

-RESEARCH ARTICLE-

LOGISTICS MANAGERS' COMPETENCE - FIRM PERFORMANCE LINKAGE AND IMPLICATIONS FOR EDUCATION AND TRAINING: AN EXPLORATORY STUDY IN VIETNAM

Dong M. TRAN

University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam
Email: tmdong@ueh.edu.vn

Thuy T. NGUYEN

School of Accounting, Information Systems and Supply Chain,
RMIT University, Australia.
Email: thuy.nguyen21@rmit.edu.au

Thao K. NGUYEN

University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam.
Email: thao.nk@ueh.edu.vn

Vinh V. THAI

School of Accounting, Information Systems and
Supply Chain, RMIT University, Australia,
University of Economics, Ho Chi Minh City, Ho Chi Minh City, Vietnam.
Email: vinh.thai@rmit.edu.au

Lien T. N. NGUYEN*

University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam.
Email: lien.nguyen@ueh.edu.vn

Citation (APA): Tran, D. M., Nguyen, T. T., Nguyen, T. T., Thai, V. V., Nguyen, L. T. N. (2024). Analysis of Factors Affecting Innovation Adoption Decisions in Private Enterprises in Vietnam. *International Journal of Economics and Finance Studies*, 16(02), 392-408. doi: 10.34109/ijefs.202416219

—Abstract—

In the rapidly evolving supply chain environment, logistics managers play a crucial role in enhancing both individual and organisational performance. This study investigates the correlation between the competencies of logistics managers and organisational performance in Vietnam, addressing a significant gap in the existing literature by emphasising both technical and interpersonal skills. Employing an exploratory qualitative research methodology, in-depth interviews were conducted with senior executives from seven case organisations. The findings suggest that logistics managers require a combination of technical competencies (such as strategic supply chain management, technology integration, and regulatory compliance) and interpersonal skills (including leadership, communication, and problem-solving) to excel in their roles. A positive association was identified between these competencies and improved individual and organisational performance. The study highlights the necessity of reforming logistics education and training programmes to better equip future managers with both practical and interpersonal skills. These insights hold substantial significance for logistics firms and educational institutions, serving as a foundation for future curriculum development and competency enhancement strategies.

Keywords: Logistics Managers, Competence, Individual Performance, Firm Performance, Vietnam.

INTRODUCTION

In the contemporary digitally transformed and globalised corporate landscape, logistics management is essential for enhancing operational efficiency and organisational competitiveness. The logistics industry has proven its significance in driving economic growth, particularly in rapidly developing economies such as Vietnam. To achieve success at both the individual and organisational levels, logistics managers must demonstrate adaptability to evolving business models and technological advancements. The logistics industry in Vietnam has been expanding rapidly, driven by globalisation, economic advancement, and participation in international trade agreements. The demand for skilled logistics managers is unprecedented, given the presence of over 30,000 logistics companies in the country ([Vietnamnews, 2024](#)). However, as 97% of these enterprises are small to medium-sized, there is a pressing need for managers to possess both technical and managerial competencies to address the challenges of a rapidly evolving industry ([VIRAC, 2023](#)). This study aims to examine how logistics managers in Vietnam can develop these competencies to enhance organisational performance.

In today's competitive business environment, human resources are fundamental to the success of any organisation. The importance of human resources in organisational effectiveness is widely recognised in both academic literature and practical applications. Various theories have highlighted the crucial role of human resources in organisational performance, notably the Intellectual Capital-based view proposed by (Reed et al., 2006) and the dynamic capabilities theory advanced by (Teece et al., 1997), alongside numerous empirical studies (Antoni et al., 2020; Hayton, 2003; Khandekar & Sharma, 2005). As supply chains undergo digital transformation through the integration of technologies such as automation, the Internet of Things (IoT), and data analytics, the demand for skilled logistics managers has risen significantly. In rapidly developing economies such as Vietnam, the logistics sector is experiencing substantial growth, leading companies to increasingly rely on highly competent specialists capable of managing complex supply chain networks and adapting to emerging technologies.

The landscape of supply chain management (SCM) has undergone a profound transformation from its earlier forms. The transition from traditional to digital supply chain management has been driven by smart manufacturing, intelligent products, and technological advancements such as the IoT (Chauhan & Singh, 2020). This shift enables the development of an intelligent SCM system that leverages technology and communication tools to enhance decision-making processes, performance monitoring, and real-time material tracking (Ivanov et al., 2016; Toh et al., 2009). Moreover, Mubarik and Khan (2024) contend that within the SCM industry—shaped by the concurrent rise of digitalisation, the pandemic, and global conflicts—the importance of intangible assets, particularly human capital, has reached unprecedented levels.

The evolving business landscape, characterised by new business models, emerging technologies, complex processes, and heightened risks, necessitates a revised approach to human competencies for effective adaptation (Kurz & Anandarajan, 2021). In this context, employees' knowledge, skills, and abilities serve as fundamental prerequisites for understanding, adopting, and leveraging digitalisation in SCM (Mubarik & Khan, 2024). Specifically, managers, who are responsible for ensuring the seamless operation of logistics businesses from production to consumption, play a pivotal role in shaping a firm's competitiveness and overall success (Essex et al., 2016). To navigate this rapidly evolving environment, logistics firms must employ proficient managers equipped with substantial technical expertise, specialised knowledge, and strong interpersonal capabilities (Murphy & Poist, 2007). This necessity is particularly pronounced in a rapidly developing nation such as Vietnam, where globalisation and economic growth are driving increased demand for logistics services (Vietnamnews, 2024). Gaining a comprehensive understanding of how these competencies enhance both individual performance and organisational effectiveness is therefore crucial in formulating appropriate human resource policies and strategies to optimise organisational outcomes.

Despite the growing importance of logistics in the global economy, a gap remains in the literature regarding the specific competencies that logistics managers must possess to enhance both individual and organisational performance. While numerous studies have explored broad supply chain management competencies, there has been a lack of focus on the distinct challenges faced by logistics managers in emerging economies such as Vietnam. This study seeks to bridge this gap by examining the technical and interpersonal competencies required of logistics managers and their impact on organisational success. The literature has extensively recognised competencies as critical determinants of business performance and competitive advantage across both financial and non-financial dimensions (Chiadamrong & Suppakitjarak, 2008; Hsu et al., 2011; Shukla et al., 2013). However, it is striking that "the topic in the context of logistics and supply chain management (L&SCM) is still in its infancy" (Derwik et al., 2016). The prevailing consensus among scholars largely stems from the conceptual ambiguity surrounding the notion of competencies within SCM (Derwik & Hellström, 2017). Furthermore, through a systematic review of 98 scientific papers, Derwik and Hellström (2017) identified a significant gap in university course syllabuses and programmes, which fail to incorporate the essential competencies required in SCM.

This study aims to examine the competencies required for logistics managers to attain operational efficiency and secure a competitive advantage within Vietnamese enterprises. It provides a detailed analysis of the technical, strategic, and interpersonal competencies that enhance both individual and organisational performance. Furthermore, the study explores how these competencies can contribute to the advancement of logistics education and training programmes. The study seeks to examine not only the current competencies of logistics managers but also their contribution to each dimension of individual and organisational performance in practice. Three key research questions are addressed: (1) What are the most critical competencies that logistics managers must possess to perform their roles effectively? (2) How does the competence of logistics managers impact both their individual performance and the performance of their organisations? (3) What are the implications of the relationship between the competencies of logistics managers and their individual and organisational performance for education and training? The study suggests that updating curricula to incorporate practical knowledge, soft skills, and technical expertise is essential for preparing future logistics managers.

This research expands the existing body of knowledge by elucidating the competency profile of logistics managers within the context of a developing nation. It offers practical insights for logistics companies aiming to strengthen their managerial competencies, as well as for educational institutions seeking to refine their logistics programmes. This study holds significant potential to improve the training and development of future logistics professionals by aligning logistics education with industry needs. The research is grounded in the dynamic capabilities' theory, which underscores the importance of

managerial competencies and agility in navigating rapidly changing contexts. The human capital approach emphasises the value of investing in the knowledge and skills of logistics managers to enhance organisational performance. This research advances existing knowledge by elucidating the competency profile of logistics managers within the context of a developing country. It provides practical insights for logistics firms seeking to strengthen their managerial capabilities, as well as for academic institutions striving to enhance their logistics curricula. This study holds considerable potential to improve the training and development of future logistics professionals by aligning logistics education with industry requirements. The remainder of this paper is structured as follows: Section 2 provides a review of the existing literature on the competency profile of logistics managers and the relationship between these competencies and both individual and organisational success. Section 3 outlines the research context of Vietnam, followed by the study methodology in Section 4. Section 5 presents the findings and discussion, while Section 6 concludes the study with a summary of key findings, implications, and recommendations for future research.

LITERATURE REVIEW

This literature review examines existing research on the competencies of logistics managers and their impact on both individual and organisational performance. It synthesises key frameworks and findings to identify gaps in the current body of knowledge, positioning itself within logistics and SCM research. The Business Logistics and Management (BLM) model, developed by [Poist \(1984\)](#), was among the earliest frameworks for logistics capabilities, categorising skills into business, logistics, and management domains. Later revisions, such as [Gammelgaard and Larson \(2001\)](#) classification, incorporated interpersonal and technological competencies, reflecting the evolving nature of the field. While these models provide a strong foundation, they fail to fully address the specific competencies required in today's digitally driven supply chain management landscape.

Numerous studies have explored the relationship between competencies and performance. [Flöthmann et al. \(2018\)](#) identified analytical and problem-solving skills as crucial for logistics managers, while interpersonal competencies, such as communication and leadership, are essential for team management and performance improvement. Similarly, [Aušra et al. \(2021\)](#) found that technical expertise in supply chain management is closely linked to task performance, whereas soft skills are vital for adaptability in dynamic environments. Despite extensive research on logistical competencies, a significant gap persists regarding the context of developing nations such as Vietnam. While studies have explored competency profiles in global supply chains, few have addressed the unique challenges faced by logistics managers in emerging economies. Additionally, research linking logistical competencies to educational and training implications, particularly in the context of digital transformation, remains limited.

Previous studies in the field have employed diverse research methods to examine the competencies of logistics managers. For instance, [Derwik and Hellström \(2017\)](#) conducted a systematic review of 98 papers to identify key competency models in supply chain management. In contrast, [Flöthmann et al. \(2018\)](#) adopted a mixed-methods approach, integrating surveys and interviews to assess the impact of competencies on logistics performance. While these studies offer valuable insights, they do not specifically address the unique challenges faced by logistics managers in emerging markets such as Vietnam. Although existing frameworks provide a strong foundation for understanding logistics competencies, they fail to account for the dynamic and context-specific demands of logistics managers in developing economies. Moreover, limited research has explored the educational implications of these competencies, particularly in the context of rapidly evolving supply chain technologies. This study seeks to bridge these gaps by examining the competencies required of logistics managers in Vietnam and their potential integration into educational curricula.

The Context of Vietnam

Vietnam's elongated, S-shaped geography highlights the critical role of logistics management within the country. According to the Vietnam Logistics Business Association, the sector has experienced an annual growth rate of 14–16% in recent years, establishing it as one of the nation's fastest-growing economic industries, with a projected compound annual growth rate of 15–20% over the next five years ([Kokalari, 2023](#)). Logistics plays a pivotal role in Vietnam's economic development ([VIRAC, 2023](#)). The country's expanding economy and increasing participation in international trade agreements have further underscored its significance. In the era of globalisation, logistics remains essential to Vietnam's economic growth, supporting key sectors such as agriculture, manufacturing, and exportation ([VIRAC, 2023](#)).

Logistics competency, defined as the quality of logistics services linked to the skills of individuals, is crucial for a country's logistics performance. Currently, there are over 30,000 logistics firms in Vietnam; however, more than 97% are micro, small, and medium-sized organizations, which collectively represent approximately 30% of the market share. Furthermore, Vietnam Industry Research and Consultancy ([VIRAC, 2023](#)) examined the difficulties confronting Vietnam's logistics sector. There are (1) technological advancements and the growing need for service value, (2) the expansion of links between enterprises and agencies, and (3) the threat of a global economic recession. Consequently, cultivating and maintaining the proficiency of logistics managers is acknowledged as a critical aspect in enhancing the competitiveness and operational performance of logistics service providers inside the nation.

RESEARCH METHODOLOGY

This study employed an exploratory qualitative research approach to examine the competencies of logistics managers and their impact on business performance in

Vietnam. Given the intricate and dynamic nature of the logistics sector in emerging economies, a qualitative methodology was deemed appropriate for capturing detailed insights from industry experts. Semi-structured, in-depth interviews were the primary data collection method, allowing for an exploration of logistics managers' experiences and skill sets. The study involved interviews with logistics managers from seven organisations operating within Vietnam's logistics and supply chain management (L&SCM) sector. These firms were purposefully selected based on their size, industry prominence, and geographical representation. Six of the participants held senior management positions, such as General Director and CEO, while one served as the Country Head for Ocean Services at a global logistics service provider. Participants were chosen for their strategic and operational insights into the industry.

This research employed qualitative interviews within a social constructionist paradigm (Carsten et al., 2010; Kramer & Crespy, 2011). Logistics managers, chief executive officers, and other senior personnel participated in semi-structured interviews, conducted using a question schedule that allowed interviewers the flexibility to explore additional topics where relevant (Lloyd et al., 2006). The method was structured around key research questions and a comprehensive literature review, addressing (1) essential competencies (knowledge, skills, abilities, or attitudes) required by logistics managers and their link to performance, (2) challenges in recruiting logistics managers and potential solutions, (3) critical factors for the effective implementation of education and training measures, and (4) the relationship between logistics services, competitiveness, and competency development in the context of technological advancements and sustainable logistics practices.

Purposive and snowball sampling strategies were employed to recruit participants with relevant expertise in logistics management. Purposive sampling ensured a focus on managers with extensive industry experience and strategic roles, while snowball sampling facilitated access to additional knowledgeable participants through referrals. Although these techniques effectively identified key informants, they may introduce selection bias and limit the generalisability of findings. However, the study's emphasis on capturing comprehensive perspectives mitigates these limitations. Participants were recruited from seven distinct organisations in Vietnam, selected to provide insights into the relationship between logistics managers' competencies and business performance, as well as implications for education and training. Initial contact was made via email, containing an overview of the study and an introductory note from the research team. Follow-up phone and email communications were conducted after one week with non-respondents. Upon agreement, interviews were scheduled at a time and location convenient for the participants, typically at their workplaces to ensure comfort with recording equipment, while some interviews were conducted via online platforms. Participants were provided with an information statement outlining the study's ethical approval. The interviews were conducted in Vietnamese, the native language of both the first-named author and the participants, and later translated into English. All

participant information sheets and consent forms were translated into Vietnamese before distribution. Participants provided written consent before interviews commenced, including consent for audio recording. To protect confidentiality, all participant and organisation names were anonymised.

Semi-structured interviews were conducted either in person or via online platforms, depending on participants' availability. Interviews lasted between 60 and 90 minutes and followed a flexible schedule of open-ended questions, allowing for an in-depth exploration of relevant themes while accommodating emerging issues. The questions centred on the competencies essential for logistics management, their impact on organisational performance, and their implications for education and training. The duration of interviews varied between 60 and 90 minutes, with some shortened to accommodate time constraints. Most participants openly shared their experiences and perspectives. In addition to audio recordings, researchers meticulously documented observations during interviews, capturing body language, identifying areas for further discussion, and refining the interview focus. This facilitated more comprehensive transcription and analysis. Thematic analysis was conducted on the English-translated transcripts, identifying key themes, including logistics managers' competency perceptions, their relationship with firm performance, and their implications for education and training within Vietnam. Thematic and conceptual coding was carried out manually (Burnard, 1991).

The interview data were transcribed and subjected to thematic analysis to identify recurring themes related to logistics managers' competencies and their impact on performance. The transcripts were read multiple times to familiarise the researchers with the data. Patterns emerging from the data were coded and categorised into broad themes such as "strategic alignment," "leadership skills," and "technical competencies." Manual coding was used to enhance flexibility in identifying new themes. Several measures were implemented to ensure the validity and reliability of findings. Firstly, member checking was conducted by providing participants with a summary of interview findings to verify the accuracy of their perspectives. Secondly, interviewer bias was minimised by employing a structured interview guide, ensuring consistency across all interviews. Additionally, peer debriefing was undertaken to review and discuss the coding process and theme interpretations, strengthening the credibility of the analysis. These measures ensured the integrity of the data and the robustness of the findings. Participants provided informed consent prior to the interviews and were informed of their right to withdraw at any time. To maintain confidentiality, the identities of participants and organisations were anonymised in all transcripts and reports.

FINDINGS AND DISCUSSION

The interview analysis identified three key themes: (1) the technical and interpersonal skills required for logistics managers, (2) their impact on individual and organisational performance, and (3) the implications for logistics education and training. The

following sections present these findings.

Interviews indicated that logistics managers in Vietnam need both technical and interpersonal competencies for effective performance. Essential technical skills include strategic supply chain management, process optimisation, and regulatory compliance, while interpersonal skills such as negotiation, communication, and leadership are crucial for managing cross-functional teams. These findings align with [Gammelgaard and Larson \(2001\)](#), who emphasised the importance of both skill sets for logistics managers globally. This study categorised logistics managers' performance into task performance, contextual performance, and adaptive performance. Task performance refers to technical duties, while contextual performance involves behaviours that enhance the corporate environment, such as collaboration and rule compliance. Adaptive performance, as defined by [Jundt et al. \(2015\)](#), is the ability to adapt to changes in the business environment. The findings show that managers with strong technical skills excel in task performance, while those with interpersonal and leadership abilities perform better in contextual and adaptive tasks.

These results align with [Flöthmann et al. \(2018\)](#), who identified problem-solving and leadership as critical for logistics managers. This study extends previous research by highlighting the significance of technological capabilities in developing countries like Vietnam, where logistics firms are increasingly adopting digital tools to enhance supply chain efficiency. The findings have important implications for logistics education and training, with participants emphasising the need for practical training in process improvement, technology use, and leadership. [Murphy and Poist \(2007\)](#) suggest that educational institutions should update their curricula to include digital technologies, as logistics firms in Vietnam are increasingly integrating these tools.

Demographic Information of Case Organisations

[Table 1](#) presents a summary of the demographic data of the interviewees and case organisations. Most interviewees (six) hold senior management positions, including general directors and CEOs, with one serving as chairman and another as the country head for ocean services at a global logistics provider. Approximately 43% of interviewees have been in their current roles for over 10 years, while 28.5% have more than five years of experience. Notably, all interviewees previously held senior management roles in various organisations within the industry. These qualifications suggest that the interviewees are well-positioned to provide valuable insights into the research issues at both strategic and operational levels. All firms involved in the in-depth interviews are currently operating within the L&SCM industry in Vietnam. Regarding firm size, approximately 72% are large organisations, while 14% are small and medium-sized enterprises. These prominent logistics service providers are highly representative of the broader L&SCM industry in Vietnam, reflecting typical

organisational sizes, service scopes, and workforce challenges, which are central to this research.

Table 1: Demographic Data of Interviewees and Case Organisations

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7
Designation	General Director	Country Head (Ocean Services)	CEO	Chairman	General Director	CEO	CEO
Years on the Current Role	6	7	23	21	4	3	14
Business Sector	Logistics Services for the Parent Firm (Beverages Production)	Comprehensive Logistics Services	Comprehensive Logistics Services	Sea and Air Forwarding; Express Delivery	Trucking, Sea Forwarding, Warehousing, Customs Clearance	Logistics Services	Full Spectrum of Logistics Services
Number of Employees	300	120	1100	60	800	20	1500

Required Knowledge of Logistics Professionals at the Managerial Level

Firstly, interview participants highlighted that logistics managers must possess fundamental knowledge relevant to the logistics and supply chain profession. Proficiency in these key areas of knowledge is therefore crucial.

“The knowledge performed by logistics professionals includes effectively managing transportation and warehousing operations, developing logistics strategies, SCM, and optimizing processes. They also require a thorough understanding of regulations and laws related to transportation and international trade in the field of logistics.” (Interviewee 1)

The majority of interviewees indicated that managerial personnel in logistics should possess both foundational and advanced knowledge. Foundational knowledge encompasses a general understanding of logistics, basic principles of import-export and transportation, legal expertise, customs procedures and regulations, familiarity with free trade agreements—particularly those between Vietnam and its business partners—and an awareness of industry-specific legal regulations.

“Understanding of customs procedures, regulations, free trade agreements, especially between Vietnam and countries where the company provides services, and knowledge of legal documents within the industry.” (Interviewee 4)

Additionally, interviewees emphasised the importance of possessing a comprehensive understanding of industry knowledge, referred to as a "market overview". Staying informed about market dynamics, trends, and fluctuations is essential for competitiveness. Self-directed learning was highlighted as crucial for acquiring market knowledge and making strategic decisions in dynamic environments. Advanced

knowledge in the logistics sector also includes linguistic skills, strategic thinking, financial acumen, and adaptability to change. Such expertise is vital for managing long-term strategies and responding to environmental shifts. Furthermore, multilingual capabilities were recognised as valuable, particularly in international business and cross-cultural communication.

Skill Required by Logistics Professionals at the Managerial Level

Logistics professionals at the managerial level must possess a diverse skill set essential for the effective operation and management of the logistics and supply chain industry. Several interviewees (Interviewee 1 and Interviewee 5) highlighted the importance of negotiation and bargaining skills.

"Interviewees 1 and 5 emphasized the necessity for managers to possess negotiation skills when engaging with external and internal stakeholders. Capacity for effective collaboration with various departments, including production and marketing... Additionally, bartering and negotiation abilities are critical soft skills, particularly when interacting with the business and procurement divisions..."

Critical competencies for job effectiveness include specialised skills such as reporting and process management, alongside soft skills like negotiation, communication, and team development. According to [Bassellier et al, \(2001\)](#), a skills-based approach highlights the essential competencies needed for employees to perform their tasks efficiently. Key abilities include time management, organisation, planning, data analysis, market information acquisition, and effective presentation. Participants also emphasised the importance of operational organisation, logistics planning, task delegation, time management, burden control, and problem-solving for effective planning. These findings highlight the need for a diverse skill set, combining technical, operational, and interpersonal proficiencies, enabling professionals to navigate complex situations, make informed decisions, manage teams, and adapt to market and operational changes.

Attitudes Required by Logistics Professionals at the Managerial Level

Logistics managers must possess a range of attitudes critical for success, including adaptability to change and a strong desire for continuous learning. This suggests that managers should actively engage in practical experiences to stay informed on emerging issues and advancements. Such adaptability is essential in the logistics sector, where market conditions, technologies, and operational methods constantly evolve. Thus, ongoing education and investigation are key to effectively tackling challenges and seizing opportunities. These attributes indicate that effective logistics management extends beyond technical proficiency, requiring a mindset focused on continuous improvement, collaboration, and flexibility. Managers with these traits are better equipped to navigate the complexities of the logistics industry, lead teams effectively,

and adapt to rapid changes. Consequently, it is not enough to focus solely on enhancing skills and knowledge; organisations must also cultivate the right mindsets among staff to optimise both individual and collective productivity.

The Linkage between Logistics Managers' Competence and Performance

This study categorises the performance of logistics managers into task performance, contextual performance, and adaptive performance.

Competence-Synergy is Critical for Contextual and Adaptive Performance

A key finding of this study is that logistics managers require a combination of diverse skills. A common assertion among respondents was the importance of a skill set that includes both soft skills, such as leadership and communication, alongside strategic alignment and organisational skills to ensure effective performance. Senior managers from Case Organisations 1, 2, 3, and 5 emphasised that managers who understand the firm's vision and strategic direction are better equipped to organise their teams' activities in support of overarching organisational goals. It is crucial that managers do not focus solely on their individual business units; only by comprehending the company's broader objectives can they establish processes and procedures that align with the firm's strategy, thereby enhancing overall performance, as highlighted by Interviewee 1.

“As we are transforming the organization, our managers need to be able to enable changes and contribute to the transformation through building working processes according to the vision.”

Therefore, logistics managers must broaden their focus beyond current practices and orient themselves towards fostering a more expansive working environment for the firm. This approach will enable them to enhance their contextual performance, driving stronger company growth. This finding aligns with [Karulanga and Namagembe \(2022\)](#), who highlight the need for operational alignment with firm strategy. However, unlike their study, this research contributes to the existing literature by revealing the significance of internal strategic coherence between a company and its subsidiaries. Furthermore, the findings underscore the importance of combining strategic alignment with other competencies, such as leadership, planning, and communication skills.

Competence as Technological Capabilities are Supporting Performance

Regarding technology-related competencies and sustainable practices, our findings reveal that firms acknowledge the significance of technological capabilities and sustainability initiatives. Managers offered detailed insights into how their organisations can develop a competitive advantage and secure more orders through the strategic use of technology and sustainability, as highlighted by one interviewee:

“Technology and Sustainable Logistics are two factors that can be considered the backbone for future development and global competition. It is also vital for our firm that we can achieve sustainable activities”. (Interviewee 2)

However, there was limited evidence regarding how individual managers' competencies in technology and sustainability contribute to firm performance. This may be attributed to the relatively low level of technology adoption and sustainability practices within the country (Akbari et al., 2024). As Vietnam is still in the early stages of the digital technology era and its economy has not yet fully recovered from the COVID-19 pandemic, firms are prioritising cost management.

IMPLICATIONS FOR EDUCATION AND TRAINING

The findings of this study highlight the evolving role of logistics managers within an increasingly digitised and globalised business environment. As businesses become more reliant on technology and complex supply chain networks, the need to update educational and training programmes grows, ensuring that future logistics managers are equipped with the necessary technical and interpersonal skills. The research identified that logistics managers require a blend of technical competencies, such as strategic supply chain management and regulatory compliance, along with soft skills like leadership and communication. Given the significance of these skills for both individual and organisational performance, it is essential that educational institutions integrate them into their curricula. Universities should prioritise teaching practical skills related to technology application and process optimisation, which the interviewees highlighted as crucial for effective logistics management in the modern era.

Many participants highlighted that young graduates often lack practical knowledge and industry-specific skills, requiring additional training upon entering the workforce. To address this gap, logistics education programmes should incorporate practical training components such as internships, case studies, and partnerships with the logistics sector, as emphasized by (Murphy & Poist, 2007) and supported by this study's participants. Given the increasing reliance on digital technologies like automation, data analytics, and IoT in supply chains, logistics education must prioritise technological proficiency. Participants stressed the need for future managers to be skilled in using these tools to optimise logistics processes, urging educational institutions to include courses on supply chain technology and digital logistics.

Furthermore, participants underscored the importance of soft skills, such as communication, negotiation, and leadership, alongside technical expertise. Educational programmes should focus on developing these interpersonal skills through role-playing, collaborative projects, and leadership training. These abilities are essential for managing teams and engaging with both internal and external stakeholders. Additionally, participants emphasised the need for closer collaboration between

educational institutions and the logistics sector to align curricula with industry demands. By offering internships, case studies, and guest lectures from industry professionals, this collaboration would better prepare students for the logistics sector. This study underscores the need for logistics education and training programmes to adapt to industry needs. By integrating both technical and interpersonal competencies into curricula and fostering stronger partnerships with logistics firms, educational institutions can better prepare future logistics managers for the challenges of a dynamic, technology-driven industry, thereby improving individual performance and enhancing organisational competitiveness.

CONCLUSION

This study provides valuable insights into the competencies required for logistics managers to succeed in a complex, digitised supply chain environment. It identifies the need for a combination of technical skills, such as strategic supply chain management, regulatory compliance, and technology proficiency, alongside soft skills like leadership, communication, and problem-solving. These findings have significant implications for logistics education and training, suggesting that curricula should be updated to include practical training and the integration of digital tools. Collaboration between educational institutions and logistics firms is crucial to align courses with industry needs and ensure future managers are equipped to enhance both individual and organisational performance. By focusing on Vietnam, the study highlights the essential competencies needed in an emerging economy, contributing to the literature on logistics management in developing countries. The research reveals that logistics managers' technical and soft skills directly influence task, contextual, and adaptive performance, critical for enhancing organisational competitiveness in a rapidly changing landscape. The study also recommends that logistics firms develop customised training programmes prioritising both technical and interpersonal skills, while educational institutions should incorporate practical training in technology and leadership. While the study's limited sample may affect the generalisability of the findings, it provides a significant contribution to understanding the competency profiles of logistics managers in the context of digitisation. The research supports contingency theory, emphasising the need for logistics managers' competencies to evolve in response to socio-economic, environmental, and technological changes. It offers managerial insights for senior management in logistics firms and can inform the development of educational programmes that better prepare logistics managers for the future. Further research is encouraged to examine logistics managers' competencies across different sectors and locations, as well as the impact of evolving technologies on their roles, to deepen understanding of the dynamic nature of logistics management competencies in various contexts.

ACKNOWLEDGMENT

This research is funded by Vietnam National Foundation for Science and Technology Development (NAFOSTED) under grant number 502.02-2020.324.

REFERENCES

- Akbari, M., Kok, S. K., Hopkins, J., Frederico, G. F., Nguyen, H., & Alonso, A. D. (2024). The changing landscape of digital transformation in supply chains: impacts of industry 4.0 in Vietnam. *The international journal of logistics management*, 35(4), 1040-1072. <https://doi.org/10.1108/IJLM-11-2022-0442>
- Antoni, D., Jie, F., & Abareshi, A. (2020). Critical factors in information technology capability for enhancing firm's environmental performance: case of Indonesian ICT sector. *International Journal of Agile Systems and Management*, 13(2), 159-181. <https://doi.org/10.1504/ijasm.2020.107907>
- Bassellier, G., Reich, B. H., & Benbasat, I. (2001). Information Technology Competence of Business Managers: A Definition and Research Model. *Journal of Management Information Systems*, 17(4), 159-182. <https://doi.org/10.1080/07421222.2001.11045660>
- Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse Education Today*, 11(6), 461-466. [https://doi.org/https://doi.org/10.1016/0260-6917\(91\)90009-Y](https://doi.org/https://doi.org/10.1016/0260-6917(91)90009-Y)
- Carsten, M. K., Uhl-Bien, M., West, B. J., Patera, J. L., & McGregor, R. (2010). Exploring social constructions of followership: A qualitative study. *The Leadership Quarterly*, 21(3), 543-562. <https://doi.org/https://doi.org/10.1016/j.leafqua.2010.03.015>
- Chauhan, C., & Singh, A. (2020). A review of Industry 4.0 in supply chain management studies. *Journal of Manufacturing Technology Management*, 31(5), 863-886. <https://doi.org/10.1108/JMTM-04-2018-0105>
- Chiadamrong, N., & Suppakitjarak, N. (2008). Relationships of Supply Chain Management capability and manufacturing operations competence on organisational performance: a case study of Thai industries. *International Journal of Logistics Systems and Management*, 4(5), 551-573. <https://doi.org/10.1504/ijlsm.2008.0176>
- Derwik, P., & Hellström, D. (2017). Competence in supply chain management: a systematic review. *Supply Chain Management: An International Journal*, 22(2), 200-218. <https://doi.org/10.1108/SCM-09-2016-0324>
- Derwik, P., Hellström, D., & Karlsson, S. (2016). Manager competences in logistics and supply chain practice. *Journal of Business Research*, 69(11), 4820-4825. <https://doi.org/https://doi.org/10.1016/j.jbusres.2016.04.037>
- Essex, A., Subramanian, N., & Gunasekaran, A. (2016). The relationship between supply chain manager capabilities and performance: empirical evidence.

Production Planning & Control, 27(3), 198-211.
<https://doi.org/10.1080/09537287.2015.1091519>

- Flöthmann, C., Hoberg, K., & Wieland, A. (2018). Competency requirements of supply chain planners & analysts and personal preferences of hiring managers. *Supply Chain Management: An International Journal*, 23(6), 480-499.
<https://doi.org/10.1108/SCM-03-2018-0101>
- Gammelgaard, B., & Larson, P. D. (2001). Logistics skills and competencies for supply chain management. *Journal of Business Logistics*, 22(2), 27-50.
<https://doi.org/https://doi.org/10.1002/j.2158-1592.2001.tb00002.x>
- Hayton, J. C. (2003). Strategic human capital management in SMEs: An empirical study of entrepreneurial performance. *Human Resource Management*, 42(4), 375-391.
<https://doi.org/https://doi.org/10.1002/hrm.10096>
- Hsu, C.-C., Tan, K. C., Laosirihongthong, T., & Leong, G. K. (2011). Entrepreneurial SCM competence and performance of manufacturing SMEs. *International Journal of Production Research*, 49(22), 6629-6649.
<https://doi.org/10.1080/00207543.2010.537384>
- Ivanov, D., Dolgui, A., Sokolov, B., Werner, F., & Ivanova, M. (2016). A dynamic model and an algorithm for short-term supply chain scheduling in the smart factory industry 4.0. *International Journal of Production Research*, 54(2), 386-402.
<https://doi.org/10.1080/00207543.2014.999958>
- Jundt, D. K., Shoss, M. K., & Huang, J. L. (2015). Individual adaptive performance in organizations: A review. *Journal of Organizational Behavior*, 36(S1), S53-S71.
<https://doi.org/https://doi.org/10.1002/job.1955>
- Khandekar, A., & Sharma, A. (2005). Managing human resource capabilities for sustainable competitive advantage. *Education + Training*, 47(8/9), 628-639.
<https://doi.org/10.1108/00400910510633161>
- Kokalari, M. (2023). Vietnam's booming logistics sector still has room for growth, <https://theinvestor.vn/vietnams-booming-logistics-sector-still-has-room-for-growth-d5463.html>
- Kramer, M. W., & Crespy, D. A. (2011). Communicating collaborative leadership. *The Leadership Quarterly*, 22(5), 1024-1037.
<https://doi.org/https://doi.org/10.1016/j.leaqua.2011.07.021>
- Kurz, D., & Anandarajan, M. (2021). *Digital supply chain leadership: reshaping talent and organizations*. Routledge. <https://doi.org/10.4324/9780429292552>
- Lloyd, V., Gatherer, A., & Kalsy, S. (2006). Conducting Qualitative Interview Research With People With Expressive Language Difficulties. *Qualitative Health Research*, 16(10), 1386-1404. <https://doi.org/10.1177/1049732306293846>
- Mubarik, M. S., & Khan, S. A. (2024). Digital Supply Chain Management: A Post-COVID-19 Perspective. In *The Theory, Methods and Application of Managing Digital Supply Chains* (pp. 41-57). Emerald Publishing Limited.
<https://doi.org/10.1108/978-1-80455-968-020241003>
- Murphy, P., & Poist, R. F. (2007). Skill requirements of senior-level logisticians: a

- longitudinal assessment. *Supply Chain Management: An International Journal*, 12(6), 423-431. <https://doi.org/10.1108/13598540710826353>
- Reed, K. K., Lubatkin, M., & Srinivasan, N. (2006). Proposing and Testing an Intellectual Capital-Based View of the Firm. *Journal of Management Studies*, 43(4), 867-893. <https://doi.org/https://doi.org/10.1111/j.1467-6486.2006.00614.x>
- Shukla, R. K., Garg, D., & Agarwal, A. (2013). Supply chain coordination competency and Firm Performance: An empirical study. *International Journal of Supply Chain Management*, 2(4), 64-70. <https://doi.org/10.59160/ijscm.v2i4.823>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. http://dx.doi.org/10.1142/9789812834478_0002
- Toh, K. T. K., Nagel, P., & Oakden, R. (2009). A business and ICT architecture for a logistics city. *International Journal of Production Economics*, 122(1), 216-228. <https://doi.org/https://doi.org/10.1016/j.ijpe.2009.05.021>
- Vietnamnews (2024) New strategy is expected to promote logistics service development, <https://vietnamnews.vn/economy/1639710/new-strategy-is-expected-to-promote-logistics-service-development.html>
- VIRAC (Vietnam Industry Research and Consultancy). (2023) Vietnam's logistics activities 2023: overview and challenges for strong development, <https://viracresearch.com/vietnams-logistics-activities-2023-overview/>