



# Logistics Best Practices Towards Logistics Performance in Malaysia Moderated with Lean Logistics

Mohamad Fared Mohamad Makmor<sup>1</sup>(✉), Zaharuzaman Jamaluddin<sup>2</sup>,  
and Mazni Saad<sup>3</sup>

<sup>1</sup> Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Jalan Universiti, Bandar Barat, 31900 Kampar, Perak, Malaysia

faredm@utar.edu.my

<sup>2</sup> Faculty of Business and Accountancy, Universiti Selangor, Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia

zaharuzaman@unisel.edu.my

<sup>3</sup> Kulliyah of Language and Management, International Islamic Universiti Malaysia, Jalan Pancor, Pagoh, 84600 Muar, Johor, Malaysia

maznisaad@iiu.edu.my

**Abstract.** Malaysia is ranked 41st in the 2018 Logistics Performance Index (LPI), which ranks the infrastructure and logistical performance of 160 nations. This is a reduction from the ratings of 2014 and 2016, which were 25 and 32, respectively. Singapore, Thailand, and Vietnam are Malaysia's top competitors, and they are ranked 7, 32, and 39 in the LPI 2018 report, respectively. This study explore on how logistics best practices and lean logistics have a moderating impact on the logistics performance. 170 logistics companies out of an estimated sample size of 297 from the total population of 1,312 organizations, successfully completed the questionnaires (57.24% response rate). To analyse the data and evaluate the hypotheses, SPSS and PLS-SEM were employed in this study. The findings indicate that management commitment and collaboration had significantly impact the performance while lean logistics does not moderate the relationship between best practices and performance. In Malaysia, this study is a pioneer in the investigation of lean logistics and the use of best practices in logistics to improve logistics performance among SME logistics firms. The limitations of the study were also discussed in this research.

**Keywords:** Best practices · Logistics · Lean · Performance · Malaysia

## 1 Introduction

From the point of sourcing raw materials to the production of finished goods to the distribution system to the point of consumption, as well as the associated reverse logistics operations, business processes play a key part in today's modern world. The logistics function's main objective is to organize, carry out, and oversee all of these operations

while adhering to client expectations and requirements and spending as little money as is practical efficiently and effectively. By upholding an acceptable and defined standard of service, modern logistics tries to fully encompass consumer satisfaction (Daniel et al., 2018). According to Daniel et al. (2018), logistical capabilities are a subset of resources that enable a company to effectively differentiate itself from rivals and exploit other resources. They describe logistical capabilities as a group of assets that are closely related to high levels of customer satisfaction. A company may need to reconsider how services are delivered or provided to various clients in order to ensure that a consumer is satisfied. The creation of value-added services is one way to overcome issues with customer satisfaction.

The Turku School of Economics in Finland working in conjunction with the World Bank to develop the Logistics Performance Index (LPI), which is used to determine the weighted average of a country's logistics performance scores based on six key dimensions, includes: (1) the efficiency of the clearance process; (2) the quality of trade and transport-related infrastructure; (3) the simplicity of setting up shipments at competitive prices; (4) competence and quality; (5) ability to track and trace; and (6) timeliness.

The Logistics Performance Index (LPI), which evaluates 160 countries' infrastructure and logistical performance, places Malaysia at position 41. This is a decrease from 25 and 32, respectively, in the assessments from 2014 and 2016 (The World Bank, 2018). This shows that Malaysia was unable to successfully manage both in order to develop into an efficient logistics hub in the Southeast Asian (SEA) region, despite its economic potential and advanced logistical infrastructures. The Straits of Malacca's strategic position as a junction for the world's principal maritime routes, however, was advantageous to Malaysia's neighbors, such as Singapore. Despite having less favorable geographic locations than Malaysia, Thailand and Vietnam are two additional nations that rank higher than Malaysia. Singapore, Thailand, and Vietnam are Malaysia's main adversaries and are ranked 7, 32, and 39 in the LPI 2018 report, respectively. It highlights how the Malaysian logistics industry may improve its overall performance with infrastructures, capabilities, and the logistics system should all be properly improved and managed. There are four logistics best practices or independent variables that directly affect the established competitive advantages or logistics performance, referred to as the dependent variable, will be examined with a moderating variable of lean logistics adoption and practices by logistics service organizations. For instance, to adopt and realize the concept of lean logistics, the employees of logistics companies must build a culture of lean thinking and lean tactics that places a priority on minimizing potential wastes.

The proficiency and caliber of Malaysia's logistics service providers demonstrated a downward trend that calls for significant improvement. According to the statistics, Malaysian companies are performing worse in terms of competence and logistical service quality. Potential importers and exporters will be left with the unfavorable perception that Malaysian logistics companies lack expertise and deliver services of inferior quality when compared to those offered by international or multinational corporations (MNCs). In order to increase the capabilities and caliber of logistics services performance in Malaysia, the relevant government agency, logistics associations, logistics businesses, and people engaged in the logistics service sectors must cooperate together.

## 1.1 Research Objectives

This study's main objectives are to gain understanding of the best practices in logistics as they relate to logistics performance and to determine whether lean logistics can be used as a moderating factor to enhance logistics performance in Malaysia. The following list outlines the specific objectives of this study.

1. To examine the correlation between management commitment and logistics performance.
2. To examine the correlation between financial capability and logistics performance.
3. To examine the correlation between skills and knowledge and logistics performance.
4. To examine the correlation between collaboration and logistics performance.
5. To examine the correlation between management commitment and logistics performance with lean logistics as the moderating variable.
6. To examine the correlation between financial capability and logistics performance with lean logistics as the moderating variable.
7. To examine the correlation between skills and knowledge and logistics performance with lean logistics as the moderating variable.
8. To examine the correlation between collaboration and logistics performance with lean logistics as the moderating variable.

## 1.2 Research Questions

The specific research questions are summarized in the list below.

1. Does management commitment have an impact on the logistics performance?
2. Does financial capability have an impact on the logistics performance?
3. Does skills and knowledge have an impact on the logistics performance?
4. Does collaboration have an impact on the logistics performance?
5. Does management commitment have an impact on the logistics performance moderated with lean logistics?
6. Does financial capability have an impact on the logistics performance moderated with lean logistics?
7. Does skills and knowledge have an impact on the logistics performance moderated with lean logistics?
8. Does collaboration have an impact on the logistics performance moderated with lean logistics?

## 1.3 Significant of the Study

The three categories of this work's significance are theoretical, practical, and methodological.

### 1.3.1 Theoretical

To enhance the effectiveness of logistics services, this study aims to discover best practices in logistics. It also explores whether lean logistics can support local Malaysian logistics service providers in improving overall logistics performance.

### **1.3.2 Practical**

Finding out how widely lean logistics is used and how it affects logistics performance are the two main objectives of the study. The objective is to increase government, academic, and practitioner understanding of the usefulness of lean logistics principles, methodologies, and implementation.

### **1.3.3 Methodological**

Many businesses are still struggling to resume their pre-crisis levels of profitability. So, it is time to think about how lean logistics principles and techniques could raise the competitiveness of logistics companies in the global market by coordinating well across the supply chain.

## **2 Literature Review**

The Resource-Based View Theory (RBVT) and Source Dependency Theory are two related management theories that this study has identified to investigate, from the perspective of lean logistics, how businesses would respond to concerns about cost and waste reduction.

### **2.1 Logistics Performance**

Lowering operating expenses, boosting competition, and enhancing bottom-line profitability can all be achieved by eliminating operations that are ineffective for the firm's operational and organizational performance. In addition, the company's performance is influenced by its capacity to offer a high degree of client satisfaction. Customer satisfaction is determined by whether a company meets the needs of the client by offering timely delivery of high-quality goods or services. The value given to customers has an impact on their level of happiness as well. According to Piercy and Rich (2015), the goal of lean operations is to utilize less resources to achieve the same result.

### **2.2 Management Commitment and Logistics Performance**

Zuliyanti, Venkateswarlu, and Dirk (2017) claim that leadership is linked to the psychological process of influencing and modifying employee behavior as well as the dedication of top decision-makers and budget holders. Although management commitment is crucial, it is also necessary for leaders to actively encourage and support their staff.

### **2.3 Financial Capability and Logistics Performance**

For a business that has poor financial management and insufficient finances, this is a major barrier to lean performance. Achanga (2006) asserts that the most crucial aspect of the implementation of lean is finance. Workers may lose faith in the implementation due to a lack of internal funding for the project and a failure to support it, and the implementation may fail.

### 2.4 Skills and Knowledge and Logistics Performance

Understanding the lean function and its impact on their organization has become a vital component of lean deployment (Jazairy et al., 2021). While in other study conducted by Abu et al. (2019), the researchers look into the significance of knowledge and skills in the Malaysian wood and furniture industry businesses by looking at the 5s tools. According to the results, experts are needed to increase operational performance, according to respondents from a range of Malaysian wood and furniture sectors.

### 2.5 Collaboration and Logistics Performance

For risk management, solution development, and risk or problem prevention, working with suppliers and other stakeholders is essential. Many firms commonly believe that “Risk outside the focus company is the most destructive” (Baez et al., 2020). Collaboration between individuals or the application of various assessment techniques can increase an organization’s adaptability and productivity (Agyei-owusu et al., 2016).

### 2.6 Lean Logistics

There are now significantly more businesses using lean strategies to improve supply chain performance. The supply chain “waste” reduction strategy used by the lean process, which includes waiting times, rework and unnecessary processing, motion, transport, and inventory, provides value. Lean manufacturing has a strong emphasis on removing waste, which includes reducing environmental contamination. Supply chain integration cycles may make it easier for manufacturing companies to use lean techniques to achieve operational excellence. According to Rawewan and Kojima (2020), their collaborative techniques help members become more motivated and productive.

Figure 1 provides an illustration of the suggested study framework.

The research objectives led to the following broad hypothesis for each independent variable.

H1 There is a significant relationship between management commitment and logistics performance.

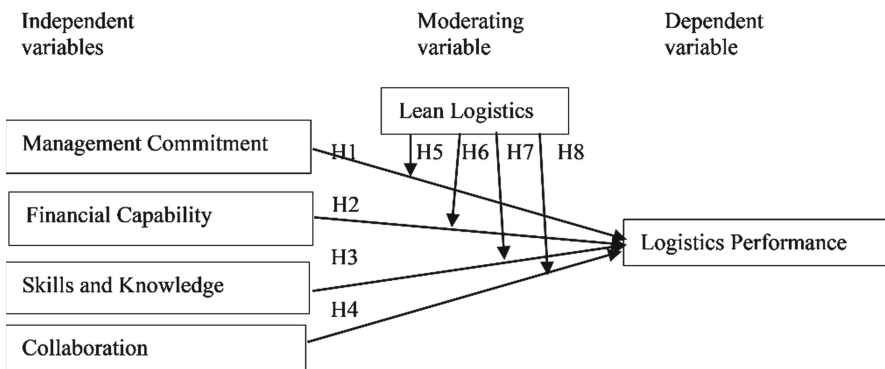


Fig. 1. Research Model

H2 There is a significant relationship between financial capability and logistics performance.

H3 There is a significant relationship between skills and knowledge and logistics performance.

H4 There is a significant relationship between collaboration and logistics performance.

The following are specific hypotheses for each independent variable that were derived from the research objectives, with lean logistics serving as the moderating variable.

H5 There is a significant relationship between management commitment and logistics performance with lean logistics as the moderating variable.

H6 There is a significant relationship between financial capability and logistics performance with lean logistics as the moderating variable.

H7 There is a significant relationship between skills and knowledge and logistics performance with lean logistics as the moderating variable.

H8 There is a significant relationship between collaboration and logistics performance with lean logistics as the moderating variable.

### **3 Research Methodology**

The study's sample size was 297 logistics companies out of the 1,312 freight forwarders who make up the Federation of Malaysia Freight Forwarders (FMFF). As a sampling method for this quantitative study, stratified random sampling was used. The country as a whole is home to the target respondent. It is the preferred method because stratified random selection enables the sample to be drawn from every region of the country. The sample is first separated into the six state associations that are under the FMFF, namely Penang Freight Forwarders Association (PFFA), Selangor Freight Forwarder and Logistics Association (SFFLA), Johore Freight Forwarders Association (JOFFA), Sarawak Forwarding Agents Association (SFAA), Sabah Freight Forwarder and Logistics Association (SabFFLA), and Labuan Freight Forwarders Association (LFFA). The needed sample size is then attained by selecting a sample at random from each stratum. This sampling strategy has a low relative cost as long as lists of pertinent strata are accessible. This sample method is reliable and simple to use. However, the researcher only managed to obtain 170 responses from the total targeted sample size of 297 respondents to conduct the data analysis.

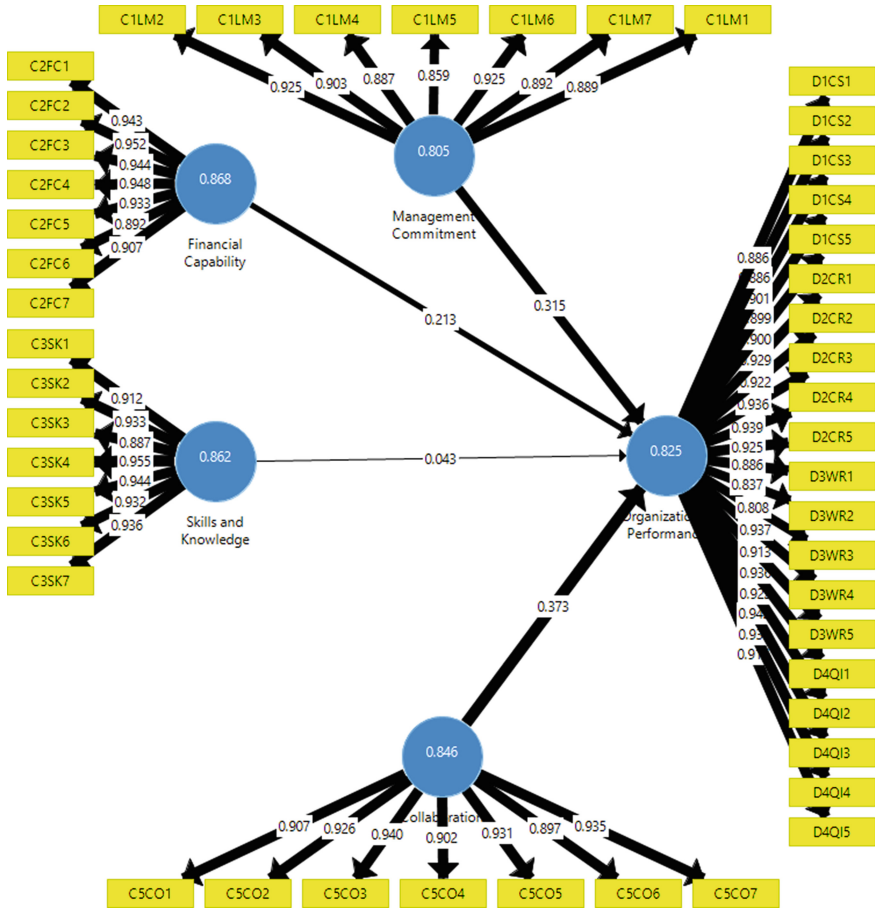


Fig. 2. Measuring Model Assessment

### 4 Data Analysis

To assure the accuracy and dependability of the measurement items, the measurement model was verified. The reflecting measuring model assessment employed in this inquiry is shown in Fig. 2 (Table 1).

**Table 1.** Construct Reliability and Validity

	Cronbach's Alpha	rho A	Composite Reliability	Variance Extracted (AVE)
Collaboration	0.970	0.970	0.975	0.846
Financial Capability	0.974	0.975	0.979	0.868
Logistics Performance	0.989	0.989	0.990	0.825
Management Commitment	0.960	0.961	0.967	0.805
Skills Knowledge	0.973	0.974	0.978	0.862

Source: As generated by PLS-SEM 3 version 3.27.

**Table 2.** Summary of Tested Hypotheses on Direct Effects

Hypotheses	Relationship	T-values	P-values	Decision
H1	MC > LP	2.028	0.043	Support
H2	FC > LP	0.992	0.321	Not Support
H3	SK > LP	0.182	0.856	Not Support
H4	CO > LP	2.745	0.006	Support

Note. MC-Management Commitment, FC-Financial Capability, SK-Skills and Knowledge, CO-Collaboration, LP-Logistics Performance.

According to Table 2, the data analysis showed that two hypotheses (H2, and H3) were not supported. At  $p > 0.05$ , financial capability and skills and knowledge have no significant impact on logistics performance. Hair et al. (2018) state that for one tail-test, the significant level must reach a minimum level on the t-value of 1.645 and a p-value of 0.05. The remaining hypotheses (H1 and H4), however, received support. At  $p < 0.05$ , management commitment and collaboration had a moderately significant favorable impact on logistics performance.



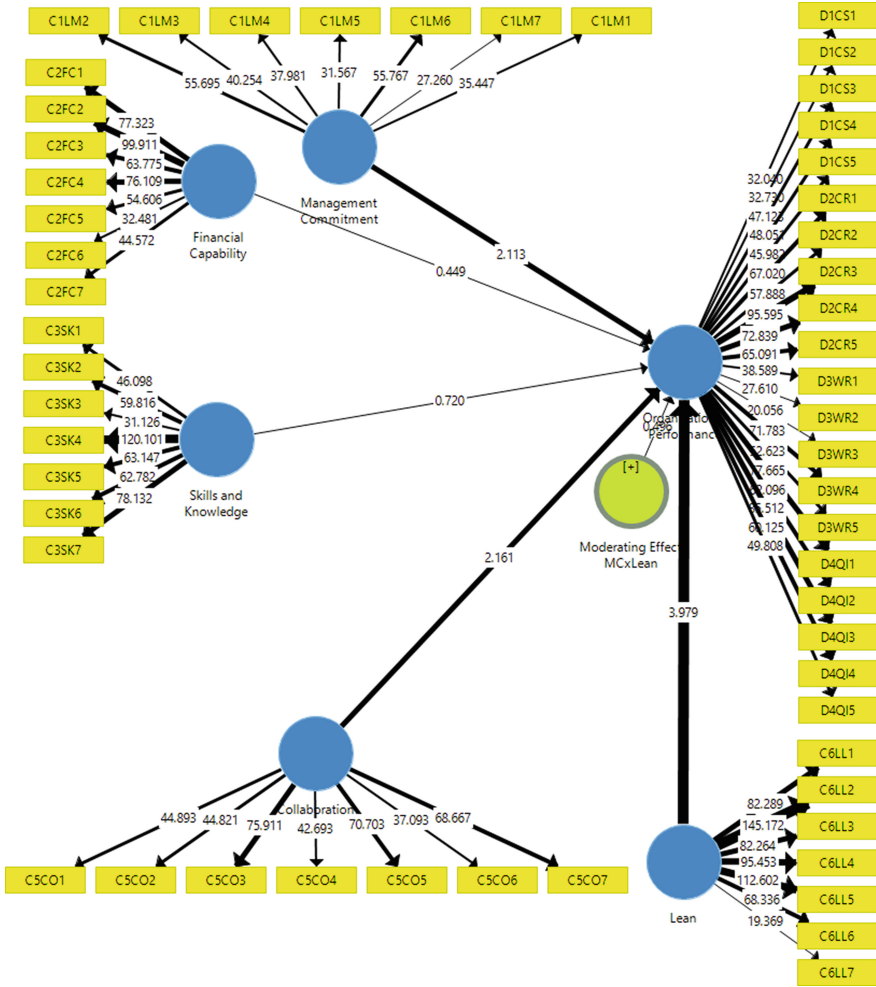


Fig. 3. Measurement model assessment for lean logistics

Figure 3 depicts the measurement model assessment for lean logistics as the moderating variable used in this investigation.

According to Table 3, the data analysis showed that all four hypotheses (H5, H6, H7 and H8) were not supported. At  $p > 0.05$ , management commitment, financial capability, skills and knowledge and collaboration, moderated with lean logistics have no significant impact on logistics performance.

**Table 3.** Summary of Tested Hypotheses moderated with Lean Logistics

Hypotheses	Relationship	T-values	P-values	Decision
H5	MC x LL > LP	0.502	0.616	Not Support
H6	FC x LL > LP	0.356	0.722	Not Support
H7	SK x LL > LP	0.67	0.503	Not Support
H8	CO x LL > LP	0.286	0.775	Not Support

Note. MC-Management Commitment, FC-Financial Capability, SK-Skills and Knowledge, CO-Collaboration, LL-Lean Logistics, LP-Logistics Performance.

## 5 Result and Discussion

The eight research questions stated below are taken into consideration as we quickly examine the findings from the analysis of the structural model of this study.

RQ 1: To ascertain whether management commitment significantly affects the performance of logistics? An analysis of the association between the management commitment dimension and logistics performance revealed a significant relationship ( $p < 0.05$ ). According to the Pearce et al., 2018 article, leadership is about having a positive attitude toward responsibility in order to gauge performance achievement. Lean adoption for leadership and performance within SMEs in New Zealand was studied by Pearce et al. (2018). The findings demonstrate that inadequate practices combined with managerial encouragement can alter how employees perceive themselves and their ability to contribute to the company.

RQ 2: To ascertain whether or not financial capacity significantly affects logistics performance? It was shown that there was no significant correlation between the financial capability component and logistics performance ( $p > 0.05$ ). According to the journals mentioned by Sahoo and Yadav (2018), the majority of recently adopting small firms face initial financial challenges. Insufficient financial resources were cited as the top three organizational impediments to implementing lean construction in practice by 187 respondents, according to Bajjou and Chafi (2018).

RQ 3: To ascertain whether skills and knowledge have a major impact on the performance of logistics? It was shown that there was no significant correlation between the factor of skills and knowledge and logistics performance ( $p > 0.05$ ). This is explained by the findings of the following journals by Xie et al., (2022), who discovered a severe shortage of logistics professionals, inadequate investment in innovation, a lackluster capacity for innovation transformation, and low overall operational efficiency and benefit in China’s logistic industry. The lack of management employees, logistics planners, and logistics researchers with a thorough understanding of management and modern logistics management principles is something that businesses should take seriously in order to improve management performance (Huang, Li & Wang, 2019).

RQ 4: To ascertain whether collaboration significantly affects logistics performance? When the association between the collaboration dimension and logistics performance was investigated, a significant relationship ( $p < 0.05$ ) was found. The following articles

demonstrate how collaboration between logistics information systems and several stakeholders was necessary in order to accomplish rapid decision-making, cost savings, and high-quality services (Sun et al., 2022). On the other hand, Zissis, Aktas, and Bourlakis (2018) stress the importance of utilizing Industry 4.0 to develop a sustainable logistics system. The study looked at the managerial and operational performance effects of industry 4.0 and sustainable logistics systems.

RQ 5: To ascertain whether management commitment has significant influence on logistics performance moderated with lean logistics? Lean logistics was used to moderate the relationship between the dimension of management commitment and logistics performance; the results indicated that there was no significant relationship ( $p > 0.05$ ). This is explained by the following journals, which concluded that the leadership was the black sheep of lean failure as a result of the poor results from a small number of organizations that used lean principles (Alefari et al, 2020). Alefari et al. (2020) conducted a comprehensive review of the literature and discovered that the leader has lost focus on lean concepts of leadership, lack of commitment from the leader, a lack of employee engagement, and a lack of understanding of lean tools and techniques, all of which have an impact on management performance in business systems.

RQ 6: To ascertain whether financial capability has significant influence on logistics performance moderated with lean logistics? Examining the relationship between the financial capability component and the performance of the logistics system as moderated by lean logistics, it was determined that there was no significant relationship ( $p > 0.05$ ). Dieste et al (2021)'s investigation of the relationship between agile firms and lean techniques provides an explanation for this. Agile businesses assert that if lean is not correctly applied, it may not always increase businesses' financial success. The General Motors industry is another example of the drawbacks of lean tactics (Simbanegavi & Qutiesha, 2022). Because they offered workers noncompetitive pay and benefits structures and goods that were enticing to the market, General Motors failed to embrace lean. The outcome was that the lean factories lost business and had to close because there was no longer a market for their goods.

RQ 7: To ascertain whether skills and knowledge has significant influence on logistics performance moderated with lean logistics? Lean logistics was used to moderate the relationship between the component of skills and knowledge and logistics performance; the results indicated that there was no significant relationship ( $p > 0.05$ ). According to the following journals of Abu et al., 2019, there are substantial findings, lack of implementation expertise ( $p > 0.05$ ) and a lack of lean competency are the primary barriers to firms not implementing lean ( $p > 0.05$ ). Respondents concurred that all of the knowledge concerns and one resource issue—lack of capital funding—were impediments to the implementation of lean.

RQ 8: To ascertain whether collaboration has significant influence on logistics performance moderated with lean logistics? When the dimension of collaboration and logistics performance which moderated with lean were compared, the results of the analysis indicated that there was no significant correlation ( $p > 0.05$ ). The papers that follow show how technology integration enhances transparency, traceability, and security at every stage of logistics operations by monitoring data, physical components, transactions, and the actions and behaviors of participants. As a result, the entire logistics system is better

able to handle conflicts and reduce risks. The same is true for research on electronic infrastructure in the service industry that collaborates with ICTs to lower all costs and improve operational performance (Scuotto et al., 2017). According to a sample of 1254 SMEs in the Italian service industry, the placement of ICTs inside their SCM is crucial since it fosters value-added partnerships and value creation.

## 6 Conclusion

The study's goal is accomplished via the research. Future research should concentrate on the management commitment and collaboration dimensions among the four independent variables under the logistics best practices since they affect logistics performance. Due to their substantial contributions and role in the economy, logistics performance especially services provided by the SMEs should be closely monitored as Malaysia strives to achieve high income status by 2024. The Resource Based View Theory (RBVT) and Sources Dependency Theory (SDT) are still relevant for enhancing organizational performance. The RBVT and SDT theories are essential in the context of small businesses because the RBVT holds that a company's ability to provide a unique product or service determines its ability to survive in the long run, and the SDT complements the RBVT by involving the exchange of resources through a reciprocity process that has the potential to enhance organizational performance. Logistics companies must keep up with these changes and make sure that staff members are always informed of the latest market trends and business environments as they alter and evolve.

The limitation of research statistics is one of the limitations that has been met in conducting this research. Throughout the research, one of the problems that has been met which is the lack of journal articles that are showing the statistics about lean logistics in Malaysia.

## References

- Abrell-Vogel, C., & Rowold, J. (2014). Leaders' commitment to change and their effectiveness in change - a multilevel investigation. *Journal of Organisational Change Management*, 27(6), 900–921.
- Abu, F., Gholami, H., Mat Saman, M. Z., Zakuan, N., & Streimikiene, D. (2019). The implementation of lean manufacturing in the furniture industry: A review and analysis on the motives, barriers, challenges, and the applications. *Journal of Cleaner Production*, 234, 660–680. <https://doi.org/10.1016/j.jclepro.2019.06.279>
- Achanga, P., Shebab, E., Roy, R. & Nelder, G. (2006). Critical Success Factors for Lean Implementation within SMEs. *Journal of Manufacturing Technology*, 17(4), pp. 460–471.
- Agyei-owusu, B., Asamoah, D., & Andoh-Baidoo, F. (2016). Impact of Supply Chain Collaboration on Logistics Performance: Evidence from a Sub-Saharan Nation's petroleum downstream. *22nd Americas Conference on Information Systems*, January 2018.
- Alefari, M., Almani, M., & Salonitis, K. (2020). Lean manufacturing, leadership, and employees: the case of UAE SME manufacturing companies. *Production and Manufacturing Research*, 8(1), 222–243.
- Baez, Y. P., Andersson, R., Bridi, E., & Paladini, E. P. (2020). Lean Six Sigma Philosophy Improves Collaboration to Get More Integrated Supply Chains. *Revista Eletrônica de Estratégia & Negócios*, 12(3), 153.

- Daniel Winter Fernandes, Roberto Giro Moori, Valdir Antonio Vitorino Filho. (2018). Logistic service quality as a mediator between logistics capabilities and customer satisfaction. *Revista de Gestão*,
- Dieste, M., Panizzolo, R., & Garza-Reyes, J. A. (2021). A systematic literature review regarding the influence of lean manufacturing on firms' financial performance. *Journal of Manufacturing Technology Management*, 32(9), 101–121. <https://doi.org/10.1108/JMTM-08-2020-0304>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th ed.). United Kingdom: Cengage Learning.
- Jazairy, A., von Haartman, R., & Björklund, M. (2021). Unravelling collaboration mechanisms for green logistics: the perspectives of shippers and logistics service providers. *International Journal of Physical Distribution and Logistics Management*, 51(4), 423–448.
- Mohsen, A., & Nezeyi, N. (2020). Impact of Organizational Culture on Employees: an Overview. *International Journal of Management (IJM)*, 11(8), 879–888.
- Pearce, A., Pons, D., & Neitzert, T. (2018). Implementing lean—Outcomes from SME case studies. *Operations Research Perspectives*, 5, 94–104.
- Piercy, N. and Rich, N. (2015). The relationship between lean operations and sustainable operations. *International Journal of Operations & Production Management*, 35(2), 282–315.
- Raweevan, M., & Kojima, F. (2020). Digital lean manufacturing - Collaborative university-industry education in systems design for lean transformation. *Procedia Manufacturing*, 45(2019), 183–188.
- Ringle, C.M., Wende, S., and Becker, J.M. (2015). “SmartPLS 3.” Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
- Simbanegavi, K., & Qutiesha, A. (2022). The Impact of Lean Practices on Organizational Performance: The Zimbabwean Perspective. *International Journal of Engineering Research & Technology*, 11(05), 687–693.
- Sun, X., Yu, H., Solvang, W. D., Wang, Y., & Wang, K. (2022). The application of Industry 4.0 technologies in sustainable logistics: a systematic literature review (2012–2020) to explore future research opportunities. *Environmental Science and Pollution Research*, 29(7), 9560–9591.
- The World Bank (2018). Logistics Performance Index, <https://lpi.worldbank.org/international/global/2018>
- Xie, R., Huang, H., Zhang, Y., & Yu, P. (2022). Coupling relationship between cold chain logistics and economic development: A investigation from China. *PLoS ONE*, 17(2 February), 1–20.
- Zissis D, Aktas E, Bourlakis M (2018) Collaboration in urban distribution of online grocery orders. *Int J Logist Manag*, 29, 1196–1214
- Zuliyanti Hanizan Ainul Azyan, Venkateswarlu Pulakanam, Dirk Pons, (2017). Success factors and barriers to implementing lean in the printing industry: A case study and theoretical framework. *Journal of Manufacturing Technology Management*, 28(4), 458–484,

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

