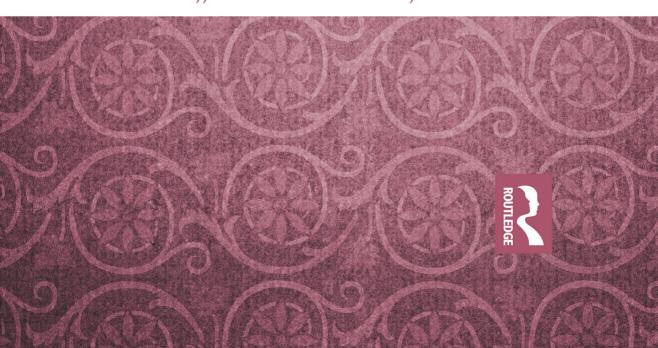


Routledge Advances in Management and Business Studies

# HALAL LOGISTICS AND SUPPLY CHAIN MANAGEMENT

**RECENT TRENDS AND ISSUES** 

Edited by Nor Aida Abdul Rahman, Azizul Hassan and Hajjah Zawiah Abdul Majid



## Halal Logistics and Supply Chain Management

This book provides a comprehensive overview of Halal in logistics, supply chain management and the future implications for the Halal industry. It discusses a wide range of Halal logistics practices and theories in Japan, Korea, Spain, Oman and Southeast Asian countries.

The book examines technology applications, regulatory and certification procedure, Halal management system and quality control, and sustainability, as well as challenges for the logistics and Halal supply chain in the pandemic context. The book also looks at how to navigate the complexity of Halal logistics to achieve business sustainability. It uses a multidisciplinary approach to provide insights on the Halal logistics and supply chain study.

This book hopes to fill an existing gap and enrich the literature on Halal logistics and supply chain management specifically in the West, Middle East and regions in Asia. This will be a useful reference to those who would like to learn more about this industry.

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Heizal Hezry Omar has more than 20 years of experience as a lecturer in the Department of Economics and Financial Studies, Faculty of Business and Management, Universiti Teknologi Mara (UiTM) Puncak Alam. He graduated with a degree in Islamic Studies (Hons) from Ibnu Tofail University, Kingdom of Morocco (1997) as well as an MBA from UiTM (2000). He also holds a Diploma in Investment Analysis from RIIAM-RMIT, a certificate in Islamic Studies and a certificate in Contemporary Shariah Studies, both from Universiti Kebangsaan Malaysia, as well as a certificate in Shariah Studies from the University of Malaya. He has been teaching Islamic banking-related subjects such as Islamic Legal Maxims, Introduction to Figh Muamalat, Advanced Figh Muamalat, Islamic Jurisprudence and also Islamic Theology since 2000. He is the recipient of UiTM's 2019 Academic Award for teaching (Business and Management cohort) and has also written a book entitled Tafsir Ayat-Ayat Ramadan (PTS Publication, 2012).

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Siti Balqis Zulfigar is a senior lecturer at Bioprocess Technology Industry at the School of Industrial Technology, Universiti Sains Malaysia. As a strong advocate of green technologies, her research interest focuses especially on biocatalysis, enzymatic hydrolysis and unearthing bioactive peptides from

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natural resources. She is currently teaching the undergraduate subjects of Enzyme Technology, Safety and Quality of Bioprocess Products and Practical of Downstream Processing at Universiti Sains Malaysia.

Nur Najihah binti Zulkifli was born in Jitra, Kedah and had her secondary education at Maahad Muhammadi Perempuan, Kota Bharu. She currently is in her final year pursuing Bachelor of Science with Honours (Food Biotechnology), in Universiti Sains Islam Malaysia (USIM). She is one of the committee members in the Halal Istihlak (Consumerism) Seminar, Exhibition and Competition (HISEC 2018) organized by Institute of Halal Research and Management, USIM. She also involved with the Activities Committee in the Halal Food Seminar (HAFOS 2019), organized by USIM. She enjoys travelling and has participated in voluntary works internationally through Global Islamic Society Outreach (GISO) to Yogyakarta, Indonesia as a vice-president. Enthusiastic in learning foreign languages, she enrolled in multiple elective classes for Mandarin, Japanese and French language during her study years in USIM. She currently is an intern student at International Institute for Halal Research and Training. Najihah hopes to complete her degree and works as a competent food biotechnologist in the Halal industry or related fields.

## Introduction

## Nor Aida Abdul Rahman, Azizul Hassan and Hajjah Zawiah Abdul Majid

The Halal industry is seen as a key vehicle for economic growth for many countries, including non-Muslim countries. It stimulates the economy through import-export activities, tourism and travel, and value-added trade, as well as industry and academic research. The Halal industry has expanded from Halal food and beverage to Halal banking, Halal hotels, Halal tourism, Halal retailing, Halal auditing, Halal clothing, Halal cleaning and Halal logistics. Halal logistics is an innovation in the logistics industry where it refers to the Halal management system in maintaining Halal integrity of the Halal product throughout the supply chain, especially focusing on transporting and warehousing activities. The aim of Halal logistics is to maintain the integrity of Halal status products from the point of origin to the point of consumption. It ensures the activities and equipment used in handling Halal products throughout transport and warehouse activities are in accordance with Islamic law or known Shariah principles.

This book is unique in providing a composite overview of Halal in the logistics and supply chain areas by groundbreaking research, application, theoretical, review, conceptual model and experience by practitioners as well as academicians. Expert contributors from research and practice provide relevant discussion on Halal logistics and supply chain issues across the globe. This book is very special as it gathers its contributors from three regions, namely Asia, the Middle East and the West. The contributors are from Spain, the United Kingdom, South Korea, Japan, Oman, Thailand, Brunei and Malaysia.

This not only opens up new areas for future research in the wider context of Asia, the West and the Middle East, but also allows readers to access information regarding Halal logistics and supply chains, current issues and development, future trends, international issues, international trends and the theory and practice of Halal in the logistics sector. This book will be beneficial to those in logistics, supply chain management, the Halal industry, marketing, transportation and warehouses.

This book will be a valuable resource for readers as it provides basic and advanced material that informs the reader about Halal logistics and supply chain management from a wide context, covering the Middle East, Asia and Western countries. This book is a contribution towards the very limited knowledge of Halal logistics and supply chain management in the wider region. The book aims

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to accommodate recent developments in the Halal logistics industry, as well as highlighting recent developments and issues including technology application, updates on regulatory and certification procedure, management systems and quality control, as well as challenges caused by the COVID-19 pandemic and the controversial issue of Halal logistics meat cartels. This book carefully addresses and unifies the issues in the Halal logistics industry.

Chapter 1 addresses recent issues and trends of Halal logistics and supply chain management in context of Asia, the West and the Middle East. In this chapter, Hamid and Rahman aim to build a solid background of Halal logistics and supply chain research in these three regions. A number of future research recommendations are also provided.

In Chapter 2, Rahman, Mahroof, Hassan and Sujchaphong provide a brief history of standard development at the local and international level, providing the International Halal Logistics Standard (IHIAS), the Standards and Metrology Institute for Islamic Countries (SMIIC) and the Malaysia Standard (MS) as principal references. The authors also provide a future agenda for researchers in the context of Halal standards.

In Chapter 3, Talib, Ngah and Kurniawati systematically review and discuss their findings on Halal theories used in Halal logistics and supply chain management (HLSCM) research. Theories used in HLSCM research are then categorized into relevant theory groups.

Chapter 4 is a literature review discussion on various theories applied in Halal logistics and supply chain research. This research project by Nee and Mohamad conducts a systematic analysis to assess published Halal logistics and supply chain academic literature in the past decade. This chapter also elaborates on theoretical aspects of future research recommendation.

In Chapter 5, Hamid and Tan determine critical success factors of trace-ability technology in Halal logistics and supply chain. The goal of this system is to implement a Halal control system by tracking and tracing all product handling and delivery operations. This also enables entire corporate visibility, resulting in improved profits, lower costs and fewer human errors while maintaining the Halal product's purity from point of origin to point of consumption.

Shamsudin and Majid in Chapter 6 provide an explanation on the critical success factor for traceability in Halal logistics. Integration of technology and traceability in the Halal industry helps the Halal stakeholders evaluate the effectiveness of using specific information technology systems in logistics.

Zahari, Zain and Azhar in Chapter 7 develop a conceptual framework for Halal logistics sustainability. A Halal logistics sustainability framework was developed by adopting technology as monitoring tools for Halal compliance. This framework is crucial and will be used as a guideline by the researchers and the industry in Halal logistics management for effective implementation.

Omar, Sarbani, Osman, Omar and Jaafar in Chapter 8 highlight the Islamic work ethics and controversial issue of the Halal meat cartel case in the Halal meat supply chain. They emphasize that the recent scandal of the meat cartel needs to

be further evaluated, specifically on its issues and challenges, including its impact on the local producers and consumers at large.

Ahmad, Shah and Hamid in Chapter 9 also discuss the Halal meat cartel case, but from a legal perspective. This study provides the Halal legal framework from the regulators' perspective. Additionally, findings suggest that individual officers must gain relevant knowledge by taking the relevant legal training and education in relation to the investigation and prosecution of any issue related to this Halal logistics controversy.

In Chapter 10, Ahmad, Zulfigar, Farudz and Zulkifli discuss Halal integrity in the supply chain and the Halal integrity effects of the fake Halal meat cartel scandal. This interesting topic highlights the chronology of the event and discusses the multiple implications of this scandal for direct and indirect stakeholders.

In Chapter 11, Ngah, Gabarre and Thurasamy discuss Halal transportation adoption by small and medium-sized enterprises (SMEs) in Malaysia, utilizing a Partial Least Square (PLS) structural equation modelling approach. Their findings show that complexity, cost, and supplier availability are obstacles, while competitive pressure and organizational readiness are facilitators to the acceptance of Halal transportation by Malaysian Halal SMEs.

In Chapter 12, Ustadi and Osman discover interesting challenges in Halal port development. This chapter addresses the question of how port authorities tackle the challenges in this dynamic market environment in terms of the industrial complex, value-added logistics hub and transport hub.

In Chapter 13, Ustadi, Osman and Rasi provide information on Halal logistics and supply chain quality control, using Malaysia as a case study. This chapter highlights a few simple ways of implementing Halal logistics, supply chains and quality control that could enhance the total implementation concept at the least cost to create benefit to all society. The chapter also deals with a few possible implementations and practice aspects to facilitate the Halal logistics approach in daily operations in Malaysian practices.

In Chapter 14, Noh explores the developments of the Halal industry in South Korea, focusing on the pilot project of Halal logistics. This chapter records the key results of major projects for each year in chronological order, including an in-depth survey of the Halal logistics industry in 2017, a survey on Halal product production, distribution and Halal logistics demand in 2018, and the implementation of a Halal logistics pilot project in 2019.

In Chapter 15, Jamaludin and Sugawara explain Halal logistics certification in Japan. Also discussed are the seven Foreign Halal Certification Bodies (FHCBs) certified by JAKIM, with its own Halal Certificates and Halal Logo.

Mayor-Vitoria in Chapter 16 provides information regarding Halal market opportunities and logistics in Spain. The chapter provides an initial overview of the current state of Halal certification in Spain and highlights the opportunities that can be generated in the near future in the logistics field.

In Chapter 17, Rahman and Balushi discuss the developments of Halal certification and opportunities of Halal logistics certification in the Middle East. This

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study also highlights a dearth of past studies focusing on the Halal logistics issue in the Middle East region.

Chapter 18 by Khairuddin, Yusriza, Rahman, Mohamed, Rahim and Ahmad highlights the effects of the COVID-19 pandemic on Halal logistics and supply chain management research. The chapter discusses the major challenges and possible solutions to sustainability in the Halal industry in the future.

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Africa Islamic Economic Foundation (2019). The Global Halal Industry: An Overview. Ghana: Africa Islamic Economic Foundation.

Ahmad, N. and Shariff, S. M. (2016). Supply chain management: Sertu cleansing for Halal logistics integrity. Procedia Economics and Finance, 37, pp. 418–425.

Ahmad, A. N., Rahman, A. A. and Ab Rahman, S. (2015). Assessing knowledge and religiosity on consumer behavior towards Halal Food and cosmetic products. International Journal of Social Science and Humanity, 5, pp. 10–14.

Ahmed, A. (2017). E-commerce from an Islamic Jurisprudence Perspective. Master's thesis. Batna: University of Hadj Lakhdar.

Ahmed, H. (2011). Maqasid al-Shari'ah and Islamic financial products: a framework for assessment. ISRA International Journal of Islamic Finance, 3(1), pp. 149–160.

Akram, H. W. (2020). Assessment of global Halal market: challenges and opportunities. African Journal of Business & Economic Research, 15(4), pp. 15–23.

Alam, S. S. and Sayuti, N. M. (2011). Applying the Theory of Planned Behaviour (TPB) in Halal food purchasing. International Journal of Commerce and Management, 21(1), pp. 8–20. Al-Qaradawi, Y. (2007). The Lawful and the Prohibited in Islam. Kuala Lumpur: Islamic Book Trust.

Al-Saudi, A. W. M. M. (2014). Legal rulings on uncertainty in contracts of donations: a comparative study of Islamic jurisprudence. Islamiyyat, 36(2), pp. 103–116.

Aziz, A. A. and Zailani, S. (2016). Halal logistics: the role of ports, issues and challenges. In D. S. Mutum, M. M. Butt and M. Rashid (Eds.), Advances in Islamic Finance, Marketing, and Management. Bingley: Emerald Group Publishing Limited, pp. 309–321.

Bahrudin, S. S. M., Illyas, M. I. and Desa, M. I. (2011). Tracking and tracing technology for Halal product integrity over the supply chain. Proceedings of the 2011 International Conference on Electrical Engineering and Informatics, 2011, pp. 1–7. doi: 10.1109/ICEEI.2011.6021678 Fakhruzzaman, M. N. N., Abidin, N. Z., Aziz, Z. A., Lim, W. F., Richard, J. J., Noorliza, M. N., Hani, M. H., Norhayati, R., Zamzurina, A. B., Zuraina, M. Y. F., Hisyam, M. J., Teh, L. K., Norazmi, M. N. and Zaki, M. S. (2019). Diversified lineages and drug-resistance profiles of clinical isolates of Mycobacterium tuberculosis complex in Malaysia. International Journal of Mycobacteriology, 8(4), 320.

Hamid, A. A. and Ibrahim, S. B. (2013). Investigation into the relationship between supply chain management practices and supply chain performance efficiency. Sudan Journal of Science and Technology, 16(1), pp. 49–67.

Harrison, A. and Van Hoek, R. I. (2008). Logistics Management and Strategy: Competing through the Supply Chain. London: Pearson Education.

IHIA (2010). ICCI-IHI Alliance Halal Standard – Logistics – IHIAS 0100:2010. Kuala Lumpur: International Halal Integrity Alliance Ltd.

Jaafar, H. S., Endut, I. R., Faisol, N. and Omar, E. N. (2011). Innovation in logistics services: Halal logistics. The 16th International Symposium on Logistics (ISL) 10–13 July. Berlin: Springer, pp. 844–851.

Jaafar, H. S., Faisol, N., Rahman, F. A., & Muhammad, A. (2016). Halal logistics versus Halal supply chain: a preliminary insight. In S. K. Ab Manan, F. Abd Rahman and M. Sahri (Eds.), Contemporary Issues and Development in the Global Halal Industry: Selected Papers from the International Halal Conference 2014. Springer, Singapore, pp. 579–588.

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

Karia, N. and Asaari, M. H. A. H. (2016). Halal value creation: its role in adding value and enabling logistics service. Production Planning & Control, 27(9), pp. 677–685.

Lestari, Y. D., Susanto, J. M., Simatupang, T. M. and Yudoko, G. (2018). Intention towards Halal logistics: a case study of Indonesian consumers. Journal of Global Business Advancement, 11(1), pp. 22–40.

Lina, M. and Ho, H. (2009). Essentials of Supply Chain Management. Hoboken, NJ: John Wiley & Sons. Inc.

Milestad, R., Bartel-Kratochvil, R., Leitner, H. and Axmann, P. (2010). Being close: the quality of social relationships in a local organic cereal and bread network in lower Austria. Journal of

Rural Studies, 26(3), pp. 228-240.

Nasir, M., Norman, A., Fauzi, S. and Azmi, M. (2011). An RFID-based validation system for Halal food. The International Arab Journal of Information Technology, 8(2), pp. 204–211.

Ngah, A. H., Zainuddin, Y. and Ramayah, T. (2014). Adoption of Halal supply chain among Malaysian Halal manufacturers: an exploratory study. Procedia – Social and Behavioral Sciences, 129, pp. 388–395.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2015). Barriers and enablers in adopting of Halal warehousing. Journal of Islamic Marketing, 6(3), pp. 354–376.

Ngah, A. H., Ramayah, T., Ali, M. H. and Khan, M. I. (2019). Halal transportation adoption among pharmaceuticals and cosmetics manufacturers. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-10-2018-0193

Rahman, N. A. A., Mohammad, M. F., Rahim, S. A. and Noh, H. M. (2018). Implementing air cargo Halal warehouse: insight from Malaysia. Journal of Islamic Marketing, 9(3), pp. 462–483.

Talib, M. S. A., Hamid, A. B. A., Zulfakar, M. H. and Jeeva, A. S. (2014). Halal logistics PEST analysis: the Malaysia perspectives. Asian Social Science, 10(14), pp. 119–131.

Tan, M. I. I., Razali, R. N. and Desa, M. I. (2012). Factors influencing ICT adoption in halal transportations: a case study of Malaysian Halal logistics service providers. International Journal of Computer Science, 9(2), pp. 62–71.

Tarmizi, H. A., Kamarulzaman, N. H., Latiff, I. A. and Rahman, A. A. (2014). Factors influencing readiness towards Halal logistics among food-based logistics players in Malaysia. UMK Procedia, 1, pp. 42–49.

Tieman, M. (2011). The application of Halal in supply chain management: in-depth interviews. Journal of Islamic Marketing, 2(2), pp. 186–195.

Tieman, M. and Ghazali, M. C. (2013). Principles in Halal purchasing. Journal of Islamic Marketing. 4(3), pp. 281–293.

Tieman, M., Van der Vorst, J. G. A. J. and Ghazali, M. C. (2012). Principles in Halal supply chain management. Journal of Islamic Marketing, 3(3), pp. 217–243.

Weele, J. (2002). Purchasing and Supply Chain Management: Analysis, Planning and Practice. London: Thomson.

Wilson, J. A. J. (2018). Halal Branding. Swansea: Claritas Books.

Wilson, J. A. J. and Liu, J. (2011). The challenges of Islamic branding: navigating emotions and Halal. Journal of Islamic Marketing, 2(1), pp. 28–42.

Zailani, S., Iranmanesh, M., Aziz, A. A. and Kanapathy, K. (2017). Halal logistics opportunities and challenges. Journal of Islamic Marketing, 8(1), pp. 127–139.

Zulfakar, M. Jie, F. and Chan, C. (2012). Halal food supply chain integrity: from literature to a conceptual framework. The 10th ANZAM Operations, Supply Chain and Service Management Symposium, Melbourne, 14–15 June.

## The new age of Halal logistics and supply chain standards in Asia, the Middle East and the West

El-Bassiouny, N. (2016). Where is "Islamic marketing" heading? A commentary on Jafari and Sandikci's (2015) "Islamic consumers", markets, and marketing. Journal of Business Research, 69(2), pp. 569–578.

Halal Industry Development Corporation (HDC) (2021). Halal Industry Master Plan. Retrieved from: www.hdcglobal.com/wp-content/uploads/2020/02/Halal-Industri-Master-Plan-2030.pdf (assessed 24 November 2021).

Khairuddin, M. M., Rahman, N. A. A., Mohamad, M. F., Majid, Z. A. and Fauzi, M. A. (2018). Regulator perspective on Halal air cargo warehouse compliance. International Journal of Supply Chain Management, 7(3), pp. 202–207.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2015). Obstacles and facilitators in adopting of Halal warehousing. Journal of Islamic Marketing, 6(3), pp. 354–376.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2017). Applying the TOE framework in the Halal warehouse adoption study. Journal of Islamic Accounting and Business Research, 8(2), pp. 161–181.

Pew Research Centre (2021). World's Muslim Population More Widespread Than You Might Think. Retrieved from: www.pewresearch.org/fact-tank/2017/01/31/worlds-muslim-population-more-widespread-than-you-might-think/ (assessed 24 November 2021).

Rahim, S. A., Mohammad, B. and Rahman, N. A. A. (2016). Influencing factors on Halal fourth-party logistics (4PL) in Malaysia. In S. K. A. Manan, F. A. Rahman and S. Mardhiyyah (Eds.), Contemporary Issues and Development in the Global Halal Industry. Singapore: Springer, pp. 543–556.

Rahman, N. A. A. (2012). The Car Manufacturer (CM) and Third Party Logistics Provider (TPLP) Relationship in the Outbound Delivery Channel: A Qualitative Study of the Malaysian Automotive Industry. PhD thesis. London: Brunel University.

Rahman, N. A. A., Melewar, T. C. and Sharif, A. M. (2014) The establishment of industrial branding through dyadic logistics partnership success (LPS): The case of the Malaysian automotive and logistics industry. Industrial Marketing Management, 43(1), pp. 67–76.

Rahman, N. A. A., Mohamad, M. F., Muda, J., Ahmad, M. F., Rahim, S. A. and Majid, Z. A. (2018a) Linking Halal requirements and branding: an examination of Halal flight kitchen provider in Malaysia. International Journal of Supply Chain Management, 7(3), pp. 208–215.

Rahman, N. A. A., Mohamad, M. F., Rahim, S. A. and Noh, H. M. (2018b). Implementing air cargo Halal warehouse: insight from Malaysia. Journal of Islamic Marketing, 9(3), pp. 462–483.

Rahman, N. A. A., Muda, J., Mohammad, M. F., Ahmad, M. F., Rahim, S. A. and Vitoria, F. M. (2019). Digitalization and leap frogging strategy among the supply chain member: facing GIG economy and why should logistics players care? International Journal of Supply Chain Management, 8(2), pp. 1042–1048.

Sack, D. (2001). Whitebread Protestants: Food and Religion in American Culture. New York, NY: Palgrave.

Saifuddeen, S. M., Rahman, N. N. A. I., Munirah, N. and Baharuddin, A. (2014). Science and Engineering Ethics, 20(2), pp, 317–327.

Shahbandeh, M. (2019). Halal Food Market Revenue Worldwide 2018–2027. Retrieved from: www.statista.com/statistics/785499/halal-food-market-revenue-global/ (assessed 24 November 2021).

Shariff, M. S. and Ahmad, N. (2015). Halal logistics operations in MS2400 Standards: a literature review. Conference Proceedings of International Malaysia Halal Conference (IMHALAL) 2015, KLCC Malaysia, 1–2 April.

Statista (2021). Global Muslim Market Size in 2017 and 2023. Retrieved from:

www.statista.com/statistics/796103/global-muslim-market-size/ (assessed 24 November 2021). Wilson, J. A. J. and Liu, J. (2011). The challenges of Islamic branding: navigating emotions and Halal. Journal of Islamic Marketing, 2(1), pp. 28–42.

World Population Review (2021). Muslim Population by Country 2021. Retrieved from: https://worldpopulationreview.com/country-rankings/muslim-population-by-country (assessed 25 August 2021).

## Theories in Halal logistics and supply chain management research

Ali, M. H., Iranmanesh, M., Tan, K. H., Zailani, S. and Omar, N. A. (2021). Impact of supply chain integration on Halal food supply chain integrity and food quality performance. Journal of Islamic Marketing. doi: 10.1108/JIMA-08-2020-0250

Alserhan, B. A. (2010). Islamic marketing: the birth of a new social science. Journal of Islamic Marketing, 1(1). doi: 10.1108/jima.2010.43201aaa.001

Björklund, M. and Forslund, H. (2018). Exploring the sustainable logistics innovation process. Industrial Management and Data Systems, 118(1), pp. 204–217.

Bottani, E. and Rizzi, A. (2006). A fuzzy TOPSIS methodology to support outsourcing of logistics services. Supply Chain Management: An International Journal, 11(4), pp. 294–308. Busse, C. and Wallenburg, C. M. (2011). Innovation management of logistics service providers. International Journal of Physical Distribution and Logistics Management, 41(2), pp. 187–218.

Chen, I. J. and Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and measurements. Journal of Operations Management, 22(2), pp. 119–150.

- Cooper, D. R. and Schindler, P. S. (2014). Business Research Methods (12th edn). Singapore: Mcgraw-Hill Education.
- Defee, C. C., Williams, B., Randall, W. S. and Thomas, R. (2010). An inventory of theory in logistics and SCM research. The International Journal of Logistics Management, 21(3), pp. 404–489.
- Grawe, S. J. (2009). Logistics innovation: a literature-based conceptual framework. The International Journal of Logistics Management, 20(3), pp. 360–377.
- Haleem, A., Khan, M. I., Khan, S. and Jami, A. R. (2020). Research status in Halal: a review and bibliometric analysis. Modern Supply Chain Research and Applications, 2(1), pp. 23–41.
- Halldorsson, A., Kotzab, H., Mikkola, J. H. and Skjøtt-Larsen, T. (2007). Complementary theories to supply chain management. Supply Chain Management: An International Journal, 12(4), pp. 284–296.
- Juan, A. A., Mendez, C. A., Faulin, J., De Armas, J. and Grasman, S. E. (2016). Electric vehicles in logistics and transportation: a survey on emerging environmental, strategic and operational challenges. Energies, 9(2), pp. 1–21.
- Karia, N. (2019). Halal logistics: practices, integration and performance of logistics service providers. Journal of Islamic Marketing. doi: 10.1108/JIMA-08-2018-0132
- Kiessling, T., Harvey, M. and Akdeniz, L. (2014). The evolving role of supply chain managers in global channels of distribution and logistics systems. International Journal of Physical Distribution and Logistics Management, 44(8/9), pp. 671–688.
- Levine-Clark, M. and Gil, E. L. (2008). A comparative citation analysis of Web of Science, Scopus and Google Scholar. Journal of Business and Finance Librarianship, 14(1), pp. 32–46. Manuj, I. and Pohlen, T. L. (2012). A reviewer's guide to the grounded theory methodology in logistics and supply chain management research. International Journal of Physical Distribution

and Logistics Management, 42(8), pp. 784-803.

- Mubarrok, U. S., Ulfi, I., Sukmana, R. and Sukoco, B. M. (2020). A bibliometric analysis of Islamic marketing studies in the *Journal of Islamic Marketing*. Journal of Islamic Marketing. doi: 10.1108/JIMA-05-2020-0158
- Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2015). Barriers and enablers in adopting of Halal warehousing. Journal of Islamic Marketing, 6(3), pp. 354–376.
- Ngah, A. H., Ramayah, T., Ali, M. H. and Khan, M. I. (2020a). Halal transportation adoption among pharmaceuticals and comestics manufacturers. Journal of Islamic Marketing, 11(6), pp. 1619–1639.
- Ngah, A. H., Gabarre, S., Eneizan, B. and Asri, N. (2020b). Mediated and moderated model of the willingness to pay for halal transportation. Journal of Islamic Marketing. doi: 10.1108/JIMA-10-2019-0199
- 10-2019-0199
  Noorliza, K. (2020). Resource-capability of Halal logistics services, its extent and impact on performance. Journal of Islamic Marketing, doi: 10.1108/JIMA-12-2019-0255
- Rahman, M. K. and Zailani, S. (2017). The effectiveness and outcomes of the Muslim-friendly medical tourism supply chain. Journal of Islamic Marketing, 8(4), pp. 732–752.
- Selim, N. I. I. B., Zailani, S., Aziz, A. A. and Rahman, M. K. (2019). Halal logistic services, trust and satisfaction amongst Malaysian 3PL service providers. Journal of Islamic Marketing. doi: 10.1108/JIMA-05-2018-0088
- Shahijan, M. K., Preece, C. N., Rezaei, S. and Ismail, W. K. W. (2014). Examining retailers' behaviour in managing critical points in Halal meat handling: a PLS analysis. Journal of Islamic Marketing, 5(3), pp. 446–472.
- Swanson, D., Goel, L., Francisco, K. and Stock, J. (2017). Applying theories from other disciplines to logistics and supply chain management: a systematic literature review. Transportation Journal, 56(3), pp. 299–356.
- Talib, M. S. A. (2020). Identifying Halal logistics constraints in Brunei Darussalam. Journal of Islamic Marketing. doi: 10.1108/JIMA-09-2019-0189
- Talib, M. S. A. and Hamid, A. B. A. (2014). Halal logistics in Malaysia: a SWOT analysis. Journal of Islamic Marketing, 5(3), pp. 322–343.
- Talib, M. S. A., Hamid, A. B. A. and Zulfakar, M. H. (2015). Halal supply chain critical success factors: a literature review. Journal of Islamic Marketing, 6(1), pp. 44–71.
- Talib, M. S. A., Hamid, A. B. A. and Chin, T. A. (2016). Can Halal certification influence logistics performance? Journal of Islamic Marketing, 7(4), pp. 461–475.

- Talib, M. S. A., Ai Chin, T. and Fischer, J. (2017). Linking Halal food certification and business performance. British Food Journal, 119(7), pp. 1606–1618.
- Talib, M. S. A., Pang, L. L. and Ngah, A. H. (2020). The role of government in promoting Halal logistics: a systematic literature review. Journal of Islamic Marketing. doi: 10.1108/JIMA-05-2020-0124
- Tieman, M. (2011). The application of Halal in supply chain management: in-depth interviews. Journal of Islamic Marketing, 2(2), 186–195.
- Tieman, M. (2015). Halal clusters. Journal of Islamic Marketing, 6(1), pp. 2–21.
- Tieman, M., van der Vorst, J. G. A. J. and Che Ghazali, M. (2012). Principles in Halal supply chain management. Journal of Islamic Marketing, 3(3), pp. 217–243.
- van Donk, D. P. and van der Vaart, T. (2005). A critical discussion on the theoretical and methodological advancements in supply chain integration research. In H. Kotzab , S. Seuring , M. Müller and G. Reiner (eds.), Research Methodologies in Supply Chain Management. Cham: Springer, pp. 31–46.
- Verhoeven, P., Sinn, F. and Herden, T. (2018). Examples from blockchain implementations in logistics and supply chain management: exploring the mindful use of a new technology. Logistics, 2(3), 20.
- Wallenburg, C. M. and Weber, J. (2005). Structural equation modeling as a basis for theory development within logistics and supply chain management research. In H. Kotzab , S. Seuring , M. Müller and G. Reiner (Eds.), Research Methodologies in Supply Chain Managemen. Heidelberg: Physica-Verlag Heidelberg, pp. 171–186.
- Wang, G., Gunasekaran, A., Ngai, E. W. T. and Papadopoulos, T. (2016). Big data analytics in logistics and supply chain management: certain investigations for research and applications. International Journal of Production Economics, 176, pp. 98–110.
- Zulfakar, M. H., Chan, C. and Jie, F. (2018). Institutional forces on Australian Halal meat supply chain (AHMSC) operations. Journal of Islamic Marketing, 9(1), pp. 80–98.

## Theories used in Halal logistics studies

- Aigbogun, O., Ghazali, Z. and Razali, R. (2016). The mediating impact of Halal logistics on supply chain resilience: an agency perspective. International Review of Management and Marketing, 6(4S), pp. 209–216.
- Alam, S. S. and Sayuti, N. M. (2011). Applying the Theory of Planned Behavior (TPB) in Halal food purchasing. International Journal of Commerce and Management, 21(1), pp. 8–20.
- Almarri, K. and Gardiner, P. (2014). Application of resource-based view to project management research: supporters and opponents. Procedia-Social and Behavioral Sciences, 119, pp. 437–445.
- Antonio, M. S., Rusydiana, A., Laila, N., Hidayat, Y. R. and Marlina, L. (2020). Halal value chain: a bibliometric review using R. Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/4606
- Aziz, A. A. and Zailani, S. (2016). Halal logistics: the role of ports, issues and challenges. In D. S. Mutum, M. M. Butt and M. Rashid (Eds.), Advances in Islamic Finance, Marketing, and Management. Bingley: Emerald Group Publishing Limited, pp. 309–321.
- Azmi, F., Abdullah, A., Bakri, M., Musa, H. and Jayakrishnan, M. (2018). The adoption of Halal food supply chain towards the performance of food manufacturing in Malaysia. Management Science Letters, 8(7), pp. 755–766.
- Haleem, A , Imran, M. K. , Shahbaz, K. and Jami, A. R. (2020). Research status in Halal: a review and bibliometric analysis. Modern Supply Chain Research and Applications, 2(1), pp. 23–41.
- Hamid, Z. J. M. H., Hussien, M. Z. S. M. and Tan, M. I. I. (2017). Service innovation: Halal logistics intention adoption model. International Journal of Supply Chain Management, 6(1). Hew. J. J., Wong, L. W., Tan, G. W. H., Ooi, K. B. and Lin, B. (2020). The blockchain-based
- Hew, J. J., Wong, L. W., Tan, G. W. H., Ool, K. B. and Lin, B. (2020). The blockchain-based Halal traceability systems: a hype or reality? Supply Chain Management: An International Journal, 25(6), pp. 863–879.
- Huang, C. Y., Wang, H. Y., Yang, C. L. and Shiau, S. J. (2020). A derivation of factors influencing the diffusion and adoption of an open source learning platform. Sustainability,

12(18), 7532.

579-588.

- Husny, Z. J. M., Hussein, M. Z. S. M. and Tan, M. I. I. (2016). Factors that influence the intention to adopt Halal logistics services among Malaysian SMEs: formation of hypotheses and research model. Asian Social Science, 7(12).
- Husny, Z. J. M., Hussein, M. Z. S. M. and Tan, M. I. I. (2017). Service innovation: Halal logistics intention adoption model. International Journal of Supply Chain Management, 6(1), pp. 146–154.
- Husny, Z. J. M., Hussein, M. Z. S. M. and Tan, M. I. I. (2018). Determinant factors towards the adoption of Halal logistics services among Malaysian Halal small medium enterprises (SMEs). Research Journal of Applied Sciences, 8(11), pp. 608–616.
- Indarti, N., Lukito-Budi, A. S. and Islam, A. M. (2020). A systematic review of Halal supply chain research: to where shall we go? Journal of Islamic Marketing. doi 10.1108/JIMA-05-2020-0161 Jaafar H. S., Faisol N., Rahman F. A. and Muhammad A. (2016) Halal logistics versus Halal supply chain: a preliminary insight. In S. A. Manan, F. A. Rahman and M. Sahri (Eds.), Contemporary Issues and Development in the Global Halal Industry. Singapore: Springer, pp.
- Karia, N. and Asaari, M. H. A. H. (2020). Developing Halal logistics framework: an innovation approach. In K. S. Soliman (Ed.), Vision 2020: Sustainable Growth, Economic Development and Global Competitiveness. Kula Lumpur: IBIMA, pp. 328–334.
- Karia, N., Asaari, M. H. A. H., Mohamad, N. and Kamaruddin, S. (2015). Assessing Halal logistics competence: an Islamic-based and resource-based view. In 2015 International Conference on Industrial Engineering and Operations Management (IEOM). IEEE, pp. 1–6. Khalek, A. A. and Ismail, S. H. S. (2015). Why are we eating Halal? Using the Theory of
- Planned Behavior in predicting Halal food consumption among Generation Y in Malaysia. International Journal of Social Science and Humanity, 5(7), pp. 608–612.
- Kwag, S. I. and Ko, Y. D. (2019). Optimal design for the Halal food logistics network. Transportation Research Part E: Logistics and Transportation Review, 128, pp. 212–228. Lestari, Y. D. , Susanto, J. M. , Simatupang, T. M. and Yudoko, G. (2018). Intention towards Halal logistics: a case study of Indonesian consumers. Journal for Global Business Advancement, 11(1), pp. 22–40.
- Mahidin, N., Mustafar, M., Elias, E. M. and Bakar, A. S. (2019). Applying the Theory of the Planned Behavior on Halal logistics services adoption among food & beverages small and medium enterprises. International Journal of Supply Chain Management (IJSCM), 8(4), pp. 1039–1046.
- Masudin, I. Fernanda, F. W. and Widayat, W. (2018). Halal logistics performance and customer loyalty: from the literature review to a conceptual framework. International journal of Technology, 5, pp. 1072–1084.
- McElwee, G., Smith, R. and Lever, J. (2017). Illegal activity in the UK Halal (sheep) supply chain: towards greater understanding. Food Policy, 69, pp. 166–175.
- Mohamed, Y. H., Rahim, A. R. A., Ma'ram, A. and Hamza, M. G. (2016). Halal traceability in enhancing Halal integrity for food industry in Malaysia a review. International Research Journal of Engineering and Technology (IRJET), 3(3), pp. 68–74.
- Mongeon, P. and Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: a comparative analysis. Scientometrics, 106(1), pp. 213–228.
- Ngah, A. H., Ramayah, T., Aziz, N. A., Ali, H. and Khan, M. I. (2019). Modelling the adoption of Halal warehousing services among Halal pharmaceutical and cosmetic manufacturers. Journal of Sustainability Science and Management, 14(6), pp. 103–116.
- Ngah, A. H., Jeevan, J., Salleh, N. H. M. and Tae, T. (2020). Willingness to pay for Halal transportation cost: the moderating effect of knowledge on the Theory of Planned Behavior. Journal of Environmental Treatment Techniques, 8(1), pp. 13–22.
- Omar, W. M. W., Rahman, S. and Jie, F. (2012). Halal food chain management: a systematic review of literature and future research directions. 13th ANZAM Operations, Supply Chain and Services Management Symposium. Melbourne: RMIT University.
- Othman, B., Shaarani, S. M. and Bahron, A. (2017). The influence of knowledge, attitude and sensitivity to government policies in Halal certification process on organizational performance. Journal of Islamic Marketing, 8(2).
- Pew Research Centre (2019). The Countries with the 10 Largest Christian Populations and the 10 Largest Muslim Populations. Retrieved from: www.pewresearch.org/fact-

tank/2019/04/01/the-countries-with-the-10-largest-christian-populations-and-the-10-largest-muslim-populations/ (accessed 15 August 2021).

Qurtubi and Kusrini, E. (2018). Research in Halal logistics and Halal supply chain: issue and area development. MATEC Web of Conferences, 154, 01096.

Radzman, N. W. S., Muhammad, A., Mohamad, S. and Jaafar, H. S. (2016). Halal transportation providers for supply chain management in Halal industry: a review. Journal of Hospitality and Networks, 1, pp. 1–12.

Rafiki, A. (2014). Determinants on the obtainment of Halal certification among small firms. World Applied Sciences Journal, 32(1), pp. 47–55.

Rafiki, A. (2016). The human capital and the obtainment of Halal certification. Journal of Islamic Marketing, 7(2), pp. 134–147.

Randeree, K. (2019). Challenges in Halal food ecosystems: the case of the United Arab Emirates. British Food Journal, 121(5), pp. 1154–1167.

Rejeb, A., Rejeb, K., Zailani, S., Treiblmaier, H. and Hand, K. J. (2021). Integrating the Internet of Things in the Halal food supply chain: a systematic literature review and research agenda. Internet of Things, 13, 100361.

Saifudin, A. M., Zainuddin, N., Elias, E. M., Samsuddin, S. N. F. and Osman, A. A. (2018). Reviewing the contributors towards the performance of the new Islamic supply chain model in Malaysia using robust econometric regression International Supply Chain Management, 7(4), pp. 151–157.

Shahbaz, K., Haleem, A., Imran, M. K., Abidi, M. H., and Al-Ahmari, A. R. (2018). Implementing traceability systems in specific supply chain management (SCM) through critical success factors (CSFs). Sustainability, 10, 204.

Shahbaz, K., Imran, M. K. and Haleem, A. (2019). Evaluation of barriers in the adoption of Halal certification: a Fuzzy DEMATEL Approach. Journal of Modelling in Management, 14(1), pp. 153–174.

Syukur, M. and Nimsai, S. (2017). Factors influencing the purchase intention of Halal packaged food in Thailand. International Journal of Supply Chain Management, 7(4).

Talib, M. S. A., Hamid, A. B. A. and Zulfakar, M. H. (2015). Halal supply chain critical success factors: a literature review, Journal of Islamic Marketing, 6(1), pp. 44–71.

Talib, M. S. A., Pang, L. L. and Ngah, A. H. (2020). The role of government in promoting Halal logistics: a systematic literature review. Journal of Islamic Marketing. doi: 10.1108/JIMA-05-2020-0124

Tan, K. H., Ali, M. H., Makhbul, Z. M. and Ismail, A. (2017). The impact of external integration on Halal food integrity. Supply Chain Management, 22(2), pp. 186–199.

Tarmizi, H. A., Kamarulzaman, N. H. and Latiff, I. A. (2014). Factors behind third-party logistics providers' readiness towards Halal logistics. International Journal of Supply Chain Management, 3(2), pp. 53–62.

Tieman, M. and Ghazali, C. (2014). Halal control activities and assurance activities in halal food logistics. Procedia – Social and Behavioural Sciences, 121, pp. 44–57.

Ustadia, M. N., Rasib, R. Z. R. M. and Osmanc, S. (2019). Factors influencing manufacturers in implementing Halal logistics. International Journal of Innovation, Creativity and Change, 10(8), pp. 43–54.

Wahyuni, H. C., Vananvy, I. and Ciptomulyono, U. (2018). Identifying risk event in Indonesian fresh meat supply chain. IOP Conference Series Materials Science and Engineering, 337(1), 012031.

Weng, T. F., Khatibi, A. and Azam, S. F. (2017). Applying the Theory of Planned Behavior (TPB) in green & halal chicken meat purchasing behavior of Malaysian consumers. Proceeding International Conference on Humanities, Language, Culture & Business, (2nd ICoHLCB). Cameron Highlands Pahang, 22–23 April 2017, pp. 20–35.

Yunan, Y. S. M., Ali, M. H. and Alam, S. S. (2019). The role of firm size and customer orientation on Halal transportation adoption. International Journal of Supply Chain Management, 8(2), pp. 1028–1034.

Yunan, Y. S. M., Ali, M. H. and Alam, S. S. (2020). Safeguarding Halal integrity through Halal logistics adoption: a case of food manufacturers. Institutions and Economies, 12(3), pp. 19–41. Yusoff, F. A. M., Yusof, R. N. R. and Hussin, S. R. (2015). Halal food supply chain knowledge

and purchase intention. International Journal of Economics & Management, 9(S), pp. 155-172.

Zailani, S., Arrifin, Z., Wahid, N. A., Othman, R. and Fernando, Y. (2010). Halal traceability and Halal tracking systems in strengthening Halal food supply chain for food industry in Malaysia: a review. Journal of Food Technology. 8(3), pp. 74–81.

Zawya (2016). State of the Global Islamic Economy Report 2016/17. Retrieved from: www.zawya.com/mena/en/ifg-publications/280916063519J/ (accessed 24 November 2021 ). Zulfakar, M. H., Jie, F. and Chan, C. (2012). Halal food supply chain integrity: from a literature review to a conceptual framework. 10th ANZAM Operations, Supply Chain and Services Management Symposium, Melbourne.

#### Traceability technology in Halal logistics and supply chain

Al-Qaradawi, Y. (1993). The Lawful and Prohibited in Islam. Lahore: Islamic Publications. Amir, A. (2020). Jakim announces action plan to tackle meat cartel scandal. New Strait Times. Retrieved from: www.nst.com.my/news/nation/2020/12/653040/jakim-announces-action-plantackle-meat-cartel-scandal (accessed 24 November 2021).

Angeles, R. (2005). RFID technologies: supply-chain applications and implementation issues. Information Systems Management, 22(1), pp. 51–65.

Arienzo, A., Coff, C. and Barling, D. (2008). The European Union and the regulation of food traceability: from risk management to informed choice? In C. Coff, D. Barling, M. Korthals and T. Nielsen (Eds.), Ethical Traceability and Communicating Food: The International Library of Environmental, Agricultural and Food Ethics. Dordrecht: Springer, pp. 23–42.

Azam, A. (2016). An empirical study on non-Muslim's packaged Halal food manufacturers: Saudi Arabian consumers' purchase intention. Journal of Islamic Marketing, 7, pp. 441–460. Bahrudin, S. S. M., Tan, M. I. b. I. and Desa, M. I. (2011). Tracking and tracing technology for Halal product integrity over the supply chain. Proceedings of the 2011 International Conference on Electrical Engineering and Informatics, 2011, pp. 1–78.

Daniel, D. R. (1961). Management information crisis. Harvard Business Review, 39, pp. 111–121.

Digman, L. A. (1990). Strategic Management: Concepts, Decisions, Cases. Boston, MA: BPI/Irwin.

Encyclopedia Britannica (n.d.). Barcode. Retrieved from:

www.britannica.com/technology/barcode (accessed 24 November 2021 ).

Food and Agriculture Organization (FAO) (2004). Codex Alimentarius Commission: Report of the Twenty-Seventh Session. Retrieved from: www.fao.org/3/y5549e/y5549e0l.htm (accessed 24 November 2021).

Husny, Z. J., Razali, R. N. and Tan, M. I. B. I. (2012). Halal Traceability Container System (Halal TraCS) using radio frequency identification (RFID) technology for Malaysian Halal logistics. International Conference on Information Technology 2012, Madrid, 28–29 March. Insight Works (2021). Barcodes vs. QR codes: Which Is Better for Manufacturers? Retrieved from: www.dmsiworks.com/resources/erp-news/inventory-management/barcodes-vs-qr-codes-which-is-better-for-manufacturers/ (accessed 24 November 2021).

International Organization of Standardization (ISO) (n.d.). ISO 12875:2011, Traceability of Finfish Products: Specification on the Information to be Recorded in Captured Finfish Distribution Chains. Geneva: ISO Central Secretariat.

Jaafar, H. S., Omar, E. N., Osman, M. R., and Faisol, N. (2013). The concept of Halal logistics – an insight. International Conference on Logistics and Transport. Kyoto: Doshisha University, Kyoto.

Jabatan Kemajuan Islam Malaysia (JAKIM) (n.d.a). Malaysian Halal Management System, MHMS 2020. Retrieved from: www.halal@gov.my (accessed 24 November 2021). Jabatan Kemajuan Islam Malaysia (JAKIM) (n.d.b). Manual Prosidur Pensijilan Halal Malaysia (Domestik) MPPHM 2020. Retrieved from: www.halal@gov.my (accessed 24 November 2021). Kamaruddin, R., Iberahim, H. and Shabudin, A. (2012). Willingness to pay for Halal logistics: the lifestyle choice. Procedia – Social and Behavioral Sciences, 50, pp. 722–729. Kärkkäinen, M., Holmström, J., Främling, K. and Artto, K. (2003). Intelligent products: a step

towards a more effective project delivery chain. Computers in Industry, 50(2), pp. 141–51.

- Khan, S., Haleem, A., Khan, M. I., Abidi, M. H. and Al-Ahmari, A. (2018). Implementing traceability systems in specific supply chain management (SCM) through critical success factors (CSFs). Sustainability, 10, 204.
- Li, S. and Visich, J. K. (2006). Radio frequency identification: supply chain impact and implementation challenges. International Journal of Integrated Supply Management, 2(4), 24407424.
- Loebbecke, C. and Powell, P. (1998). Competitive advantage from IT in logistics: the integrated transport tracking system. International Journal of Information Management, 18(1), pp. 17–27. Marjudi, S., Hassan, W. A. W., Ahmad, R. M. T. R. L., Hamid, A. and Zainuddin, N. M. M. (2017). The critical success factors of Halal SCM systems for Malaysian SMEs. The 69th IRES International Conference, Jeddah, 24–25 May.
- Meuwissen, M. P., Velthuis, A. G., Hogeveen, H. and Huirne, R. B. (2003). Traceability and certification in meat supply chains. Journal of Agribusiness, 21(2), pp. 167–182.
- Mohamed, Y. H., Rahim, A. R. A., Ma'ram, A. B. and Hamza, M. G. (2016). Halal traceability in enhancing Halal integrity for food industry in Malaysia a review. International Research Journal of Engineering and Technology (IRJET), 3(3), pp. 68–74.
- Ngai, E. W. T., Cheng, T. C. E., Au, S. and Lai, K-h. (2007). Mobile commerce integrated with RFID technology in a container depot. Decision Support Systems, 43(1), pp. 62–76.
- Sahin, E., Dallery, Y. and Gershwin, S. (2002). Performance evaluation of a traceability system: an application to the radio frequency identification technology. IEEE International Conference on Systems, Man and Cybernetics, 3. doi: 10.1109/ICSMC.2002.1176118
- Shamsuzzoha, A. H. M. and Helo, P. T. (2011). Real-time tracking and tracing systems: potentials for the logistics network. International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, 22–24 January.
- Shi, Y.-D., Pan, Y.-Y. and Lang, W.-M. (2009). The RFID application in logistics and supply chain management. Research Journal of Applied Sciences, 4(1), pp. 57–61.
- Soon, J. M., Chandia, M. and Regenstein, J. M. (2017). Halal integrity in the food supply chain, British Food Journal, 119(1), pp. 39–51.
- Stefansson, G. and Tilanus, B. (2001). Tracking and tracking: principles and practice. International Journal of Services Technology and Management, 2(3/4), pp. 187–206. *Straits Times Asia* (2014). Cadbury Malaysia reviews supply chain after pork DNA found in two products. Straits Times Asia. Retrieved from: www.straitstimes.com/asia/se-asia/cadbury-malaysia-reviews-supply-chain-after-pork-dna-found-in-two-products (accessed 24 November 2021).
- Taghaboni-Dutta, F. and Velthouse, B. (2006). RFID technology is revolutionary: who should be involved in this game of tag? Academy of Management Perspectives, 20(4), pp. 65–78.
- Tan, M. I. I. and Husny, Z. J. I. M. (2020). Digital innovation, Halal industry and the Fourth Industrial Revolution. In N. A. A. Rahman , A. Hassan and M. F. Mohammad (Eds.), Halal Logistics and Supply Chain Management in Southeast Asia. Abingdon: Routledge.
- Tausz, A. (1994). The high stakes game of keeping tabs. Distribution, 93(13), 54–57.
- Tieman, M. (2011). The application of Halal in supply chain management: in-depth interview. Journal of Islamic Marketing, 2(2), pp. 186–195.
- Tieman, M., van der Vorst, J. G. A. J. and Che Ghazali, M. (2012). Principles in Halal supply chain management. Journal of Islamic Marketing, 3(3), pp. 217–243.
- Zailani, S., Arrifin, Z., Abd Wahid, N., Othman, R. and Fernando, Y. (2010). Halal traceability and Halal tracking systems in strengthening Halal food supply chains for food industry in Malaysia (a review). Journal of Food Technology, 8(3), pp. 74–81.

### Technology and traceability in Halal logistics

Ahmad, M. F., Samsi, S. Z. M. and Hui, L. T. (2017). Halascan: Halal brand personality screening process using camera phone barcode scanning. International Journal of Academic Research in Business and Social Sciences, 7(10), pp. 291–302.

Ahmad, H., Sabar, R., Udin, Z. M., Abd Latif, M. F. and Zainuddin, N. (2019). Quality management of internal supply chain in Halal food manufacturer. International Journal of Supply Chain Management, 8(4), pp. 1047–1052.

- Aslan, I. and Aslan, H. (2016). Halal foods awarness and future challenges. British Journal of Economics, Management and Trade, 12(3), pp. 1–20.
- Aziz, Y. A. and Chok, N. V. (2013). The role of Halal awareness, Halal certification, and marketing components in determining Halal purchase intention among non-Muslims in Malaysia: a structural equation modeling approach. Journal of International Food and Agribusiness Marketing, 25(1), pp. 1–23.
- Bibi, F., Guillaume, C., Gontard, N. and Sorli, B. (2017). A review: RFID technology having sensing aptitudes for food industry and their contribution to tracking and monitoring of food products. Trends in Food Science and Technology, 62, pp. 91–103.
- Denuwara, N., Maijala, J. and Hakovirta, M. (2019). Sustainability benefits of RFID technology in the apparel industry. Sustainability, 11(22), 6477.
- Duroc, Y. and Tedjini, S. (2018). RFID: A key technology for humanity. Comptes Rendus Physique, 19(1-2), pp. 64–71.
- Fatmi, F. O., Ahmad, A. N. and Kartika, B. (2020). Determinants affecting purchase intention of Halal products: an article review. Journal of Halal Product and Research, 3(2), pp. 64–79.
- Garg, P. and Joshi, R. (2018). Purchase intention of "Halal" brands in India: the mediating effect of attitude. Journal of Islamic Marketing, 9(3), pp. 683–694.
- Herrojo, C. , Paredes, F. , Mata-Contreras, J. and Martín, F. (2019). Chipless-RFID: a review and recent developments. Sensors, 19(15), 3385.
- Jalil, N. S. A., Tawde, A. V., Zito, S., Sinclair, M., Fryer, C., Idrus, Z. and Phillips, C. J. C. (2018). Attitudes of the public towards Halal food and associated animal welfare issues in two countries with predominantly Muslim and non-Muslim populations. PLoS ONE, 13(10), e0204094.
- Jusop, M., Ismail, R. M. and Ismail, N. A. (2020). Managing information quality in B2C companies: an empirical investigation on Halal e-commerce websites. International Journal of Interactive Mobile Technologies, 14(17), pp. 97–112.
- Kawata, Y. and Salman, S. A. (2020). Do different Halal certificates have different impacts on Muslims? Journal of Emerging Economies and Islamic Research, 8(3), pp. 26–39.
- Landaluce, H., Arjona, L., Perallos, A., Falcone, F., Angulo, I. and Muralter, F. (2020). A review of IoT sensing applications and challenges using RFID and wireless sensor networks. Sensors, 20(9), 2495.
- Lathifah, A. and Narulidea, W. (2017). Business model financially viable for a radio frequency identification (RFID) application to Halal food system. Jurnal Ekonomi Dan Bisnis Islam (Journal of Islamic Economics and Business), 3(1), pp. 12–25.
- Lee, H. Y., Hwang, H. J. and Kim, D. H. (2019). Issues of Halal supply chain management: suggestion for Korean traders. Journal of Korea Trade, 23(8), pp. 132–144.
- Ma'rifat, T. N., Purwanto, S. and Windarwati, S. (2017). Perception on Halal traceability on chicken meat supply chain. Agroindustrial Technology Journal, 1(1), pp. 33–41.
- McGee, K., Anandarajah, P. and Collins, D. (2019). A review of chipless remote sensing solutions based on RFID technology. Sensors, 19(22), 4829.
- Memon, Y. J., Azhar, S. M., Haque, R. and Bhutto, N. A. (2019). Religiosity as a moderator between Theory of Planned Behavior and Halal purchase intention. Journal of Islamic Marketing, 11(6), pp. 1821–1836.
- Mohamad, M. A., Mansor, S., Ahmad, N., Adnan, W. A. W. and Wali, I. M. (2016). The reliability of Halal product transportation using GPS tracking system. Journal of Theoretical and Applied Information Technology, 90(2), pp. 188–196.
- Mohamed, Y. H., Rahim, A. R. A., Ma'ram, A. B. and Hamza, M. G. (2016). Halal traceability in enhancing Halal integrity for food industry in Malaysia a review. International Research Journal of Engineering and Technology, 3(3), pp. 68–74.
- Muliansyah, D., Rahmayanti, R. and Nurhidayah, R. (2020). Halal and non-Halal product recognition systems. International Journal of Innovation, Creativity and Change, 12(9), pp. 255–270.
- Mutmainah, L. (2018). The role of religiosity, Halal awareness, Halal certification, and food ingredients on purchase intention of Halal food. Ihtifaz: Journal of Islamic Economics, Finance, and Banking, 1(1), pp. 33–50.
- Noordin, N., Noor, N. L. M. and Samicho, Z. (2014). Strategic approach to Halal certification system: an ecosystem perspective. Procedia Social and Behavioral Sciences, 121, pp. 79–95.

- Nugroho, A. J. S., Andadari, R. K., and Aribowo, E. K. (2018). Supply chain and purchasing behavior of Halal chicken meat. Share: Jurnal Ekonomi Dan Keuangan Islam, 7(2), pp. 162–179.
- Othman, B., Shaarani, S. M. and Bahron, A. (2016). The potential of ASEAN in Halal certification implementation: a review. Pertanika Journal of Social Sciences and Humanities, 24(1), pp. 1–24.
- Poniman, D., Purchase, S. and Sneddon, J. (2018). Traceability in Halal food supply chains from a business network perspective. Information Processing in Agriculture. Retrieved from: www.impgroup.org/uploads/papers/7855.pdf (accessed 24 November 2021).
- Pradana, M., Syarifuddin, S., Hafid, H., Gilang, A. and Diandri, M. (2019). Purchase intention determinants of Halal food in secular countries. International Journal of Supply Chain Management, 8(4), pp. 83–89.
- Rashid, N. A., Supian, K. and Bojei, J. (2018). Relationship between Halal traceability system adoptions on halal food supply chain integrity and performance. International Journal of Asian Social Science, 8(8), pp. 569–579.
- Rasul, T., Ashaduzzaman, M. and Jebarajakirthy, C. (2018). How do Muslim consumers arrive at Halal purchase decisions in online food consumption context? Proceedings of the 20th Australia and New Zealand Marketing Academy Conference (ANZMAC), Adelaide, 3–5 December.
- Razak, M. N. F. A. and Katuk, N. (2017). Barcode scanning mobile application for searching Halal information of food products. In J. Zulikha and N. H. Zakaria (Eds.), Proceedings of the 6th International Conference of Computing & Informatics. Sintok: School of Computing, pp. 418–425.
- Rohmah, D., Maharani, S., Kholis, M., Taqwa, S. and Setyaningrum, H. (2020). Traceability and Tracking Systems of Halal Food Using Blockchain Technology to Improve Food Industry Competitiveness. Retrieved from: https://eudl.eu/pdf/10.4108/eai.13-2-2019.2286199 (accessed 24 November 2021).
- Saifudin, A. M., Zainuddin, N., Elias, E. M., Samsuddin, S. N. F. and Osman, A. A. (2018). Reviewing the contributors towards the performance of the new Islamic supply chain model. International Journal of Supply Chain Management, 7(4), pp. 151–157.
- Tieman, M. (2019). Branding Halal: a delicate balance. ICR Journal, pp. 283–287.
- Usama, M., and Ramish, A. (2020). Towards a sustainable reverse logistics framework/typologies based on radio frequency identification (RFID). Operations and Supply Chain Management, 13(3), pp. 222–232.
- Van Hoek, R. (2019). Exploring blockchain implementation in the supply chain: learning from pioneers and RFID research. International Journal of Operations and Production Management, 39(6/7/8), pp. 829–859.
- Zainuddin, N., Saifudin, A. M., Deraman, N. and Osman, A. A. (2020). The effect of Halal traceability system on Halal supply chain performance. International Journal of Supply Chain Management, 9(1), pp. 490–498.
- Zakaria, Z, Majid, M. D. A. Jusoh, Z. A. Z. and Zakaria, N. Z. (2018). Influence of Halal certification on customers' purchase intention. Journal of Fundamental and Applied Sciences, 9(5S), pp. 772–787.

## Halal logistics sustainability

Abdelsamie, M. A. A., Rahman, R. A. and Mustafa, S. (2014). Pyramid shape power as a new Halal-compliant food preservation and packaging technique. Procedia – Social and Behavioral Sciences, 121, pp. 232–242.

- Ahmad, A. N., Rahman, R. A., Othman, M. and Abidin, U. F. U. Z. (2017). Critical success factors affecting the implementation of Halal food management systems: perspective of Halal executives, consultants and auditors. Food Control, 74, pp. 70–78.
- Arif, S. and Sidek, S. (2015). Application of Halalan tayyiban in the standard reference for determining Malaysian Halal food. Asian Social Science, 11(17), pp. 116–129.
- Bonne, K. and Verbeke, W. (2008). Muslim consumer trust in Halal meat status and control in Belgium. Meat Science, 79, pp. 113–123.

- Chandra, G. R., Liaqat, I. A. and Sharma, B. (2019). Blockchain redefining: the Halal food sector. Proceedings 2019 Amity International Conference on Artificial Intelligence, AICAI 2019, pp. 349–354.
- de Camargo Fiorini, P. and Jabbour, C. J. C. (2017). Information systems and sustainable supply chain management towards a more sustainable society: where we are and where we are going? International Journal of Information Management, 37(4), pp. 241–249.
- Elassy, N. (2015). The concepts of quality, quality assurance and quality enhancement. Quality Assurance in Education, 23(3), pp. 250–261.
- Ghani, M. K. A., Ikram, R. R. and Basari, A. S. H. (2015). Computerised systems framework for the Halal pharmaceuticals. International Journal of Telemedicine and Clinical Practices, 1(1), pp. 77–93.
- Haleem, A., Khan, M. I., Khan, S. and Jami, A. R. (2020). Research status in Halal: a review and bibliometric analysis. Modern Supply Chain Research and Applications, 2(1), pp. 23–41. Hashim, H., Hussin, S. R. and Zainal, N. N. (2014). Exploring Islamic retailer store attributes
- from consumers perspectives: an empirical investigation. International Journal of Economics and Management, 8(S), pp. 117–136.
- Hassan, W. A. W., Ahmad, R. M. T. R. L., Marjudi, S., Hamid, A. and Zainuddin, N. M. M. (2017). The implementation framework of Halal supply chain management systems. Indian Journal of Science and Technology, 10(48), pp. 1–9.
- Hoffman, N. (2000). An examination of the "sustainable competitive advantage" concept: past, present, and future. Academy of Marketing Science Review, 2000(4).
- Khairuddin, M. M., Rahman, N. A. A., Mohammad, M. F., Majid, Z. A. and Ahmad, M. F. (2018). Regulator perspective on Halal air cargo warehouse compliance. International Journal of Supply Chain Management, 7(3), pp. 202–207.
- Khan, M. I., Haleem, A. and Khan, S. (2018). Defining Halal supply chain management. Supply Chain Forum: An International Journal, 19(2), 122–131
- Chain Forum: An International Journal, 19(2), 122–131. Kuncoro, W. and Suriani, W. O. (2018). Achieving sustainable competitive advantage through
- product innovation and market driving. Asia Pacific Management Review, 23(3), pp. 186–192. Mutsikiwa, M. and Basera, C. H. (2012). The influence of socio-cultural variables on consumers' perception of Halal food products: a case of Masvingo urban, Zimbabwe. International Journal of Business and Management, 7(20), pp. 112–119.
- Ngah, A. H., Ramayah, T., Ali, M. H. and Khan, M. I. (2019). Halal transportation adoption among pharmaceuticals and comestics manufacturers. Journal of Islamic Marketing, 11(6), pp. 1619–1639.
- Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2017). Applying the TOE framework in the Halal warehouse adoption study. Journal of Islamic Accounting and Business Research, 8(2), pp. 161–181.
- Rahim, N. H. M., Zainuddin, A. and Shariff, S. M. (2016). Retailing layouts for Halal food supply chain: issues and challenges. ScienceInternational, 28(2), pp. 1941–1947.
- Ramli, J. A. (2020). The influence of internal governance on Halal compliance of Malaysian food industry: preliminary study. Global Business and Management Research: An International Journal, 12(4), pp. 712–720.
- Ikram, R. R. B. R., Ghani, M. K. B. A. and Basari, A. S. H. (2013). Novel computerized Halal Pharmaceuticals supply chain framework for warehouse and procurement. International Journal of Computer Applications, 70(10), pp. 22–27.
- Shafie, S. and Othman, M. N. (2006). Halal Certification: An International Marketing Issues and Challenges. Retrieved from: https://bit.ly/3xlFlpm (accessed 24 November 2021).
- Soon, J. M., Chandia, M. and Regenstein, J. M. (2017). Halal integrity in the food supply chain. British Food Journal, 119(1), pp. 39–51.
- Soong, S. F. V. (2007). Managing Halal Quality in Food Service Industry. UNLV Theses, Dissertations, Professional Papers, and Capstones. Singapore: University of Nevada Las Vegas.
- Sukati, I. and Bawaain, A. (2019). The practices of Halal foods and beverages supply chain on marketing performance: a conceptual framework. International Journal of Business and Social Science, 10(8), pp. 110–117.
- Sumpin, N. A., Kassim, N. F., Zaki, M. I. M., Piah, Z. H. M. and Majid, M. A. A. (2019). Will the real Halal logo please stand up? International Journal of Academic Research in Business and Social Sciences, 9(9), pp. 1226–1234.

Surjandari, I., Yusuf, H., Laoh, E. and Maulida, R. (2021). Designing a permissioned blockchain network for the Halal industry using hyperledger fabric with multiple channels and the raft consensus mechanism. Journal of Big Data, 8(10). https://doi.org/10.1186/s40537-020-00405-7

Susanty, A., Puspitasari, N. B., Jati, S. and Selvina, O. (2021). Impact of internal and external factors on Halal logistics implementation. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-09-2020-0293

Talib, M. S. A. and Johan, M. R. M. (2012). Issues in Halal packaging: a conceptual paper. International Business and Management, 5(2), pp. 94–98.

Talib, H. H. A., Ali, K. A. M. and Jamaludin, K. R. (2008). Quality assurance in Halal food manufacturing in Malaysia: a preliminary study. Proceedings of International Conference on Mechanical & Manufacturing Engineering (ICME2008), Johor Bahru, 21–23 May.

Talib, Z., Zailani, S. and Zainuddin, Y. (2010). Conceptualizations on the dimensions for Halal orientation for food manufacturers: a study in the context of Malaysia. Pakistan Journal of Social Sciences, 7(2), pp. 56–61.

Tieman, M. and Darun, M. R. (2017). Leveraging blockchain technology for Halal supply chains. Islam and Civilisational Renewal, 8(4), pp. 547–550.

Tieman, M. and Ruiz-bejarano, B. (2020). Halal retailing: closing the last mile in an end-to-end Halal. Islam and Civilisational Renewal, 11(1), pp. 147–152.

Tieman, M., van der Vorst, J. G. A. J. and Ghazali, M. C. (2012). Principles in Halal supply chain management. Journal of Islamic Marketing, 3(3), pp. 217–243.

Vlasceanu, L., Grünberg, L. and Pârlea, D. (2007). Quality assurance and accreditation: a glossary of basic terms and definitions. UNESCO-CEPES 2007. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000134621 (accessed 24 November 2021).

Yaacob, T. Z., Rahman, F. A. and Jaafar, H. S. (2018). Risk categories in Halal food transportation: a preliminary findings. International Journal of Supply Chain Management, 7(6), pp. 453–461.

Zulfakar, M. H., Jie, F. and Chan, C. (2012). Halal food supply chain integrity: from a literature review to a conceptual framework. Proceedings of the 10th ANZAM Operations, Supply Chain and Services Management Symposium, 61(4), pp. 1–23.

## Exploring the Islamic work ethics and Halal meat supply chain

Ahmad, S. and Owoyemi, M. Y. (2012). The concept of Islamic work ethic: an analysis of some salient points in the prophetic tradition. International Journal of Business and Social Science, 3(20), pp. 116–123.

Ahmed, A. and Fatima, S. (2015). The Holy Quran: text, translation and commentary by Abdullah Yusuf 'Ali (a critical review). Al-Adwa, 44(30).

Al-Shafii, M. M. O., Ali, M. S., Zin, E. I. E. W. and Thoarlim, A. (2018). Al-Akhlaq (ethics) perceptions in Islam: a textual interpretation through Imam Muhammad Al-Ghazali. International Journal of Academic Research in Business and Social Sciences, 8(10), pp. 315–329.

Ali, A. Y. (1989). The Holy Quran: Text, Translation and Commentary (New Revise). Maryland, MA: Amana Corporation.

Ali, A. J. (2005). Islamic Perspectives on on Management and Organization. Cheltenham: Edward Elgar.

Ali, A. J. and Al-Owaihan, A. (2008). Islamic work ethic: a critical review. Cross Cultural Management: An International Journal, 15(1), pp. 5–19.

At-Tirmidhi . (n.d.). Jami' at-Tirmidhi 1209. The Hadith of the Prophet Muhammad. Retrieved from: Sunnah.com (accessed 24 November 2021).

Beekun, R. I., Stedham, Y. and Yamamura, J. H. (2003). Business ethics in Brazil and the US: a comparative investigation. Journal of Business Ethics, 42(3), pp. 267–279.

Department of Standard Malaysia (DSM) (2019). Department of Standard Malaysia 2400–2019. Kulala Lumpur: DSM.

Ernst, C. W. (2003). Following Muhammad: Rethinking Islam in the Contemporary World. Chapel Hill, NC: University of North Carolina Press.

Hamat, M. A. H. C., Rashid, M. F. and Mohammad, N. B. (2019). Role of freight and forwarding company in facilitating the export-import process in Kelantan Malaysia. International Journal of Economics and Business Research, 18(3), pp. 387–398.

International Islamic University Malaysia (2021). IIUM Repository. Retrieved from:

http://irep.iium.edu.my/ (accessed 24 November 2021 ).

Islamic Markets (2021). Navigate the Islamic Economy. Retrieved from:

https://islamicmarkets.com/ (accessed 24 November 2021 ).

Kadhim, A. S., Ahmad, S., Owoyemi, M. Y. and Ahmad, M. (2017). Islamic ethics: the attributes of Al-Ihsan in the Quran and its effects on Muslim morality. International Journal of Business and Social Science, 8(11), pp. 102–107.

Kementerian Dalam Negeri . (2021). About Us. Retrieved from: www.kdn.gov.my (accessed 24 November 2021 ).

Luco, A. (2014). The definition of morality: threading the needle. Social Theory and Practice, 40(3), 361–387.

Melan, M. and Sabar, R. (2014). Seamless freights movement towards the quality services at cross border checkpoints between Malaysia and Thailand. International Journal of Science and Research. 3(9).

Rexhepi, G. and Ramadani, N. (2016). Ethics and social responsibility in Islamic finance. In V. Ramadani, L. P. Dana, S. Gërguri-Rashiti and V. Ratten (Eds.), Entrepreneurship and Management in an Islamic Context. Cham: Springer. pp. 133–142.

Rizk, R. R. (2008). Back to basics: an Islamic perspective on business and work ethics. Social Responsibility Journal, 4(1/2), pp. 246–254.

Sahih al-Bukhari. (n.d.). Sahih al-Bukhari 1979. The Hadith of the Prophet Muhammad. Retrieved from: sunnah.com (accessed 24 November 2021).

Saks, A. M., Mudrack, P. E. and Ashforth, B. E. (1996). The relationship between the work ethic, job attitudes, intentions to quit, and turnover for temporary service employees. Canadian Journal of Administrative Sciences, 13(3), pp. 226–236.

Sarbani, N. B. and Jaafar, H. S. (2016). Facilitation for Halal product supply chain: a conceptual review. MITRANS Logistics and Transport International Conference. 6, pp. 12–14.

Shepherd, B. and Hamanaka, S. (2015). Overcoming trade logistics challenges: Asia-Pacific experiences. Asia Pacific Journal of Marketing and Logistics, 27(3), pp. 444–466.

Sula, M. S. and Kartajaya, H. (2006). Syariah Marketing. Bandung: Mizan Publishing. Widdowson, D., Short, G., Blegen, B. and Kashubsky, M. (2018). National committees on trade facilitation. World Customs Journal, 12(1), pp. 27–48.

Yaken . (2006). What is the Meaning of My Belong to Islam? Beirut: Darul Al-Ressalh Publication.

Yousef, D. A. (2000). The Islamic work ethic as a mediator of the relationship between locus of control, role conflict and role ambiguity – a study in an Islamic country setting. Journal of Managerial Psychology, 15(4), pp. 283–298.

## Exploring the Halal meat cartel case

Abdullah, M. S., Salleh, A., Rosman, B. and Mia, M. H. (2017). Halal food and Sufism: introduction of new technology. Journal of Enginering Technology, 6(2), pp. 842–852.

Ab. Halim, M. A. and Ahmad, A. A. (2014). Enforcement of consumer protection laws on Halal Products: Malaysian experience. Asian Social Science, 10(3), pp. 9–14.

Ab. Halim, M. A. B., Mohd, K. W. B., Salleh, M. M. M., Yalawae, A., Omar, T. S. N. M. S., Ahmad, A., Ahmad, A. A. B. and Kashim, M. I. A. B. M. (2014). Consumer protection of Halal products in Malaysia: a literature highlight. Procedia – Social and Behavioral Sciences, 121, pp. 68–78.

Afiq, M., Razak, A., & Ramli, M. A. (2009). Aplikasi Umum Al-Balwa Dalam Menangani Pencemaran. www.academia.edu/35881465/Aplikasi Umum Al-

Balwa\_Dalam\_Menangani\_Pencemaran\_Silang\_Produk\_Makanan?auto=download&email\_work\_card=download-paper

Ahmad, A. N., Rahman, R. A., Othman, M. and Abidin, U. F. U. Z. (2017). Critical success factors affecting the implementation of Halal food management systems: perspective of Halal

executives, consultants and auditors. Food Control, 74, pp. 70–78.

Ahmad, F., Shah, M. Z., Junaida, Z., Yazid, M. T., Rozelin, A., Donn, T., Shima, R., Ghazali, M. A. I. and Ramzi, M. (2020). Halal logistics legal framework: Malaysia perspective. Journal of Critical Reviews, 7(8), pp. 33–39.

Ahmad, M., Kadir, S. A. and Salehudin, N. A. (2013). Perceptions and behaviors of Muslims and non-Muslims towards Halal products. Journal of Social and Development Sciences, 4, pp. 2–6.

Aksoy, H. and Özsönmez, C. (2019). How Millennials' knowledge, trust, and product involvement affect the willingness to pay a premium price for fairtrade products? Asian Journal of Business Research, 9(2), pp. 95–112.

Al-Ansi, A. , Olya, H. G. T. and Han, H. (2019). Effect of general risk on trust, satisfaction, and recommendation intention for Halal food. International Journal of Hospitality Management, 83, pp. 210–219.

Alzeer, J. , Rieder, U. and Hadeed, K. A. (2018). Rational and practical aspects of Halal and Tayyib in the context of food safety. Trends in Food Science and Technology, 71, pp. 264–267.

Ambali, A. R. and Bakar, A. N. (2014). People's awareness on Halal foods and products: potential issues for policy-makers. Procedia – Social and Behavioral Sciences, 121, pp. 3–25. Ariffin, M. F. M., Riza, N. S. M., Hamid, M. F. A., Awae, F. and Nasir, B. M. (2021). Halal food

crime in Malaysia: an analysis on illegal meat cartel issues. Journal of Contemporary Issues in Business and Government, 27(2), 1407–1412.

Bernama (2019). Govt to introduce National Halal Council Act in 2019. News Straits Times. Retrieved from: www.nst.com.my/news/government-public-policy/2018/10/424023/govt-introduce-national-halal-council-act-2019 (accessed 24 November 2021).

Denin, M. J. A. N. (2021). Isu kartel daging: SPRM kumpul bukti sejak dua minggu lalu. Harian Metro. Retrieved from: www.hmetro.com.my/mutakhir/2021/01/660020/isu-kartel-daging-sprm-kumpul-bukti-sejak-dua-minggu-lalu (accessed 24 November 2021).

Firdausi, A. S. M., Farahdiba, D. and Munthe, A. M. (2020). Determining consumers' willingness to buy Halal meat. Jurnal Bisnis Strategi, 29(2), pp. 143–162.

Hamid, A. A. (2021). Syarikat pembekal daging tuntut RM50 juta [METROTV]. Harian Metro. Retrieved from: www.hmetro.com.my/mutakhir/2021/01/662064/syarikat-pembekal-daging-tuntut-rm50-juta-metroty (accessed 24 November 2021).

Hammim, R. (2020). Company, two directors plead not guilty to charges of using unrecognised Halal logo. New Straits Times. Retrieved from: www.nst.com.my/news/crime-courts/2020/12/653169/company-two-directors-plead-not-guilty-charges-using-unrecognised

courts/2020/12/653169/company-two-directors-plead-not-guilty-charges-using-unrecognisec (accessed 24 November 2021 ).

Hammim, R. (2021). Meat cartel scandal: three food distribution company execs charged in. New Straits Times. Retrieved from: www.nst.com.my/news/crime-courts/2021/02/664430/meat-cartel-scandal-three-food-distribution-company-execs-charged (accessed 24 November 2021). Hasan, Z. (2007). Undang-Undang Produk Halal di Malaysia: Isu Penguatkuasaan Dan Pendakwaan. Retrieved from: https://zulkiflihasan.files.wordpress.com/2008/06/microsoft-word-halal-di-malaysia1.pdf (accessed 24 November 2021).

Krishnan, S., Haniff, M., Aderis, H. M., Azman, M. N., Nazrin, M. and Kamaluddin, A. (2017). Halal food: study on non-Muslim acceptance. American Journal of Economics, 7(1), pp. 41–45. Mahidin, N., Saifudin, A. M. and Othman, S. N. (2017). Halal food logistics: the challenges among food & beverages small and medium sized manufacturers. Internal Journal of Supply Chain Management, 6(3), pp. 337–346.

*Malayan Law Journal* (1986). Public prosecutor v Wee Mee Industries Co Sdn Bhd. Malayan Law Journal.

Rashid, N. A. and Bojei, J. (2020). The relationship between Halal traceability system adoption and environmental factors on Halal food supply chain integrity in Malaysia. Journal of Islamic Marketing, 11(1), pp. 117–142.

Rigod, B. and Tovar, P. (2019). Indonesia-chicken: tensions between international trade and domestic food policies? World Trade Review, 18(2), pp. 219–243.

Shariff, S. M., Akma, N. and Lah, A. (2014). Halal certification on chocolate products: a case study. Procedia – Social and Behavioral Sciences, 121, pp. 104–112.

Soon, J. M., Chandia, M. and Regenstein, J. M. (2017). Halal integrity in the food supply chain. British Food Journal, 119, pp. 39–51.

Suhaini, N. A. (2017). 4 kontena daging kambing campur babi dirampas. Berita Harian Online. Retrieved from: www.bharian.com.my/berita/nasional/2017/07/303117/4-kontena-daging-kambing-campur-babi-dirampas (accessed 24 November 2021).

Tieman, M. and Ghazali, M. C. (2014). Halal control activities and assurance activities in Halal food logistics. Procedia – Social and Behavioral Sciences, 121, pp. 44–57.

Tieman, M. and van Nistelrooy, M. (2014). Perception of Malaysian food manufacturers toward Halal logistics. Journal of International Food and Agribusiness Marketing, 26(3), pp. 218–233.

Yaacob, T. Z., Suzana Jaafar, H. and Rahman, F. A. (2016). A review of regulatory framework for Halal meat supply chain: the case of Halal meat based food products in Malaysia. Journal of Applied Environmntal and Biological Science, 6(9S), pp. 14–21.

Zaina, C. R. C. M., Rahman, S. A., Mohd., I. Z. and Aziz, S. A. (2015). Jurisdiction and prosecution of Halal related matters in Malaysia: challenges and prospects. Procedia – Social and Behavioral Sciences, 172, pp. 294–300.

Zakaria, Z. and Zubaidah Ismail, S. (2014). The Trade Description Act 2011: Regulating "Halal" in Malaysia. International Conference on Law, Management and Humanities (ICLMH'14), 3. https://doi.org/10.15242/ICEHM.ED0614020

Zulfakar, M. H., Chan, C. and Jie, F. (2014). Factors influencing the operations of the Halal meat supply chain in Australia. Conference: International Symposium on Logistics, Ho Chi Minh City, 1–8 March.

### Halal integrity in the supply chain

Adam, A. (2021). How Malaysia's "meat cartel" scandal unfolded: a timeline. Malay Mail. Retrieved from: www.malaymail.com/news/malaysia/2021/01/04/how-malaysias-meat-cartel-scandal-unfolded-a-timeline/1937007 (accessed 24 November 2021).

Ahmad, A. N., Abidin, U. F. U. Z., Othman, M. and Rahman, R. A. (2018). Overview of Halal food control system in Malaysia. Food Control, 90, pp. 352–363.

Ahmad, S. (2020). JAKIM keluarkan 6 pelan tindakan tangani isu halal daging import. Berita Harian. Retrieved from: https://bit.ly/2UiRmm4 (accessed 24 November 2021).

Ashman, A. (2020). Cops say "meat cartel" scandal involves massive network, including international syndicates. Malay Mail. Retrieved from:

www.malaymail.com/news/malaysia/2020/12/29/cops-say-meat-cartel-scandal-involve-massive-network-including-internationa/1935817 (accessed 24 November 2021).

Ashman, A. (2021). Aeon sees sales of red meat plunge after "cartel" scandal: Mydin MD calls for swift action ahead of April fasting month. Yahoo News. Retrieved from:

https://malaysia.news.yahoo.com/aeon-sees-sales-red-meat-030025910.html (accessed 24 November 2021 ).

Bahrudin, S. S. M., Illyas, M. I. and Desa, M. I. (2011). Tracking and tracing technology for Halal product integrity over the supply chain. Proceedings of the 2011 International Conference on Electrical Engineering and Informatics. doi: 10.1109/ICEEI.2011.6021678

Basyir, M. (2020). Meat cartel scandal: traders group to refrain from selling beef. New Straits Times. Retrieved from: www.nst.com.my/news/nation/2020/12/651615/meat-cartel-scandal-traders-group-refrain-selling-beef (accessed 24 November 2021).

Basyir, M. (2021). Meat cartels "exploiting loopholes in the system". New Straits Times. Retrieved from: www.nst.com.my/news/nation/2021/02/662044/meat-cartels-exploiting-loopholes-system (accessed 24 November 2021).

Bernama (2020). Malaysia's three largest frozen meat suppliers guaranteed Halal. New Straits Times. Retrieved from: www.nst.com.my/news/nation/2020/12/653032/malaysias-three-largest-frozen-meat-suppliers-guaranteed-halal (accessed 24 November 2021).

Best Food Importers (2020). Malaysia Food Importers and Import Trends 2020 – Best Food Importers. Retrieved from: https://bestfoodimporters.com/malaysia-food-importers-and-import-trends-2020/ (accessed 24 November 2021).

Bloomberg and Today Online (2020). Malaysian cartel allegedly sold fake Halal meat to Muslims for 40 years. South China Morning Post. Retrieved from:

www.scmp.com/news/asia/southeast-asia/article/3115837/malaysian-cartel-allegedly-sold-fake-halal-meat-muslims-40 (accessed 24 November 2021).

British Retail Consortium (BRC) (2016). About. Retrieved from: https://brcfoodsafety.com/the-british-retail-consortium/ (accessed 24 November 2021).

Brooks, S., Elliott, C. T., Spence, M., Walsh, C. and Dean, M. (2017). Four years post-horsegate: an update of measures and actions put in place following the horsemeat incident of 2013. NPJ Science of Food. https://doi.org/10.1038/s41538-017-0007-z

Channel News Asia (2020). SFA, MUIS looking into concerns that alleged Malaysian "meat cartel syndicate" has affected Singapore. CNA. Retrieved from:

 $www. channelnews a sia.com/news/singapore/malaysia-meat-cartel-syndicate-muis-sfa-singapore-market-13860308 \ (accessed 24 \ November 2021).$ 

Daniele, U. (2021). Malaysia reels from fake Halal meat scandal, consumer mistrust. Arab News. Retrieved from: www.arabnews.com/node/1808651/world (accessed 24 November 2021).

Deloitte (2014). Fraud Risk Management – Providing Insight into Fraud Prevention, Detection and Response. Retrieved from:

www2.deloitte.com/content/dam/Deloitte/in/Documents/finance/Forensic-Proactive-services/infa-frm-noexp.pdf (accessed 24 November 2021).

Dhesegaan, B. K. and Solhi. F. (2020). Traders of imported beef "stung" by meat cartel. New Strait Times. Retrieved from: www.nst.com.my/news/nation/2020/12/653100/traders-imported-beef-stung-meat-cartel (accessed 24 November 2021).

FandD Technology (2017). Food Fraud Report shows 2/3 of consumers blame producers for food fraud. Food and Drink Technology. Retrieved from:

www.food and drink technology.com/news/18367/food-fraud-report-shows-23-consumers-blame-producers-food-fraud/ (accessed 24 November 2021).

Farah, I. (2021). How technology is putting a stop to Halal food fraud. Halalop. Retrieved from: https://halalop.com/business/how-technology-stop-halal-food-fraud/ (accessed 24 November 2021).

Fatimah, M. A. (2021). My say: Halal meat fiasco begs a system overhaul. The Edge Markets. Retrieved from: https://bit.ly/2V8L0q1 (accessed 24 November 2021).

Food and Agriculture Organization (FAO). (2006). Strengthening National Food Control Systems: Guidelines to Assess Capacity Building Needs. Rome: FAO.

Food and Agriculture Organization (FAO) (2015). Inclusive Business Models: Guidelines for Improving Linkages between Producer and Groups and Buyers of Agricultural Produce. Rome: FAO.

Hammim, R. (2021). Meat cartel case: frozen food company, two execs charged. New Straits Times. Retrieved from: www.nst.com.my/news/crime-courts/2021/04/684411/meat-cartel-case-frozen-food-company-two-execs-charged (accessed 24 November 2021).

Hibrahim, M. A. (2020). Laporan *Sinar Harian* berkenaan isu kartel daging tepat. Sinar Harian. Retrieved from: https://bit.ly/36ajTNh (accessed 24 November 2021 ).

Hibrahim, M. A. and Zulkafli, N. (2020). Sindiket kartel palsu jenama daging hanya libatkan satu syarikat. Sinar Harian. Retrieved from: https://bit.ly/369gJcP (accessed 24 November 2021).

Hopper, M. and Boutrif, E. (2006). Strengthening National Food Control Systems: Guidelines to Assess Capacity Building Needs. Geneva: FAO.

Iskandar, M., Tan, I., Razali, R. N., and Husny, Z. J. (2012). The adoption of Halal transportations technologies for Halal logistics service providers in Malaysia. International Journal of Mechanical, Industrial Science and Engineering, 6(3), pp. 10–17.

Islamic Chamber Research & Information Center (2020). State of the Global Islamic Economy 2020/21 Report Is Published. Retrieved from: https://bit.ly/3hfg1Ba (accessed 24 November 2021).

Koya, Z. and Anis, M. N. (2020). Jakim not at fault, say industry players. The Star. Retrieved from: www.thestar.com.my/news/nation/2020/12/31/jakim-not-at-fault-say-industry-players (accessed 24 November 2021).

Lu, D. (2011). Fundamentals of Supply Chain Management. Bookboon.

Malaysia Competition Commission (MyCC) . (2019). Final Report – Market Review on Food Sector in Malaysia under the Competition Act 2010. Retrieved from: https://bit.ly/3hcGQ8N (accessed 24 November 2021 ).

Meidayanti, K., Arkeman, Y. and Sugiarto . (2019). Analysis and design of beef supply chain traceability system based on blockchain technology. IOP Conference Series: Earth and Environmental Science, 335, 012012.

Mohamed, Y. H., Abdul Rahim, A. R., and Ma'aram, A. (2020). The effect of Halal supply chain management on Halal integrity assurance for the food industry in Malaysia. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-12-2018-0240

Muhammad Shahrulnizam Muhadi (2020). Bayan Linnas Series 232: the issue of meat cartel which is haram and rulings related to it. Official Website of Mufti of Federal Territory. Retrieved from: https://muftiwp.gov.my/en/artikel/bayan-linnas/4642-bayan-linnas-series-232-the-issue-of-meat-cartel-which-is-haram-and-rulings-related-to-it (accessed 24 November 2021).

Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. Retrieved from: https://bitcoin.org/bitcoin.pdf (accessed 24 November 2021).

*New Straits Times* (2021). More messages linked to meat cartel leaked. New Straits Times. Retrieved from: www.nst.com.my/news/nation/2021/02/664309/more-messages-linked-meat-cartel-leaked (accessed 24 November 2021).

Pal, A. and Kant, K. (2019). Using blockchain for provenance and traceability in Internet of Things-integrated food logistics. Computer, 52(12), pp. 94–98.

Raikwar, M., Gligoroski, D., and Kralevska, K. (2019). SoK of used cryptography in blockchain. IEEE Access, 7, 148550–148575.

Razak, R. (2021). Come clean on companies behind "meat cartel" scandal, Lembah Pantai MP tells Putrajaya. Malay Mail . Retrieved from: https://bit.ly/3heIEOF (accessed 24 November 2021 ).

Rejeb, A. (2018). Halal meat supply chain traceability based on HACCP, blockchain and Internet of Things. Acta Technica Jaurinensis, 11(4), pp. 218–247.

Rozlin, I. and Ramli, M. A. (2020). Kartel tukar daging haram jadi halal. Sinar Harian. Retrieved from: www.sinarharian.com.my/article/112898/LAPORAN-KHAS/Kartel-tukar-daging-haram-iadi-halal (accessed 24 November 2021).

Scholten, H., Verdouw, C. N., Beulens, A., and van der Vorst, J. G. A. J. (2016). Defining and analyzing traceability systems in food supply chains. In M. Espiñeira and F. J. Santaclara (eds.), Advances in Food Traceability Techniques and Technologies: Improving Quality Throughout the Food Chain. London: Elsevier Ltd., pp. 9–33.

Seebacher, S. and Schüritz, R. (2017). Blockchain technology as an enabler of service systems: a structured literature review. Lecture Notes in Business Information Processing, 279, pp. 12–23.

Syaida, N. (2020). Kronologi isu kartel seludup daging sejuk beku tahun 2020. Sinar Harian. Retrieved from: https://m.sinarharian.com.my/mobile-article?articleid=139752 (accessed 24 November 2021).

Talib, M. S. A., Hamid, A. B. A. and Chin, T. A. (2015). Motivations and limitations in implementing Halal food certification: a Pareto analysis. British Food Journal, 117(11), pp. 2664–2705.

Tee, K. and Shahrizam, S. A. N. (2020). Backed by ex-IGP, Malay group demands reshuffle of Jakim over "meat cartel" scandal. Malay Mail. Retrieved from: https://bit.ly/36plZJz (accessed 24 November 2021).

Tieman, M. and Ghazali, M. C. (2014). Halal control activities and assurance activities in Halal food logistics. Procedia – Social and Behavioral Sciences, 121, pp. 44–57.

Zainul, E. (2019). Matrade targets 5% growth in halal exports for 2019. The Edge Markets. Retrieved from: www.theedgemarkets.com/article/matrade-%0Atargets-5-growth-halal-exports-2019 (accessed 24 November 2021).

Zulsyamini, M. and Suhaini, N. A. (2020). Avoid imported meat until trust issue resolved. New Straits Times. Retrieved from: https://bit.ly/3dADZ7F (accessed 24 November 2021).

### Halal transportation adoption among SMEs in Malaysia

Abed, S. S. (2020). Social commerce adoption using TOE framework: an empirical investigation of Saudi Arabian SMEs. International Journal of Information Management, 53, 102118. Al-Qirim, N. (2007). An empirical investigation of an e-commerce adoption-capability model in

small businesses in New Zealand. Electronic Markets, 15(4), pp. 418–437.

Alsaad, A. , Mohamad, R. and Ismail, N. A. (2019). The contingent role of dependency in predicting the intention to adopt B2B e-commerce. Information Technology for Development,  $\frac{1}{2}$ 

25(4), pp. 686–714.

Awa, H. O., Ojiabo, O. U. and Emecheta, B. C. (2015). Integrating TAM, TPB and TOE frameworks and expanding their characteristic constructs for e-commerce adoption by SMEs. Journal of Science and Technology Policy Management, 6(1), pp. 76–94.

Azmi, F. R., Abdullah, A., Musa, H. and Wan Mahmood, W. H. (2019). Perception of food manufacturers towards adoption of Halal food supply chain in Malaysia: exploratory factor analysis. Journal of Islamic Marketing, 11(3), pp. 571–589.

Chen, C. J. R., Gregoire, M. B., Arendt, S. and Shelley, M. C. (2011). College and university dining services administrators' intention to adopt sustainable practices: results from US institutions. International Journal of Sustainability in Higher Education, 12(2), pp. 145–162.

Chen, H., Li, L. and Chen, Y. (2021). Explore success factors that impact artificial intelligence adoption on telecom industry in China. Journal of Management Analytics, 8(1), pp. 36–68. Diamantopoulos, A. and Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: a comparison and empirical illustration. British Journal of Management, 17(4), pp. 263–282.

Dryden-Palmer, K. D. , Parshuram, C. S. and Berta, W. B. (2020). Context, complexity and process in the implementation of evidence-based innovation: a realist informed review. BMC Health Services Research, 20(81). https://doi.org/10.1186/s12913-020-4935-y

Fathi, E., Zailani, S., Iranmanesh, M., and Kanapathy, K. (2016). Drivers of consumers' willingness to pay for Halal logistics. British Food Journal, 118(2), pp. 464–479.

Franke, G. and Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. Internet Research, 29(3), pp. 431–447.

Gefen, D., Rigdon, E. E. and Straub, D. (2011). An update and extension to SEM guidelines for administrative and social science research. MIS Quarterly, 35(2), iii–A7.

Ghobakhloo, M. and Ching, N. T. (2019). Adoption of digital technologies of smart manufacturing in SMEs. Journal of Industrial Information Integration, 16, 100107.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Ringle, C. M., Sarstedt, M. and Ketchen, D. J. (2013). A primer on Partial Least Squares structural equation modeling. Long Range Planning, 46(1–2), pp. 184–185.

Hair, J. F., Risher, J. J., Sarstedt, M. and Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), pp. 2–24.

Iranmanesh, M., Mirzaei, M., Hosseini, S. M. P. and Zailani, S. (2019). Muslims' willingness to pay for certified halal food: an extension of the theory of planned behaviour. Journal of Islamic Marketing, 11(1), pp. 14–30.

Kock, N. (2015). Common method bias in PLS-SEM. International Journal of E-Collaboration, 11(4), pp. 1–10.

Lorente-Martínez, J., Navío-Marco, J., and Rodrigo-Moya, B. (2020). Analysis of the adoption of customer facing InStore technologies in retail SMEs. Journal of Retailing and Consumer Services, 57, 102225.

MacKenzie, S. B. and Podsakoff, P. M. (2012). Common method bias in marketing: causes, mechanisms, and procedural remedies. Journal of Retailing, 88(4), pp. 542–555.

Ngah, A. H. and Thurasamy, R. (2018). Modelling the intention to adopt halal transportation among Halal pharmaceutical and cosmetic manufacturers in Malaysia. Journal of Computational and Theoretical Nanoscience, 24(1), pp. 205–207.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2014a). Obstacles and facilitators in adopting Halal transportation services: a study of Malaysian Halal manufacturers. International Journal of Business and Management, 2(2), pp. 49–70.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2014b). Contributing factors of Halal warehouse adoption. In F. L. Gaol, W. Mars and H. Saragih (Eds.), Management and Technology in Knowledge, Service, Tourism and Hospitality. Abingdon: Routledge, pp. 89–94.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2015). Obstacles and facilitators in adopting of Halal warehousing. Journal of Islamic Marketing, 6(3), pp. 354–376.

Ngah, A. H., Zainuddin, Y. and Thurasamy, R. (2017). Applying the TOE framework in the Halal warehouse adoption study. Journal of Islamic Accounting and Business Research, 8(2), pp. 161–181.

Ngah, A. H., Rahimi, A. H. M. and Norzalita, A. A. (2018). The influence of electronic word of mouth on theory of reasoned action and the visit intention to the world monument fund site. Indian Journal of Public Health Research and Development, 9(11), pp. 1277–1282.

- Ngah, A. H., Ramayah, T., Ali, M. H. and Khan, M. I. (2019a). Halal transportation adoption among pharmaceuticals and cosmetics manufacturers. Journal of Islamic Marketing, 11(6), pp. 1619–1639.
- Ngah, A. H., Thurasamy, R., Aziz, N. A., Ali, H. and Khan, M. I. (2019b). Modelling the adoption of Halal warehousing services among Halal pharmaceutical and cosmetic manufacturers. Journal of Sustainability Science and Management, 14(6), pp. 103–116.
- Ngah, A. H. , Kim, H. D. , Hanafiah, R. M. , Salleh, N. H. M. , Jeevan, J. and Asri, N. M. (2019c). Willingness to pay for Halal transportation cost: the stimulus-organism-response model.
- International Journal of E-Navigation and Maritime Economy, 12, pp. 11–021.

  Ngah, A. H., Hanafiah, R. M., Talib, M. S. A., Zulfakar, M. H. and Asri, N. M. (2020a).
- Mediating effects of attitude towards willingness to pay for Halal transportation. Malaysian Journal of Consumer and Family Economics, 24(S2).
- Ngah, A. H., Gabarre, S., Eneizan, B. and Asri, N. (2020b). Mediated and moderated model of the willingness to pay for Halal transportation. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-10-2019-0199
- Ngah, A. H., Ramayah, T., Mohd Salleh, N. H., Jeevan, J., Md. A. Hanapiah, R. and Eneizan, B. (2021). Halal transportation adoption among food manufacturers in Malaysia: the moderated model of Technology, Organization and Environment (TOE) Framework. Journal of Islamic Marketing, https://doi.org/10.1108/JIMA-03-2020-0079
- Pew Research Center (2011). The Future of the Global Muslim Population. Retrieved from: www.pewforum.org/2011/01/27/the-future-of-the-global-muslim-population/ (accessed 24 November 2021).
- Podsakoff, P. M., MacKenzie, S. B., and Podsakoff, N. (2012). Sources of method bias in social science research and recommendations on how to control it. Annual Review of Psychology, 63, pp. 539–569.
- Rahman, N. A. A., Mohammad, M. F., Abdul Rahim, S. and Mohd Noh, H. (2018). Implementing air cargo Halal warehouse: insight from Malaysia. Journal of Islamic Marketing, 9(3), pp. 462–483.
- Ringle, C. M., Wende, S. and Becker, J. M. (2015). "Smart PLS 3." Boenningstedt: SmartPLS GmbH . Retrieved from: www.smartpls.com (accessed 24 November 2021 ).
- Rubbio, I., Bruccoleri, M., Pietrosi, A. and Ragonese, B. (2019). Digital health technology enhances resilient behaviour: evidence from the ward. International Journal of Operations and Production Management, 39(2), pp. 260–293.
- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S. and Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict.
- European Journal of Marketing, 53(11), pp. 2323–2347.

chain management. Journal of Islamic Marketing, 3(3), pp. 217–243.

- SMECORP (2021). SMEs Are the Backbone of the Economy. Retrieved from: www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/sme-statistics (accessed 24 November 2021).
- Sophonthummapharn, K. (2009). The adoption of techno-relationship innovations: a framework for electronic customer relationship management. Marketing Intelligence and Planning, 27(3), pp. 380–412.
- Sun, W., Dedahanov, A. T., Shin, H. Y., and Li, W. P. (2021). Using extended complexity theory to test SMEs' adoption of blockchain-based loan system. PLoS ONE, *16* (2). https://doi.org/10.1371/journal.pone.0245964
- Talib, M. S. A., Rahim, M. A. R. A., Chin, T. A. and Hamid, A. B. A. (2017). Logistics service providers perceptions on Halal logistics certification. International Journal of Logistics Economics and Globalisation, 6(4), pp. 311–331.
- Talib, M. S. A., Pang, L. L. and Ngah, A. H. (2020). The role of government in promoting Halal logistics: a systematic literature review. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-05-2020-0124
- Thiesse, F., Staake, T., Schmitt, P. and Fleisch, E. (2011). The rise of the "next-generation bar code": an international RFID adoption study. Supply Chain Management, 16(5), pp. 328–345. Tieman. M., van der Vorst, J. G. A. J. and Ghazali, M. C. (2012). Principles in Halal supply
- Wong, L. W., Leong, L. Y., Hew, J. J., Tan, G. W. H. and Ooi, K. B. (2020). Time to seize the digital evolution: adoption of blockchain in operations and supply chain management among Malaysian SMEs. International Journal of Information Management, 52, 101997.

Zailani, S., Iranmanesh, M., Hyun, S. S. and Ali, M. H. (2019). Applying the theory of consumption values to explain drivers'willingness to pay for biofuels. Sustainability, 11(3), 668. Zhang, Y., Sun, J., Yang, Z. and Wang, Y. (2020). Critical success factors of green innovation: technology, organization and environment readiness. Journal of Cleaner Production, 264. 121701.

#### Halal port development

Ab Talib, M. S., Ai Chin, T. and Fischer, J. (2017). Linking Halal food certification and business performance. British Food Journal, 119(7), pp. 1606–1618.

Dellyana, D. and Sudrajad, O. Y. (2021). Capturing the velocity of Sharia economy through an Islamic boarding school's (Pesantren) B2B e-commerce. In M. N. Almunawar, M. A. Ali and S. A. Lim (Eds.), Handbook of Research on Innovation and Development of E-Commerce and E-Business in ASEAN. Hershey, PA: IGI Global, pp. 457–484.

Ekwall, D. and Lantz, B. (2019). The moderating role of transport chain location in cargo theft risk. The TQM Journal, 32(5), pp. 1003–1019.

Haleem, A. and Khan, M. I. (2017). Towards successful adoption of halal logistics and its implications for the stakeholders. British Food Journal, 119(7), pp. 1592–1605.

Hong, M., Sun, S., Beg, A. R. and Zhou, Z. (2019). Determinants of Halal purchasing behaviour: evidences from China. Journal of Islamic Marketing, 10(9).

Khalek, A. A., Ismail, S. H. S. and Ibrahim, H. M. (2017). A study on the factors influencing young Muslims' behavioral intention in consuming Halal food in Malaysia. Jurnal Syariah, 23(1), pp. 79–102.

Lin, R. and Tan, J. (2013). Evaluation of port development based on the theory of the driving force and the law of entropy weight. Procedia-Social and Behavioral Sciences, 96, pp. 1774–1783.

Ngah, A. H., Jeevan, J., Salleh, N. H. M. and Lee, T. T. H. (2020). Willingness to pay for Halal transportation cost: the moderating effect of knowledge on the Theory of Planned Behavior. Journal of Environmental Treatment Techniques, 8(1), pp. 13–22.

Noorsiah, A. and Shariff, S. M. (2016). Supply chain management: Sertu cleansing for Halal logistics integrity. Procedia Economics and Finance, 37, pp. 418–425.

Roslan, N. F., Rahman, F. A., Ahmad, F. and Ngadiman, N. I. (2016). Halal logistics certificate in Malaysia: challenges and practices. International Journal of Supply Chain Management, 5(3), pp. 142–146.

Salam Gateway (2018). Report: State of the Global Islamic Economy 2018/19. Retrieved from: www.salaamgateway.com/en/story/report\_state\_of\_the\_global\_islamic\_economy\_201819-SALAAM06092018061914 (accessed 24 November 2021).

Shahara, W. S. S. (2019). Halal Economic: Challenges and Merging Opportunities in Malaysia. Doctoral dissertation. Selangor: Kolej Universiti Islam Antarabangsa Selangor.

Slack, B. (2001). Globalisation in Maritime Transportation: Competition, Uncertainty and Implications for Port Development Strategy. Retrieved from: https://ssrn.com/abstract=272131 (accessed 24 November 2021).

Thomson Reuters (2018). States of the Global Islamic Economy Report 2018/19. Retrieved from: www.slideshare.net/EzzedineGHLAMALLAH/state-of-the-global-islamic-economy-report-201819 (accessed 24 November 2021).

Tieman, M. and Ghazali, M. C. (2014). Halal control activities and assurance activities in Halal food logistics. Procedia – Social and Behavioral Sciences, 121, pp. 44–57.

Ustadi, M. N., Osman, S. and Rasi, R. Z. (2020). Perception of non-Muslim manufacturers towards Halal food supply chain in Malaysia. International Journal of Innovation, Creativity and Change, 10(11).

Zailani, S., Jafarzadeh, S., Iranmanesh, M., Nikbin, D. and Selim, N. I. I. (2018). Halal logistics service quality: conceptual model and empirical evidence. British Food Journal, 120(11), pp. 2599–2614.

Zain, N. F. B. M., Jaafar, H. S. and Ibrahim, I. B. (2018). Modelling Halal supply chain: strategy for industrial parks in Malaysia. Advances in Transportation and Logistics Research, 1, pp. 540–551.

### Halal logistics, supply chain and quality control in Malaysia

- Al-Qaradawi, Y. (2007). The Lawful and the Prohibited in Islam. Kuala Lumpur: Islamic Book Trust.
- Al-Qaradawi, Y. (2013). The Lawful and the Prohibited in Islam: . New York, NY: The Other Press.
- Aziz, A. A. and Zailani, S. (2016). Halal logistics: the role of ports, issues and challenges. In D. S. Mutum, M. M. Butt and M. Rashid, M. (Eds.), Advances in Islamic Finance, Marketing, and Management. Bingley: Emerald Group Publishing Limited, pp. 309–321.
- Baharuddin, K., Kassim, N. A., Nordin, S. K. and Buyong, S. Z. (2015). Understanding the Halal concept and the importance of information on Halal food business needed by potential Malaysian entrepreneurs. International Journal of Academic Research in Business and Social Sciences, 5(2), pp. 170–180.
- Department of Standards Malaysia (2018). Shariah-Based Quality Management Systems Requirements with Guidance (2nd Revision), MS 1900:2018. Kuala Lumpur: Department of Standards Malaysia.
- Dewi, O. A. C. and Trihardani, L. (2017). How Halal transportation system impact the location routing problem. Journal of Engineering and Management in Industrial System, 5(1), pp. 8–19.
- Farag, M. D. E. D. H. (2019). Halal food in Egypt. In Y. R. Al-Teinaz, S. Spear and I. H. A. A. El-Rahim (Eds), The Halal Food Handbook. Hoboken, NJ: John Wiley & Sons, Inc., pp. 369–392.
- Hussein, M. Z., Husny, Z. J. and Shima, N. (2017). Delay as a challenge in prosecuting non-compliance in the Halal Industry. International Journal of Supply Chain Management, 6(1), pp. 141–145.
- Jaafar, H. S., Endut, I. R., Intan, R., Faisol, N. and Omar, E. N. (2011). Innovation in logistics services: Halal logistics. Proceedings of the 16th International Symposium on Logistics (ISL), Berlin, 10–13 July, pp. 844–851.
- Jaafar, H. S., Faisol, N., Rahman, F. A. and Muhammad, A. (2017). Halal logistics versus Halal supply chain: a preliminary insight. In S. Ab Manan, F. Abd Rahman and M. Sahri (Eds.), Contemporary Issues and Development in the Global Halal Industry. Singapore: Springer, pp. 579–588.
- JAKIM . (2015). Manual Procedure for Malaysia Halal Certification (Third Revision 2014). Putrajaya: Jabatan Kemajuan Islam Malaysia (JAKIM).
- JAKIM . (2018). Manual Procedure for Malaysia Halal Certification (Fourth Revision 2018). Putrajaya: Jabatan Kemajuan Islam Malaysia (JAKIM).
- Ngah, A. H., Jeevan, J., Salleh, N. H. M. and Lee, T. T. H. (2020). Willingness to pay for Halal transportation cost: the moderating effect of knowledge on the Theory of Planned Behavior. Journal of Environmental Treatment Techniques, 8(1), pp. 13–22.
- Noorliza, K. (2020). Resource-capability of Halal logistics services, its extent and impact on performance. Journal of Islamic Marketing, 12(4), pp. 813–829.
- Nordin, N. A. N. B. (2018). The Development of Halal Hub Malaysia from Halal Industry Development Corporation (HDC) Perspective: The Qualitative Approach in Refining its Implications and Challenges. Retrieved from:
- https://ir.uitm.edu.my/id/eprint/23377/1/PPb\_NOR%20AMIRA%20NAJWA%20NORDIN%20ACI %20B%2018 5.pdf (accessed 24 November 2021 ).
- Rahman, F. A., Jaafar, H. S., Idha, S. and Muhammad, A. (2016). Ethics of food handlers throughout the supply chain in the Halal food industry: Halal perspective. In S. Ab Manan, F. Abd Rahman and M. Sahri (Eds.), Contemporary Issues and Development in the Global Halal Industry. Singapore: Springer, pp. 483–498.
- Rasi, R. Z., Masrom, N. R., Omar, S. S., Ahmad, M. F. and Sham, R. (2017). Designing Halal supply chain: Malaysia's halal industry scenarios. In MATEC Web of Conferences, Vol. 135. EDP Sciences.
- Tieman, M. (2020). Measuring corporate Halal reputation: a corporate Halal reputation index and research propositions. Journal of Islamic Marketing, 11(3), pp. 591–601.
- Tieman, M., Darun, M. R., Fernando, Y. and Ngah, A. B. (2019). Utilizing blockchain technology to enhance Halal integrity: the perspectives of Halal certification bodies. In Y. Xia and L. J. Zhang (Eds.), Services SERVICES 2019. SERVICES 2019. Lecture Notes in Computer Science, Vol. 11517. Cham, Springer, pp. 119–128.

Ustadi, M. N., Osman, S. and Rasi, R. Z. (2020). Perception of non-Muslim manufacturers towards Halal food supply chain in Malaysia, International Journal of Innovation, Creativity and Change, 10(11).

Zainuddin, A., Ridzwan, S. I. and Ridzwan, S. B. (2020). The role of Halalan-Toyyiban supply chain practices as significant predictors towards excellent customer service management. Advances in Business Research International Journal, 6(1), pp. 1–10.

#### Development of the Halal industry in South Korea

Chaudry, M. M., Jackson, M. A. and Riaz, M. N. (2000). Halal Industry Production Standards. Illinois, IL: J&M Food Products Company.

Department of Standard Malaysia (2010), MS 2400-1;2010 (P); Halalan-Tovviban Assurance Pipeline – Part 1: Management System Requirements for Transportation of Goods and/or Cargo Chain Services. Retrieved from: www.khidi.or.kr (accessed 24 November 2021).

International Halal Integrity Alliance (IHIA), (2010), Halal Standard-Logistics, IHIAS 0100. Kuala Lumpur: IHIA.

JAKIM (2012). The Guidelines for Halal Assurance Management System. Retrieved from: www.halal.gov.mv/v4/images/pdf/halalassurancesystem.pdf (accessed 24 November 2021). JAKIM (2015). Manual Procedure for Malaysia Halal Certification. Retrieved from: www.halal.gov.my/v4/images/pdf/MPPHM2014BI.pdf (accessed 24 November 2021).

Korea Food Research Institute (KFRI) (2017), Halal Logistics Industry In-Depth Research.

Wanjugun: Korea Food Research Institute.

Korea Food Research Institute (KFRI) (2018), Halal Product Production and Distribution Status and Halal Logistics Demand Survey. Wanjugun: Korea Food Research Institute.

Korea Food Research Institute (KFRI) (2019). Survey on Halal and Kosher Food Producers. Wanjugun: Korea Food Research Institute.

Ministry of Agriculture, Food and Rural Affairs (MAFRA) (2015). Halal Food Industry Development and Export Revitalization Measures. Retrieved from

www.mafra.go.kr/bbs/mafra/68/312426/artclView (accessed 24 November 2021).

Ministry of Economy and Finance (MOEF) (2016). Investment Revitalization Measures - Focus on New Industry. Retrieved from:

www.korea.kr/news/pressReleaseView.do?newsId=156140977 (accessed 24 November 2021).

## Halal logistics certification and regulations in Japan

A-Transglobal Logistics (n.d.). Halal Supply Chain Ecosystem. Retrieved from: https://atransglobal.com/V2/halalservices-2/ (accessed 24 November 2021 ).

Bon, M. and Hussain, M. (2010). Halal food and tourism: prospect and challenges. In N. Scott and J. Jafari (Eds.), Tourism in the Muslim World: Bridging Tourism Theory and Practice. Bingley: Emerald Group Publishing, pp. 47–59.

Grandview Research (2021). Halal Logistics Market Size. Retrieved from:

www.randviewreserach.com (accessed 24 November 2021).

Halal in Japan (2020). Halal Market Expansion in Japan. Retrieved from:

www.halalinjapan.com/blog/halal-market-expansion-in-japan (accessed 24 November 2021). Jaafar, H. S., Omar, E. N., Omar, E. N. and Faisol, N. (2013). The concept of Halal logistics – an insight. The 5th International Conference on Transport and Logistics (ICLT 2013). Kyoto: Doshisha University.

Kawabata, T. (2015). "Hararu bijinesu" no bumuka to kadai: masumedia no roncho kara yomitoku. Chuło Kenkyu, 523, pp. 62–74.

Masayuki, N. (2015). A Religious Sociological Study of Halal Boom in Japan: Intercultural Understandings Brought by the Religious Taboo. Osaka: Otemon Gakuin University. Narita International Airport (2021). Global Mega Logistic City. Retrieved from: www.naritaairport.jp (accessed 24 November 2021 ).

Nippon Express (2021). Japan's Economic and Freight Outlook and Short-term Survey of Freight Movement in Japan (Nittsu Soken Tan-kan). Retrieved from:

www.nipponexpress.com/press/report/10-Feb-21.html (accessed 24 November 2021).

Nittsu Research Institute and Consulting, Inc. (NRIC) (2020a). Japan's Economic and Freight Outlook. Retrieved from: www.nittsu-soken.co.jp/wp-content/uploads/2020/12/report-20201225.pdf (accessed 24 November 2021).

Nittsu Research Institute and Consulting, Inc. (NRIC) (2020b). Short-term Survey of Freight Movement in Japan (Nittsu Soken Tan-kan). Retrieved from: www.nittsu-soken.co.jp/wp-content/uploads/2021/01/tankan2020-12.pdf (accessed 24 November 2021).

United Nations (UN) (2021). Population by Religion, Sex and Urban/Rural Residence. Retrieve from http://data.un.org (accessed 24 November 2021 ).

Sasaki, Y. (2014). Hararu Maketo Saizensen. Tokyo: Jitsugyounonihonsha.

Sumitomo Corporation (2017). Halal Certification of Domestically-Produced Food Products and Export Support. Retrieved from:

www.sumitomocorp.com/en/easia/news/release/2017/group/20170203 (accessed 24 November 2021 ).

Wunsch, N-G. (2020). Global Halal market – statistics and facts. Statistica. Retrieved from: https://bit.ly/3qWLcV1 (accessed 24 November 2021 ).

World Economic Forum (WEF) (2016). Digital Transformation Industries: Logistics Industry. Retrieve from: https://bit.lv/3gWLcV1 (accessed 24 November 2021 ).

Yasuda, S. (2014). Nihon ni Okeru Musurimu Kankokyaku – Kanko ni okeru hararu ninshoseido no juyo o meguru genjo to kadai. Chuto Kenkyu, pp. 49–55.

Yusen Logistics (2015). Yusen Logistics Group Certified Halal-compliant in Malaysia. Retrieved from: www.yusen-logistics.com/en/resources/press-and-media/1815 (accessed 24 November 2021).

### Halal market opportunities and logistics in Spain

Algetransit (2020). About Us. Retrieved from: www.algetransit.es/ (accessed 24 November 2021).

Destatis (2020). Home. Retrieved from: www.destatis.de/ (accessed 24 November 2021).

Flanders Investment & Trade (2019). About Us. Retrieved from:

www.flandersinvestmentandtrade.com/ (accessed 24 November 2021 ).

FoodNavigator (2020). News. Retrieved from: www.foodnavigator.com/ (accessed November 2021).

Hackett, C., Stonawski, M., Potančoková, M., Connor, P., Shi, A. F., Kramer, S. and Marshall, J. (2019). Projections of Europe's growing Muslim population under three migration scenarios, Journal of Religion and Demography, 6(1), pp. 87–122.

Halal Institute (2020). About Us. Retrieved from: www.institutohalal.com (accessed 24 November 2021).

Halal Institute (2021). Certification. Retrieved from:

www.institutohalal.com/acreditaciones/(accessed 24 November 2021 ).

Halal International Tourism (2019). Home. Retrieved from: www.halalinternationaltourism.org/ (accessed 24 November 2021).

Han, H., Al-Ansi, A., Koseoglu, M. A., Lin, P. M. C., Park, J., Yu, J. and Kim, W. (2019). Halal tourism: travel motivators and customer retention. Journal of Travel & Tourism Marketing, 36(9), pp. 1012–1024.

International Council of Certification (2020). Our certificates. Retrieved from: https://icc-iso.org/ (accessed 24 November 2021 ).

International Trade Centre (2015). Home. Retrieved from: www.intracen.org/ (accessed 24 November 2021 ).

Jamal, A. (2003). Marketing in a multicultural world: the interplay of marketing, ethnicity and consumption. European Journal of Marketing, 37(11/12), pp. 1599–1620.

Junaidi, J. (2020). Halal-friendly tourism and factors influencing Halal tourism. Management Science Letters, 10(8), pp. 1755–1762.

MasterCard (2019). Global Muslim Travel Index 2019. Retrieved from: www.crescentrating.com/reports/global-muslim-travel-index-2019.html (accessed 24 November 2021).

National Statistics Institute (2007). Tourism Expenditure Survey: Egatur. Madrid: INE. Office for National Statistics (ONS) (2020). Population of the UK by Country of Birth and Nationality. Retrieved from: https://bit.ly/2SI5ZyP (accessed 24 November 2021). Pew Research Center (2017). Religion. Retrieved from: www.pewforum.org/ (accessed 24

November 2021). Rehman, A. and Shabbir, M. S. (2010). The relationship between religiosity and new product adoption. Journal of Islamic Marketing 1(1), pp. 63–69.

Union of Islamic Communities of Spain (UCIDE) (2020). Informes Anuales, el Islam en España, Observatorio Andalusí. Madrid: UCIDE.

United Nations Educational, Scientific and Cultural Organization (UNESCO) (2021). Spain. Retrieved from: https://whc.unesco.org/en/statesparties/es (accessed 24 November 2021). World Travel and Tourism Council (WTTC) (2019). The Tourism Sector Is Growing Again. London: WTTC.

# Halal logistics certification

Aziz, Y. A. and Chok, N. V. (2013). The role of Halal awareness, Halal certification, and marketing components in determining Halal Purchase intention among non-Muslims in Malaysia: a structural equation modeling approach. Journal of International Food & Agribusiness Marketing, 25(1), pp. 1–23.

Fuseini, A., Hadley, P. and Knowles, T. (2021). Halal food marketing: an evaluation of UK Halal standards, Journal of Islamic Marketing, 12(5), pp. 977–991.

Khairuddin, M. M., Rahman, N. A. A., Mohammad, M. F., Majid, Z. A. and Ahmad, M. F. (2018). Regulator perspective on Halal air cargo warehouse compliance, International Journal of Supply Chain Management, 7(3), pp. 202–207.

Liow, R. J. (2012). Marketing Halal, Creating New Economy, New Wealth. Petaling Jaya: MPH Group Publishing.

Majid, Z. A., Shamsudin, M. F., Rahman, N. A. A., Jaafar, H. S., Mohammad, M. F. and Khairuddin, M. M. (2019). Innovation in logistics from 1PL toward 10PL: counting the numbers. Advances in Transportation and Logistics Research, 2, pp. 440–447.

Neiburg, O. (2013). Catering to the Middle East: Halal certification and alcohol-free labeling with Mondelez. Retrieved from: www.confectionerynews.com/Article/2013/01/28/Halal-chocolate-and-alcoholfree-confectionery-with-Mondelez (accessed 24 November 2021).

Neo, P. (2019). Halal Food Leaders: Malaysia, Australia and Pakistan Retain Top APAC Spots in Global Islamic Economy Report's Top 10 List. Retrieved from: www.foodnavigator-asia.com/Article/2019/12/18/Halal-food-leaders-Malaysia-Australia-and-Pakistan-retain-top-APAC-spots-in-Global-Islamic-Economy-report-s-Top-10-list (accessed 24 November 2021). Perdana, F. F. P. and Altunisik, R. (2017). A study on the saliency of the Halal certification towards food products in Turkey. Journal of Halal Life Style, 1(1).

Rahman, N. A. A., Mohammad, M. F., Rahim, S. A. and Noh, H. M. (2018). Implementing air cargo Halal warehouse: insight from Malaysia. Journal of Islamic Marketing, 9(3), pp. 462–483. Rahman, N. A. A., Majid, Z. A., Mohammad, M. F., Ahmad, M. F., Rahim, S. A. and Mokhtar, A. Z. (2020a). The development of Halal logistics standards in South-East Asia: Halal supply chain standards (MS2400) as a principal reference in Halal logistics and supply chain management in Southeast Asia. In N. A. A. Rahman, A. Hassan and M. F. Mohammad (Eds.), Halal Logistics and Supply Chain in South East Asia: Development and Challenges. Singapore: Routledge, pp. 149–160.

Rahman, N. A. A., Rahim, S. A., Ahmad, M. F. and Hafizuddin-Syah, B. A. M. (2020b). Exploring COVID-19 pandemic: its impact to global aviation industry and the key strategy. International Journal of Advanced Science and Technology, 29(6), pp. 1829–1836.

Roslan, N. F., Rahman, F. A., Ahmad, F. and Ngadiman, N. I. (2016). Halal logistics certificate in Malaysia: challenges and practices. International Journal of Supply Chain Management, 5(3), pp. 142–146.

Sapry, H. R. M., Takiudin, N. S. M. and Ahmad, A. R. (2020). Challenges faced by non-Muslim transporter in adopting Halal logistics certificate. Journal of Critical Reviews, 7(8), pp. 141–146.

Talib, M. S. A., Rubin, L. and Zhengyi, V. K. (2013). Qualitative research on critical issues in Halal logistics. Journal of Emerging Economies and Islamic Research, 1(2), pp. 1–20.

Talib, M. S. A., Hamid, A. B. A., Zulfakar, M. H. and Chin, T. A. (2015). Barriers to halal logistics operation: views from Malaysian logistics experts. International Journal of Logistics Systems and Management, 22(2), pp. 193–209.

Talib, M. S. A., Pang, L. L. and Ngah, A. H. (2020). The role of government in promoting Halal logistics: a systematic literature review. Journal of Islamic Marketing. https://doi.org/10.1108/JIMA-05-2020-0124

Tieman, M. (2020). Halal Business Management: A Guide to Achieving Halal Excellence. New York: Routledge.

Wilson, J. A. J. (2018). Halal Branding. Swansea: Claritas Books.

Zailani, S., Iranmanesh, M., Aziz, A. A. and Kanapathy, K. (2017). Halal logistics opportunities and challenges. Journal of Islamic Marketing, 8(1), pp. 127–139.

#### Halal logistics and supply chain management research

Craighead, D. J. and Ketchen, C. W. (2021). Toward a theory of supply chain entrepreneurial embeddedness in disrupted and normal states. Journal of Supply Chain Management, 57(1), pp. 50–57.

Di Tella, M., Romeo, A., Benfante, A. and Castelli, L. (2020). Mental health of healthcare workers during the COVID-19 pandemic in Italy. Journal of Evaluation in Clinical Practice, 26(6), pp. 1583–1587.

Espitia, A., Rocha, N. and Ruta, M. (2020). COVID-19 and Food Protectionism: The Impact of the Pandemic and Export Restrictions on World Food Markets. Washington, DC: World Bank Group.

Fetzer, T., Hensel, L., Hermle, J. and Roth, C. (2020). Coronavirus perceptions and economic anxiety. The Review of Economics and Statistics, pp. 1–60.

Fidrmuc, J. and Korhonen, I. (2010). The impact of the global financial crisis on business cycles in Asian emerging economies. Journal of Asian Economics, 21(3), pp. 293–303.

Fonseca, L. and Azevedo A. (2020). COVID- 19: outcomes for global supply chains. Management & Marketing: Challenges for the Knowledge Society, 15, pp. 424–438.

Jaiyeoba, H. B. (2021). The spillover effects of COVID-19 on Halal industry: an overview and way forward. Halalsphere, 1(1), pp. 72–82.

Kanapathipillai, K. (2020). The impact of the silent enemy (COVID-19 pandemic) on the marketing efforts undertaken by the automotive industries in Malaysia. European Journal of Management and Marketing Studies, 5(4), pp. 1–21.

Khairuddin, M. M. and Rahman, N. A. A. (2020). Successful halal compliance factors for air cargo warehouse: warehouse operator perspective. In N. A. A. Rahman, A. Hassan and M. F. Mohammad (Eds.), Halal Logistics and Supply Chain in South East Asia: Development and Challenges. Singapore: Routledge, pp. 187–203.

Khairuddin, M. M., Rahman, N. A. A., Mohammad, M. F., Majid, Z. A. and Ahmad, M. F. (2018). Regulator perspective on Halal air cargo warehouse compliance. International Journal of Supply Chain Management, 7(3), pp. 202–207.

Kim, K. (2021). Impacts of COVID-19 on transportation: summary and synthesis of interdisciplinary research. Transportation Research Interdisciplinary Perspective. doi: 10.1016/j.trip.2021.100305

Laila, N., Rusydiana, A. S., and Assalafiyah, A. (2017). The impact of COVID-19 on the Halal, economy: a bibliometric approach. Library Philosophy and Practice, Summer, 5417.

Miani, P., Kille, T., Lee, S-Y., Zhang, Y. and Bates, P. R. (2021). The impact of the COVID-19 pandemic on current tertiary aviation education and future careers: students' perspective. Journal of Air Transport Management, 94, 102081.

Musson, A. and Rousselière, D. (2019). Identifying the impact of crisis on cooperative capital constraint: a short note on French craftsmen cooperatives. Finance Research Letters, 35, 101290.

NST (2018). Fostering a True Halal Economy: Global Integration and Ethical Practice. Retrieved from: www.nst.com.my/opinion/columnists/2018/04/353789/fostering-true-halal-economy-global-integration-and-ethical (accessed 24 November 2021).

Ozili, P. and Arun, T. (2020). Spillover of COVID-19: impact on the global economy. SSRN Electronic Journal, https://doi.org/10.2139/ssrn.3562570

Rahman, N. A. A., Mohammad, M. F., Rahim, S. A. and Noh, H. M. (2018). Implementing air cargo halal warehouse: insight from Malaysia. Journal of Islamic Marketing, 9(3), pp. 462–483. Rahman, N. A. A., Majid, Z. A., Mohammad, M. F., Ahmad, M. F., Rahim, S. A. and Mokhtar, A. Z. (2020a). The development of Halal logistics standards in South-East Asia: Halal supply chain standards (MS2400) as a principal reference in Halal logistics and supply chain management in Southeast Asia. In N. A. A. Rahman, A. Hassan and M. F. Mohammad (Eds.). Halal Logistics and Supply Chain in South East Asia: Development and Challenges. Singapore: Routledge, pp. 149–160.

Rahman, N. A. A., Rahim, S. A., Ahmad, M. F. and Hafizuddin-Syah, B. A. M. (2020b). Exploring COVID-19 Pandemic: its impact to global aviation industry and the key strategy. International Journal of Advanced Science and Technology, 29(6), pp. 1829–1836. Schild, L., Ling, C., Blackburn, J., Stringhini, G., Zhang, Y. and Zannettou, S. (2020). Go Eat a Bat, Chang! An Early Look on the Emergence of Sinophobic Behavior on Web Communities in the Face of COVID-19. Retrieved from: https://arxiv.org/abs/2004.04046 (accessed 24 November 2021).

Siche, R. (2020). What is the impact of COVID-19 disease on agriculture? Scientia Agropecuaria, 11(1), pp. 3–6.

Uğur, N. G. and Akbiyik, A. (2020). Impacts of COVID-19 on global tourism industry: a cross-regional comparison. Tourism Management Perspectives, 36, 100744.

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### Halal integrity in the supply chain

The impacts of the fake Halal meat cartel scandal towards Halal integrity

By Anis Najiha Ahmad, Siti Balqis Zulfigar, Baiduri Zaiyyanna Mohd Farudz, Nur Najihah binti Zulkifli

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ABSTRACT

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