.* https://www.krungsri.com/th/research/industry/industry-outlook/logistics/road-freight-transportation/IO/road-freight-transportation-2022-2024.

16) Li, Q., Yan, R., Zhang, L., & Yan, B. (2022). Empirical study on improving international dry port competitiveness based on logistics supply chain integration: evidence from China. *The International Journal of Logistics Management, 33*(3), 1040-1068.

17) Likert, R. (1932). A technique for measurement of attitudes. *Archives of Psychology, 140*, 5-55.

18) Lin, M.S.-M., Potter, A., & Pettit, S. (2021). Relationship heterogeneity in Taiwanese maritime logistics service supply chains. *Supply Chain Management, 26*(3), 385-401.

19) Liu, C.-L., & Lee, M.-Y. (2018). Integration, supply chain resilience, and service performance in third-party logistics providers. *The International Journal of Logistics Management, 29*(1), 5-21.

20) Lyu, G., Chen, L., & Huo, B. (2019). The impact of logistics platforms and location on logistics resource integration and operational performance. *The International Journal of Logistics Management, 30*(2), 549-568.

21) Manikas, I., Sundarakani, B., & Iakimenko, V. (2019). Time-based responsive logistics for a maintenance service network: A case study of an automated teller manufacturer. *Journal of Quality in Maintenance Engineering, 25*(4), 589-611. .

22) Noorliza, K. (2021). Resource-capability of halal logistics services, its extent and impact on Performance. *Journal of Islamic Marketing, 12*(4), 813-829.

23) Nunnally, J.C., & Bernstein, I.H. (1967). *Psychometric Theory* (3rd Edition). McGraw-Hill, New York.

24) Office of Strategic Trade Policy. (2022). *Thai logistics business situation* (January 2022 issue). Department of Foreign Trade.

25) Paula, I.C.d., Campos, E.A.R.d., Pagani, R.N., Guarnieri, P., & Kaviani, M.A. (2020). Are collaboration and trust sources for innovation in the reverse logistics? Insights from a systematic literature review. *Supply Chain Management*, 25(2), 176-222.

26) Sorkun, M.F. (2019). The impact of product variety on LSQ in e-marketplaces. *International Journal of Physical Distribution & Logistics Management*, 49(7), 749-766.

27) Sorkun, M.F., Yumurtacı Hüseyinoğlu, I.Ö., & Börühan, G. (2020). Omni-channel capability and customer satisfaction: mediating roles of flexibility and operational logistics service quality. *International Journal of Retail & Distribution Management, 48*(6), 629-648.

28) Thongkruer, P., & Wanarat, S. (2021). Logistics service quality: where we are and where we go in the context of airline industry. *Management Research Review*, 44(2), 209-235.

29) Tukamuhabwa, B., Mutebi, H., & Isabirye, D. (2023). Supplier performance in the public healthcare: internal social capital, logistics capabilities and supply chain risk management capabilities as antecedents in a developing economy. *Journal of Business and Socio-economic Development, 3*(1), 50-68.