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Factors Affecting Logistics Performance on Malaysian Retail Industry: A Conceptual Paper

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Abstract

This conceptual paper examines the factors influencing performance in Malaysia's retail industry, driven by the rapid growth of e- logistics commerce and the rising demand for logistics services. Although the global logistics market has seen significant growth, there is still a lack of detailed insights into Malaysia's logistics sector. Key factors affecting logistics performance include logistics service quality, technology adoption, and cooperative partnerships. High-quality logistics services are essential for enhancing customer satisfaction and business success. The integration of advanced technologies, such as the Internet of Things and Radio Frequency Identification, plays a critical role in improving operational efficiency. Moreover, strong partnerships between logistics service providers and retailers foster better communication and resource sharing, leading to improved logistics outcomes. This study emphasizes the need for continued research to understand the specific logistics factors that contribute to competitive advantage and operational efficiency within the Malaysian retail sector. Addressing these factors is vital for enhancing the overall performance of logistics operations and meeting evolving consumer demands in a dynamic market.

Keywords: Logistics Service Quality, Technology Adoption, Cooperative Partnerships, Logistics Performance

Introduction

The rapid growth of e-commerce and the increasing demand for logistics services have significantly boosted the Malaysian retail industry. According to Gan (2022), the global logistics market was valued at approximately $1.020 trillion in 2020 and is expected to grow further. However, specific data on the Malaysian logistics sector is still limited. The expanding

e-commerce environment presents opportunities for logistics service providers (LSPs), attracting both domestic and foreign companies. With a population of about 31 million, Malaysia offers a profitable market for LSPs to adapt to evolving customer needs.

The logistics industry's evolution profoundly affects customer satisfaction and loyalty. Superior logistics services are crucial for improving corporate success, necessitating an examination of the individual logistics elements that influence overall performance and competitive advantage in Malaysia. The incorporation of sophisticated technologies, such the Internet of Things (IoT) and Radio Frequency Identification (RFID), is essential for enhancing logistics performance. This study will examine the effective implementation of these technologies to address increasing consumer demands and enhance service performance.

The growth of the logistics sector in Malaysia is closely tied to technological advancements and the increasing complexity of supply chains. Talib et al. (2020) stated that LSPs are investing heavily in logistics technology to improve operational efficiency, enhance service delivery, and reduce costs. The COVID-19 pandemic has accelerated these trends, forcing businesses to adapt to changing customer behaviors, especially the shift towards online shopping. Tan (2023), emphasizes that integrating digital technologies, such as big data analytics and blockchain, is essential for LSPs to remain competitive and improve logistics performance. Shahadat et al (2023), further support this by highlighting how technological advancements strengthen operational capabilities and create more resilient supply chains.

Several key factors affect the efficiency of the Malaysian retail sector, including the quality of logistics services, logistics technology, and the relationships between LSPs and their clients. High-quality logistics services are vital for improving business performance, leading to greater customer satisfaction and financial success. Oliveira et al (2022), stress the importance of effective logistics in urban deliveries, particularly in light of changing consumer behaviors during the COVID-19 pandemic, which has shifted demand from traditional retail to online platforms. Tehseen et al (2021), assert that the perceived success of Malaysian SMEs, particularly retailers, is closely linked to the quality of their logistics services.

The role of technology and innovation in logistics is crucial. Sakrabani and Ping (2020), demonstrate that technological capabilities are essential for achieving high performance in logistics operations. In Malaysia, the adoption of Retail 4.0 technologies is still in its early stages, with only 15-20% of businesses implementing these innovations (Sakrabani & Ping, 2020). This slow adoption may hinder retailers' ability to meet rising consumer demands for on-demand delivery and real-time data access, which are now standard in the retail industry (Sakrabani & Teoh, 2020). Information technology is critical for addressing these needs, as highlighted by Perera et al (2020), who discuss the rapid adoption of IT solutions to enhance supply chain responsiveness.

The relationship between LSPs and their clients is essential for improving logistics service quality and overall performance. Munita et al (2020), argue that strong partnerships allow LSPs to deliver services more effectively, thus enhancing logistics performance. This is particularly relevant in the Malaysian retail sector, where consumer expectations increasingly emphasize speed and efficiency in delivery. Mokhlis et al (2021), note that Industry 4.0 technologies support this trend, enabling retailers to leverage innovations to optimize

operations and meet customer demands for fast service. Fernando et al. (2022) investigate the influence of on-demand delivery systems on customer expectations and logistics strategies within the retail sector.

The transport and logistics sector in Malaysia is vital to the national economy, with a market value expected to exceed USD 100 billion by 2026, driven by the rise of e-commerce and digital logistics innovations. Kara & Yalçin (2022), project a growth rate of around 6% per year from 2021 to 2026, primarily due to the increasing demand for efficient logistics services that cater to the evolving needs of customers in the digital marketplace. Omotayo & Melan (2022), emphasize that LSPs face significant challenges in achieving operational efficiency in this dynamic environment, necessitating a commitment to enhancing service quality and transparency.

To improve the domestic logistics sector, Malaysia must focus on enhancing logistics performance to meet customer expectations. Kaur (2021) suggests this involves developing a skilled workforce, particularly in middle and senior management, responsible for strategic logistics planning. Implementing advanced technology and digital logistics systems is crucial for improving competitiveness and operational efficiency. Amiruddin & Romdhony (2020) indicate that adopting automation and digital platforms can significantly enhance logistics operations, reduce costs, and improve service delivery. Therefore, Omotayo & Melan (2022), argue that LSPs must diversify their service offerings to meet customer needs and market trends.

Furthermore, research by Bahsri & Zakaria (2023), shows that the quality of logistics services greatly influences customer satisfaction and loyalty, highlighting the need to maintain high service standards. However, a gap exists in the literature regarding the specific logistics factors that impact overall performance and competitive advantage in Malaysia. Rahim (2023), stresses the importance of addressing this gap to better understand how logistics operations can be improved to align with the nation's broader economic goals. As the logistics industry continues to evolve, stakeholders need stay engaged in research and development to keep pace with its changing demands.

A significant deficiency exists in the literature concerning the logistical elements that especially influence performance within the Malaysian setting. The study seeks to bridge this gap by offering insights that can assist industry players in enhancing logistics operations to correspond with the nation's overarching economic objectives. The results of this study will be advantageous for multiple stakeholders, including logistics service providers (LSPs), merchants, and policymakers. This research will assist stakeholders in improving service quality, operational efficiency, and customer happiness by concentrating on the utility and efficacy of logistics operations, which are essential for continued corporate success in a competitive landscape.

This article underscores the importance of logistics performance in the Malaysian retail sector, stressing the necessity for ongoing research to identify the precise elements that foster competitive advantage and operational efficiency. It aims to offer pragmatic insights for industry stakeholders striving to improve their logistics operations in a swiftly evolving market.

Literature Review and Hypothesis Development

Logistics Performance

The logistics performance in the Malaysian retail sector is a multifaceted concept that includes efficiency, effectiveness, and differentiation (Arun & Yildirim, 2023). This aligns with Khadim et al. (2021), who emphasized that evaluating logistics performance should focus on the effectiveness and efficiency of logistical operations. In Malaysia, the retail sector has come under increased inspection over its logistical efficiency, particularly in terms of delivering customer value. Langley and Holcomb Irfani et al. (2019) clarified that difference is an essential element of logistics performance, which can be measured by customer service metrics like delivery punctuality and service accessibility. These measures are especially relevant in the Malaysian retail sector, where consumer expectations for timely and reliable service are increasing.

Furthermore, the Malaysian retail sector is increasingly recognizing the importance of information technology in enhancing logistics efficiency. Zawawi Sentia et al (2018), stated that integrating advanced information technology systems significantly improves logistics performance. This viewpoint is supported by Çakır (2016), who stated that logistics performance is a crucial for logistics service providers. The relationship between technology and logistics performance is especially prominent in Malaysia, where digital transformation is reshaping retail operations (Lee et al., 2022). Implementing advanced logistics management systems enables retailers to optimize processes, reduce costs, and improve service delivery, thereby enhancing overall performance.

In addition to efficiency and effectiveness, the Malaysian retail sector must navigate the complexities of evaluating logistics performance in a competitive market. Panayides et al. (2018), identified four key perspectives for assessing logistics performance: effectiveness, efficiency, satisfaction, and innovation. This comprehensive approach is essential for Malaysian retailers aiming to stand out in a crowded market. The challenge lies in accurately measuring these factors, especially since the definitions of effectiveness and efficiency are often confused. Arun and Yildirim (2023), clarified that effectiveness refers to the wise use of resources, while efficiency relates to a company's ability to achieve desired outcomes with minimal resource expenditure. A thorough understanding of these concepts is vital for Malaysian retailers looking to streamline logistics operations and strengthen their competitive position in the market (Kozikojoukian, 2021). For aforementioned reasons, this study further explores the factors affecting logistics performance in the Malaysian retail industry.

Logistics Service Quality

The Logistics service quality plays a crucial role in determining the overall performance of logistics within the retail sector. It encompasses various dimensions, including reliability, responsiveness, assurance, empathy, and tangibles, which collectively influence customer satisfaction and loyalty (Yang et al., 2024). Research indicates that higher logistics service quality directly correlates with improved logistics performance, as it enhances customer trust and satisfaction, leading to repeat business and positive word-of-mouth (Ejdys & Gulc, 2020; Sutrisno et al., 2019). For instance, studies have shown that effective logistics service quality not only meets customer expectations but also fosters a competitive advantage for retailers,

thereby improving their operational efficiency and market position (Gotzamani et al., 2010; Chen & Qi, 2016).

According to Sutrisno et al (2019), operational and relational performances in logistics services significantly correlate with customer satisfaction, which in turn influences logistics performance. Additionally, Liu and Song (2023), highlights that logistics integration capabilities enhance performance in omni-channel retailing, suggesting that effective logistics service quality is integral to achieving superior logistics performance. Similarly, Chen and Qi (2016), highlight logistics service speed as a key factor influencing customer satisfaction, further reinforcing the connection between service quality and overall logistics performance.

Additionally, the significance of logistics service quality becomes even more critical in the changing retail landscape, particularly with the rise of omni-channel retailing (Wang et al., 2022). As retailers adapt to these changes, the ability to provide high-quality logistics services becomes essential for maintaining customer loyalty and satisfaction (Ishfaq et al., 2016; Song et al., 2019). The integration of logistics service quality into the strategic framework of retail operations enhances both customer experience and performance metrics (Lin et al., 2016; Bouzaabia et al., 2013). Derived from earlier mentioned discussions, this study hypothesized that:

H1: There is a positive relationship between logistics service quality and logistics performance.

Technology Adoption

The adoption of technology plays a crucial role in enhancing logistics performance within the Malaysian retail industry. As retailers increasingly integrate advanced technologies such as the Internet of Things (IoT) and Radio Frequency Identification (RFID), they experience improvements in operational efficiency and inventory management (Tan & Sidhu, 2022). For instance, RFID technology has been recognized for its potential to enhance inventory accuracy and provide real-time data, which is essential for effective supply chain management (Shankar et al., 2021). Moreover, the implementation of IoT solutions allows retailers to optimize in-store operations and streamline e-commerce processes, thereby improving overall logistics performance (De Vass et al., 2021; Sakrabani & Teoh, 2020). The focus on adopting such technologies aligns with the broader trend of Retail 4.0, where internal processes are enhanced through data analytics and automation, leading to better customer service and financial outcomes (Sakrabani, 2020).

In the Malaysian context, the readiness of retailers to adopt new technologies significantly influences their logistics performance. Research indicates that Malaysian retailers are increasingly focusing on back-end technologies that streamline internal processes, which in turn enhances customer satisfaction and financial performance (Hamim, et al., 2021; Masudin et al., 2021). The Technology-Organization-Environment (TOE) framework has been instrumental in understanding the factors that drive technology adoption among retailers (Chittipaka et al., 2023; Nguyen et al., 2022; Malik et al., 2021). This framework emphasizes the importance of organizational readiness and environmental factors, such as market competition and consumer expectations, which are critical for successful technology integration (Sakrabani & Ping, 2020). Thus, the acceptance of

technology by consumers is a vital consideration for retailers, as it directly impacts the effectiveness of technology adoption strategies.

Despite the clear benefits of technology adoption, challenges remain in the Malaysian retail sector. Many retailers have not yet fully integrated technologies such as RFID, which could greatly improve logistics efficiency (Roberts et al., 2021; Tan & Sidhu, 2022; Kalaiarasan et al., 2024). The slow adoption rates can be attributed to various factors, including the perceived risks associated with new technology investments and the need for employee training (Choi et al., 2020). Meanwhile, studies show that retailers who effectively adopt these technologies can significantly enhance their logistics performance (Behl et al., 2024; Argyropoulou et al., 2024). Therefore, adopting technology will be crucial for retailers aiming to remain competitive and enhance their logistics capabilities as the retail landscape evolves. Derived from earlier mentioned discussions, this study hypothesized that:

H2: There is a positive relationship between technology adoption and logistics performance.

Cooperative Partnerships

The Cooperative partnerships play a crucial role in enhancing logistics performance within the Malaysian retail industry. The establishment of strong partnerships among various stakeholders, including suppliers, logistics service providers, and retailers, fosters an environment conducive to information sharing and resource optimization (Hall et al., 2022). Research indicates that effective partnerships significantly impact supply chain performance by facilitating rapid decision-making and improving service quality (Zhong et al., 2020). In Malaysia's competitive retail industry, effective collaboration can result in significant cost savings and enhanced operational efficiency. Makmor et al. (2023) support this statement by emphasizing the importance of collaboration in logistics information systems to deliver high-quality services, highlighting that partnerships are crucial for navigating the complexities of modern supply chains.

Moreover, the dynamics of cooperative relationships can influence logistics performance through various mechanisms, such as shared incentives and mutual trust. Studies have shown that partnerships characterized by high-quality interactions and effective communication lead to better performance outcomes (Zhong et al., 2020; Wang et al., 2021). In Malaysia’s retail sector, businesses frequently face supply chain disruptions and fluctuating consumer demands. Establishing cooperative partnerships can provide a competitive advantage in this challenging environment. Jiménez et al (2019), state that cooperative relationships with suppliers positively impact performance, highlighting the importance of strategic alliances in enhancing logistics capabilities. This is particularly relevant for Malaysian retailers who must adapt to rapidly changing market conditions.

In addition to enhancing operational efficiency, cooperative partnerships can drive innovation within the logistics sector. Research by Shin et al (2019), indicates that deeper partnerships correlate with increased innovation and better overall firm performance. This finding is particularly relevant in Malaysia, where integrating technology and innovative practices is vital for sustaining growth in the retail industry. A collaborative approach not only enhances logistics performance but also fosters a culture of continuous improvement and adaptability among partners (Zhong et al., 2020; Makmor et al., 2023; Jiménez et al, 2019;

Hendayani & Alviyan, 2019). Therefore, derived from earlier mentioned discussions, this study hypothesized that:

H3: There is a positive relationship between cooperative partnerships and logistics performance.

Based on the existing literature and the hypotheses detailed above, the research framework presented in Figure 1 was developed. This framework illustrates the factors affecting logistics performance, specifically focusing on logistics service quality, technology adoption, and cooperative partnerships.

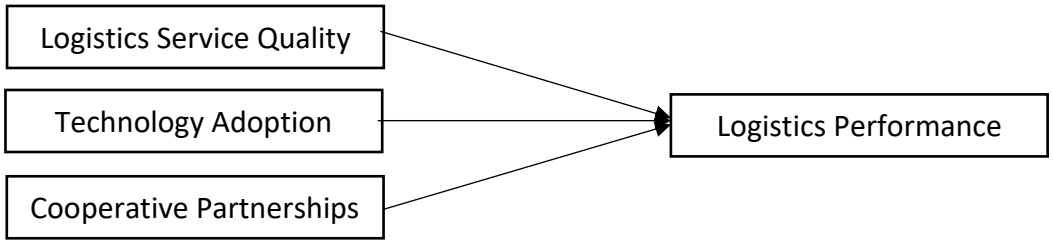

Figure 1: Conceptual Framework

Discussion

In the Malaysian retail sector, evaluating logistics performance is increasingly important as companies aim to boost their competitive edge. Key factors affecting logistics performance include service quality, technology, and the relationships between suppliers and customers. These elements are essential for improving operational efficiency and fostering customer satisfaction and loyalty, which are crucial for sustained business growth in a competitive environment. Recent studies by Samad et al (2021), highlight the importance of logistics service quality (LSQ) in enhancing customer satisfaction, particularly in Malaysia's courier and logistics industries, where timely and reliable service is critical.

Moreover, integrating new technologies into logistics operations has significantly enhanced performance metrics. Fernando et al (2022), found that using traceability systems enhances logistics performance, especially in halal logistics, where compliance with religious standards is vital. Yingfei et al (2022), further illustrate that effective use of technology correlates with better service quality and improved customer experiences, thereby increasing customer loyalty towards logistics providers.

The dynamics between suppliers and customers also play a critical role in logistics performance. Chandran (2024), highlights that strong partnerships can help organizations improve supply chain visibility and responsiveness, which are essential for meeting market demands quickly. Widjaja (2022), also stated that strong supplier relationships lead to better operational performance and customer satisfaction by facilitating effective communication and information sharing. This is particularly relevant in Malaysia, where the logistics sector consists of various participants, including micro, small, and medium enterprises (MSMEs), which heavily rely on solid supplier connections to navigate challenges and seize opportunities (Husin & Haron, 2020).

Conclusion and Future Recommendations

In conclusion, logistics performance in the Malaysian retail sector can be effectively evaluated through logistics service quality, technological advancements, and strong supplier-customer relationships. These elements work together to boost operational efficiency, enhance service quality, and ensure timely deliveries, thereby enabling logistics organizations to improve their overall performance and gain a competitive edge in the market.

To further enhance logistics performance, stakeholders in Malaysia should prioritize several key actions. First, investing in advanced technologies, such as the Internet of Things (IoT) and data analytics, is essential for optimizing logistics processes and meeting the evolving needs of consumers. Second, fostering collaborative partnerships among logistics service providers, retailers, and suppliers can facilitate information sharing and resource optimization, leading to improved service delivery and customer satisfaction.

Additionally, continuous training and development of the workforce are crucial to equip employees with the necessary skills to navigate the complexities of modern logistics. As the retail environment evolves—especially following the COVID-19 pandemic—embracing innovation and maintaining high service quality will be vital for the success of logistics operations in Malaysia.

Future research should focus on identifying specific logistics factors that impact performance and competitive advantage within the Malaysian context. This will help to fill the existing gaps in the literature and provide practical insights for industry stakeholders aiming to align logistics operations with the country's broader economic objectives.

References

Amiruddin, B. P. and Romdhony, D. R. (2020). A study on application of automation technology in logistics and its effect on e-commerce.. https://doi.org/10.31224/osf.io/vs9yg

Arun, K. And Yildirim Özmutlu, S. (2023). Türkiye'nin lojistik performans endeksinin stratejik bakiş açisiyla değerlendirilmesi. Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi, 13(3), 1315-1327. https://doi.org/10.30783/nevsosbilen.1228917

Asamoah, D., Agyei-Owusu, B., Andoh-Baidoo, F. K., & Ayaburi, E. (2021). Inter-organizational systems use and supply chain performance: mediating role of supply chain management capabilities. International Journal of Information Management, 58, 102195. https://doi.org/10.1016/j.ijinfomgt.2020.102195

Asree, S., Cherikh, M., & Gopalan, S. (2018). The impact of supply chain responsiveness and strategic supply chain collaboration on innovation performance. International Journal of Business Performance and Supply Chain Modelling, 10(2), 131. https://doi.org/10.1504/ijbpscm.2018.098306

Bahsri, N. B. and Zakaria, A. B. (2023). Systematic literature review on the job satisfaction of employees in the logistics industry. International Journal of Industrial Management, 17(1), 1-6. https://doi.org/10.15282/ijim.17.1.2023.9174

Bouzaabia, R., Bouzaâbia, O., & Căpăţînă, A. (2013). Retail logistics service quality: a cross-cultural survey on customer perceptions. International Journal of Retail &Amp; Distribution Management, 41(8), 627-647. https://doi.org/10.1108/ijrdm-02-2012-0012

Buldeo, H., Verlinde, S., Macharis, C., Schoutteet, P., & Vanhaverbeke, L. (2019). Logistics outsourcing in omnichannel retail. International Journal of Physical Distribution &Amp; Logistics Management, 49(3), 267-286. https://doi.org/10.1108/ijpdlm-02-2018-0092

Çakır, S. (2016). Measuring logistics performance of oecd countries via fuzzy linear regression. Journal of Multi-Criteria Decision Analysis, 24(3-4), 177-186. https://doi.org/10.1002/mcda.1601

Centenaro, A. and Laimer, C. G. (2017). Cooperative relationships and competitiveness in supermarket sector. Review of Business Management, 19(63), 65-81. https://doi.org/10.7819/rbgn.v0i0.3070

Chandran, S., Krishnasamy, T., Sundram, V. P. K., & Othman, A. K. (2024). The relationship between purchasing strategies and logistics performance in malaysian manufacturing. The European Proceedings of Social and Behavioural Sciences, 133, Sasitharan-906. https://doi.org/10.15405/epsbs.2024.05.73

Chen, H. and Qi, Y. (2016). The evaluation of customer satisfaction with the third party logistics service quality for online shopping. Advances in Economics and Business, 4(5), 201-207. https://doi.org/10.13189/aeb.2016.040501

Chen, L., Dong, T., Nan, G., Xiao, Q., Xu, M., & Ming, J. (2023). Impact of the introduction of marketplace channel on e-tailer's logistics service strategy. Managerial and Decision Economics, 44(5), 2835-2855. https://doi.org/10.1002/mde.3850

Chittipaka, V., Kumar, S., Sivarajah, U., Bowden, J. L. H., & Baral, M. M. (2023). Blockchain Technology for Supply Chains operating in emerging markets: an empirical examination of technology-organization-environment (TOE) framework. *Annals of Operations Research*, *327*(1), 465-492.

Choi, D., Chung, C. Y., Seyha, T., & Young, J. (2020). Factors affecting organizations' resistance to the adoption of blockchain technology in supply networks. *Sustainability*, *12*(21), 8882.

De Vass, T., Shee, H., & Miah, S. (2021). IoT in supply chain management: Opportunities and challenges for businesses in early industry 4.0 context. *Operations and Supply Chain Management: An International Journal*, *14*(2), 148-161.

Ejdys, J., and Gulc, A. (2020). Trust in courier services and its antecedents as a determinant of perceived service quality and future intention to use courier service. Sustainability, 12(21), 9088. https://doi.org/10.3390/su12219088

Fernando, Y., Chidambaram, R. R., & Wahyuni-TD, I. S. (2018). The impact of big data analytics and data security practices on service supply chain performance. Benchmarking: An International Journal, 25(9), 4009-4034. https://doi.org/10.1108/bij-07-2017-0194

Fernando, Y., Wahyuni-TD, I. S., Abideen, A. Z., & Mergeresa, F. (2022). Traceability technology, halal logistics brand and logistics performance: religious beliefs and beyond. Journal of Islamic Marketing, 14(4), 1007-1031. https://doi.org/10.1108/jima-06-2020-0183

Gan, K. H. (2022). Enhancing business performance through social media platforms amid the covid-19 pandemic: a study on shopee in malaysia. Journal of the Community Development in Asia, 5(3), 1-12. https://doi.org/10.32535/jcda.v5i3.1504

Gotzamani, K., Longinidis, P., & Vouzas, F. (2010). The logistics services outsourcing dilemma: quality management and financial performance perspectives. Supply Chain Management: An International Journal, 15(6), 438-453. https://doi.org/10.1108/13598541011080428

Haag, L., and Sandberg, E. (2019). Exploring key logistics characteristics supporting embeddedness in retailers' geographical expansion. The International Review of Retail, Distribution and Consumer Research, 30(1), 1-26. https://doi.org/10.1080/09593969.2019.1683052

Haag, L., Sandberg, E., & Sallnäs, U. (2021). Towards an increased understanding of learning: a case study of a collaborative relationship between a retailer and a logistics service provider. International Journal of Retail &Amp; Distribution Management, 50(13), 44-58. https://doi.org/10.1108/ijrdm-10-2020-0409

Hall, K. K. L., Richey Jr, R. G., & Patil, R. K. (2022). Collaboration, feedback, and performance: Supply chain insights from service-dominant logic. *Journal of Business Research*, *146*, 385-397.

Hamim, H., Kadir, M. N. A., & Shariff, M. N. M. (2021). SMEs retailing in Malaysia: Challenges for industrial revolution 4.0 implementation. In *Modeling Economic Growth in Contemporary Malaysia* (pp. 1-15). Emerald Publishing Limited.

Hashim, N. S. B. (2022). The importance of logistic programs and competency in logistic education in malaysia. The European Proceedings of Multidisciplinary Sciences. https://doi.org/10.15405/epms.2022.10.44

Hendayani, R., and Alviyan, B. (2019). The relationship between supply chain collaboration of value innovation in small medium enterprises and supply chain capability as mediator to achieve competitive advantages. Proceedings of the 1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018). https://doi.org/10.2991/icebef-18.2019.133

Hu, M., Chaudhry, P. E., & Chaudhry, S. S. (2022). Linking customized logistics service in online retailing with e-satisfaction and e-loyalty. International Journal of Engineering Business Management, 14, 184797902210975. https://doi.org/10.1177/18479790221097528

Husin, M. M., and Haron, R. (2020). Micro, small and medium enterprises' competitiveness and micro-takāfuladoption. ISRA International Journal of Islamic Finance, 12(3), 367-380. https://doi.org/10.1108/ijif-03-2019-0038

Irfani, D. P., Wibisono, D., & Basri, M. H. (2019). Logistics performance measurement framework for companies with multiple roles. Measuring Business Excellence, 23(2), 93-109. https://doi.org/10.1108/mbe-11-2018-0091

Ishfaq, R., Defee, C. C., Gibson, B., & Raja, U. (2016). Realignment of the physical distribution process in omni-channel fulfillment. International Journal of Physical Distribution &Amp; Logistics Management, 46(6/7), 543-561. https://doi.org/10.1108/ijpdlm-02-2015-0032

Jiménez, D. J., Costa, M. M., & Rodríguez, C. S. (2019). The mediating role of supply chain collaboration on the relationship between information technology and innovation. Journal of Knowledge Management, 23(3), 548-567. https://doi.org/10.1108/jkm-01-2018-0019

Kalaiarasan, R., Kamalesh, S., Jeyasurya, T., Kishor, L., & Nachimuthu, J. (2024, March). Automated Shopping with RFID-Enhanced Smart Technology. In *2024 5th International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV)* (pp. 831-836). IEEE.

Kara, K. and Yalçın, G. C. (2022). Digital logistics market performance of developing countries. Uluslararasi Akademik Birikim Dergisi. https://doi.org/10.53001/uluabd.2022.38

Karia, N. (2019). Halal logistics: practices, integration and performance of logistics service providers. Journal of Islamic Marketing, 13(1), 100-118. https://doi.org/10.1108/jima-08-2018-0132

Kaur, K. (2021). Business intelligence on supply chain responsiveness and agile performance: empirical evidence from malaysian logistics industry. International Journal of Supply Chain Management, 6(2), 31-63. https://doi.org/10.47604/ijscm.1351

Khadim, Z., Batool, I., Akbar, A., Poulová, P., & Akbar, M. H. (2021). Mapping the moderating role of logistics performance of logistics infrastructure on economic growth in developing countries. Economies, 9(4), 177. https://doi.org/10.3390/economies9040177

Kozikojoukian, T. (2021). Retail 4.0 and Adoption of Performance of SMEs in Malaysia. *Revista de Management Comparat Internațional*, *22*(5), 700-720.

Lee, K., Azmi, N., Hanaysha, J., Alzoubi, H., & Alshurideh, M. (2022). The effect of digital supply chain on organizational performance: An empirical study in Malaysia manufacturing industry. *Uncertain Supply Chain Management*, *10*(2), 495-510.

Liew, P. S., Liew, W. N., Lim, C. S., Lin, J. Y., & Qonitah, S. I. (2022). The impact of covid-19 pandemic on consumer behavior: j&t express courier services in malaysia and indonesia. Asia Pacific Journal of Management and Education, 5(1). https://doi.org/10.32535/apjme.v5i1.1428

Lim, A. F., Ooi, K., Tan, G. W., Cham, T., Alryalat, M. A., & Dwivedi, Y. K. (2022). Adapt or die: a competitive digital supply chain quality management strategy. Journal of Enterprise Information Management, 37(2), 698-720. https://doi.org/10.1108/jeim-09-2022-0345

Lin, Y., Luo, J., Cai, S., Ma, S., & Rong, K. (2016). Exploring the service quality in the e-commerce context: a triadic view. Industrial Management &Amp; Data Systems, 116(3), 388-415. https://doi.org/10.1108/imds-04-2015-0116

Liu, Y., and Song, G. (2023). Role of logistics integration capability in enhancing performance in omni-channel retailing: supply chain integration as mediator. Sustainability, 15(11), 9053. https://doi.org/10.3390/su15119053

Makmor, M. F. M., Jamaluddin, Z., & Saad, M. (2023). Logistics best practices towards logistics performance in malaysia moderated with lean logistics. Advances in Economics, Business and Management Research, 225-238. https://doi.org/10.2991/978-2-494069-99-2_19

Malik, S., Chadhar, M., Vatanasakdakul, S., & Chetty, M. (2021). Factors affecting the organizational adoption of blockchain technology: Extending the technology–organization–environment (TOE) framework in the Australian context. *Sustainability*, *13*(16), 9404.

Masudin, I., Jie, F., Djajadikerta, H. G., & Widayat, W. (2021). The effect of halal retail and manufacturing technology readiness on halal meat logistics performance. International Journal of Logistics Systems and Management, 40(1), 1. https://doi.org/10.1504/ijlsm.2021.117688

Mokhlis, S., Hussin, N. S. N., Nizam, N. Z., Noor, N. A. M., & Muslim, N. A. (2021). Predicting malaysian university students' intent to pursue retailing career: applicability of theory of planned behavior. International Journal of Professional Business Review, 7(1), e0277. https://doi.org/10.26668/businessreview/2022.v7i1.277

Mulyati, E. (2020). Multigroup analysis in supply chain performance. Jurnal Bisnis Dan Manajemen, 21(2), 100-113. https://doi.org/10.24198/jbm.v21i2.466

Munita, A. A., Kholil, M., Siwi, G. R., & Suparno, A. (2020). Application of vendor managed inventory cooperation model to encourage distribution of products in ud. sari jaya. International Journal of Advanced Technology in Mechanical, Mechatronics and Materials, 1(2), 56-65. https://doi.org/10.37869/ijatec.v1i2.15

Nguyen, T. H., Le, X. C., & Vu, T. H. L. (2022). An extended technology-organization-environment (TOE) framework for online retailing utilization in digital transformation: Empirical evidence from Vietnam. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4), 200.

Oliveira, L. K. D., Oliveira, I. K. D., Bertoncini, B. V., Sousa, L. S., & Junior, J. L. D. S. (2022). Determining the impacts of covid-19 on urban deliveries in the metropolitan region of belo horizonte using spatial analysis. Transportation Research Record: Journal of the Transportation Research Board, 2677(4), 408-431. https://doi.org/10.1177/03611981221078846

Omotayo, A., and Melan, M. (2022). Innovative logistics practices: performance assessment of third-party logistics services providers in malaysia. Journal of Economics, Management and Trade, 39-48. https://doi.org/10.9734/jemt/2022/v28i230393

Omotayo, A., Melan, M., & Richard, A. O. (2021). Moderating impact of innovation practices on logistics practices of 3pls service provider in malaysia context. Journal of Economics, Management and Trade, 1-12. https://doi.org/10.9734/jemt/2021/v27i630347

Panayides, P. M., Borch, O. J., & Henk, A. (2018). Measurement challenges of supply chain performance in complex shipping environments. Maritime Business Review, 3(4), 431-448. https://doi.org/10.1108/mabr-07-2018-0021

Perera, S., Dawande, M., Janakiraman, G., & Mookerjee, V. (2020). Retail deliveries by drones: how will logistics networks change?. Production and Operations Management, 29(9), 2019-2034. https://doi.org/10.1111/poms.13217

Roberts, R., Flin, R., Millar, D., & Corradi, L. (2021). Psychological factors influencing technology adoption: A case study from the oil and gas industry. *Technovation*, *102*, 102219.

Sakrabani, P. (2020). The impact of retail 4.0 technologies adoption on retailers' performance in malaysia. European Proceedings of Social and Behavioural Sciences. https://doi.org/10.15405/epsbs.2020.03.03.33

Sakrabani, P. and Ping, T. A. (2020). The influence of technology factors on retail 4.0 adoption in malaysia. Proceedings of the 8th International Conference on Entrepreneurship and Business Management (ICEBM 2019) UNTAR. https://doi.org/10.2991/aebmr.k.200626.028

Sakrabani, P., and Teoh, A. P. (2020). Retail 4.0 adoption and firm performance among malaysian retailers: the role of enterprise risk management as moderator. International Journal of Retail &Amp; Distribution Management, 49(3), 359-376. https://doi.org/10.1108/ijrdm-09-2020-0344

Sentia, P. D., Ramadani, R., & Zuhri, S. (2018). Logistic performance measurement on a port in aceh. Jurnal Teknik Industri, 20(1), 59-64. https://doi.org/10.9744/jti.20.1.59-64

Shahadat, M. M. H., Chowdhury, A. H. M. Y., Nathan, R. J., & Fekete-Farkas, M. (2023). Digital technologies for firms' competitive advantage and improved supply chain performance. Journal of Risk and Financial Management, 16(2), 94. https://doi.org/10.3390/jrfm16020094

Shankar, V., Kalyanam, K., Setia, P., Golmohammadi, A., Tirunillai, S., Douglass, T., ... & Waddoups, R. (2021). How technology is changing retail. *Journal of Retailing*, *97*(1), 13-27.

Samad, N. S. A., Muhamad, S. F., Zakaria, N. S., Bahari, N., & Rahman, A. H. A. (2021). Determinant of customer satisfaction towards pos laju malaysia services during movement control order. Journal of Entrepreneurship and Business, 9(2), 97-108. https://doi.org/10.17687/jeb.v9i2.794

Song, G., Sang-Hwa, S., & Sun, L. (2019). Supply chain integration in omni-channel retailing: a logistics perspective. The International Journal of Logistics Management, 30(2), 527-548. https://doi.org/10.1108/ijlm-12-2017-0349

Sutrisno, A., Andajani, E., & Widjaja, F. N. (2019). The effects of service quality on customer satisfaction and loyalty in a logistics company. KnE Social Sciences. https://doi.org/10.18502/kss.v3i26.5360

Talib, M. S. A., Pang, L. L., & Ngah, A. H. (2020). The role of government in promoting halal logistics: a systematic literature review. Journal of Islamic Marketing, 12(9), 1682-1708. https://doi.org/10.1108/jima-05-2020-0124

Tan, W. C., & Sidhu, M. S. (2022). Review of RFID and IoT integration in supply chain management. *Operations Research Perspectives*, *9*, 100229.

Tehseen, S., Johara, F., Halbusi, H. A., Islam, A., & Fattah, F. A. M. A. (2021). Measuring dimensions of perceived business success among malaysian and bangladeshi sme owners. Rajagiri Management Journal, 17(2), 102-124. https://doi.org/10.1108/ramj-05-2021-0045

Wang, S., Zhao, Y., Liu, L., & Huang, F. (2021). Dynamic incentive mechanism of multitask cooperation in logistics supply chain. Mathematical Problems in Engineering, 2021, 1-10. https://doi.org/10.1155/2021/6683240

Wang, X., Wong, Y. D., Shi, W., & Yuen, K. F. (2022). Shoppers' logistics activities in omni-channel retailing: A conceptualisation and an exploration on perceptual differences in effort valuation. *Transport Policy*, *115*, 195-208.

Widjaja, S. A. and Darmawan, B. (2022). Importance of supplier quality and supplier relationship quality in supply chain. Journal of Logistics and Supply Chain, 2(1), 41-48. https://doi.org/10.17509/jlsc.v2i1.62836

Yang, Q., Wang, Z. S., Feng, K., & Tang, Q. Y. (2024). Investigating the crucial role of logistics service quality in customer satisfaction for fresh e-commerce: A mutually validating method based on SERVQUAL and service encounter theory. *Journal of Retailing and Consumer Services*, *81*, 103940.

Yingfei, Y., Zhang, M., & Bae, K. (2022). The nexus of service quality, customer experience, and customer commitment: the neglected mediating role of corporate image. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.917284

Yunus, E. N. (2018). Leveraging supply chain collaboration in pursuing radical innovation. International Journal of Innovation Science, 10(3), 350-370. https://doi.org/10.1108/ijis-05-2017-0039

Zhong, Y., Lai, I. K. W., Guo, F., & Tang, H. (2020). Effects of partnership quality and information sharing on express delivery service performance in the e-commerce industry. Sustainability, 12(20), 8293. https://doi.org/10.3390/su12208293