


MALAYSIA SMALL AND MEDIUM SIZE BUSINESSES IN IMPLEMENTING ENVIRONMENT MANAGEMENT PRACTICES

Saiful Azmir Kasdi^A, Irwan Ibrahim^B, Abdul Rahman S. Senathirajah^C, Nor Shahrul Nizam Muhamad Nor^D



ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 31 March 2023</p> <p>Accepted 28 June 2023</p>	<p>Purpose: It is critical to understand the drivers behind environmental management practises, or EMPs, as they may be measured as important variables in fixing environmental challenges for businesses. Therefore, the goal of the research is to investigate the variables applying their establishment's environmental management techniques.</p>
<p>Keywords:</p> <p>Environment Management Practices; Small and Medium Size Businesses; Logistics.</p> <div data-bbox="172 1021 480 1267" style="text-align: center;">  </div>	<p>Theoretical framework: The environment awareness and attitudes factor in Gadenne's (2009) Model of External Influences on Environmental Awareness and Practices (MEAP) is suitable variables to represent the research. Based on the Gadenne's MEAP construct; general awareness, cost benefits awareness, and environmental attitudes; these are the characteristic of an individuals to show the level of their concerns and responsiveness towards the environment.</p> <p>Design/methodology/approach: The study is to determine the factors adopting environment management practices in Malaysia logistics industry. Variables introduced are from systematic literature review of related articles and journals. The papers were analysed from descriptive, bibliographic, methodologic, results and citation characteristics.</p> <p>Findings: According to the findings, it is crucial that small and medium-sized businesses adopt environmental activities such as those pertaining to stakeholder force, environmental legislation, industrial sectors, company sizes, manager traits, human resources, global competition, organisational structures, corporate operation activity, green innovation characteristics, and position in the value stream, strategic attitude, and geographical position.</p> <p>Research, Practical & Social implications: This study is necessary to create a new framework for promoting EMP adoption behaviour among logistics business owner. This study connect technology acceptance and innovation adoption research with environment awareness behaviour in alleviating the impact of technology adoption among business owner.</p> <p>Originality/value: Within the field of technology acceptance and innovation adoption, this study will make a substantial contribution to the corpus of knowledge as it advances the integrative approach to innovation adoption behaviour.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i7.930</p>

^A Lecturer. Department of Operations Management, Faculty of Business and Management, Universiti Teknologi Mara Puncak Alam Campus. Malaysia. E-mail: saifulazmir@uitm.edu.my

Orcid: <https://orcid.org/0000-0001-5971-2721>

^B Lecturer. Department of Corporate Communications, Malaysia Institute of Transport (MITRANS), Universiti Teknologi Mara Puncak Alam Campus. Malaysia. E-mail: irwan623@uitm.edu.my

Orcid: <https://orcid.org/0000-0002-0887-2394>

^C Lecturer. Department of Business and Communication, Faculty of Business and Communications, INTI International University. Malaysia. E-mail: arahman.senathirajah@newinti.edu.my

Orcid: <https://orcid.org/0000-0001-6044-9051>

^D Lecturer. Department of Entrepreneurship, Faculty of Business and Management, Universiti Teknologi Mara Puncak Alam Campus. Malaysia. E-mail: shahrul@uitm.edu.my Orcid: <https://orcid.org/0000-0001-6908-9451>

PEQUENAS E MÉDIAS EMPRESAS DA MALÁSIA NA IMPLEMENTAÇÃO DE PRÁTICAS DE GESTÃO AMBIENTAL

RESUMO

Objetivo: É fundamental entender os motivadores por trás das práticas de gestão ambiental, ou PGAs, pois elas podem ser medidas como variáveis importantes na solução de desafios ambientais para as empresas. Portanto, o objetivo da pesquisa é investigar as variáveis que aplicam as técnicas de gestão ambiental de seus estabelecimentos.

Estrutura teórica: O fator de conscientização e atitudes ambientais no Modelo de Influências Externas sobre Conscientização e Práticas Ambientais (MEAP) de Gadenne (2009) são variáveis adequadas para representar a pesquisa. Com base na construção do MEAP de Gadenne, a conscientização geral, a conscientização sobre os custos e benefícios e as atitudes ambientais são características de um indivíduo que demonstram o nível de suas preocupações e a capacidade de resposta em relação ao meio ambiente.

Projeto/metodologia/abordagem: O estudo visa determinar os fatores que adotam práticas de gestão ambiental no setor de logística da Malásia. As variáveis introduzidas são provenientes de uma revisão sistemática da literatura de artigos e periódicos relacionados. Os artigos foram analisados com base em características descritivas, bibliográficas, metodológicas, de resultados e de citação.

Conclusões: De acordo com os resultados, é fundamental que as pequenas e médias empresas adotem atividades ambientais, como as relacionadas à força das partes interessadas, à legislação ambiental, aos setores industriais, ao tamanho das empresas, às características dos gerentes, aos recursos humanos, à concorrência global, às estruturas organizacionais, à atividade de operação corporativa, às características de inovação verde e à posição no fluxo de valor, à atitude estratégica e à posição geográfica.

Implicações sociais, práticas e de pesquisa: Este estudo é necessário para criar uma nova estrutura para promover o comportamento de adoção de PEM entre os proprietários de empresas de logística. Este estudo conecta a aceitação de tecnologia e a pesquisa de adoção de inovação com o comportamento de conscientização ambiental para aliviar o impacto da adoção de tecnologia entre os proprietários de empresas.

Originalidade/valor: Dentro do campo de aceitação de tecnologia e adoção de inovação, este estudo fará uma contribuição substancial para o corpus de conhecimento, pois avança a abordagem integrativa do comportamento de adoção de inovação.

Palavra-chave: Práticas de Gestão Ambiental, Pequenas e Médias Empresas, Logística.

LAS PEQUEÑAS Y MEDIANAS EMPRESAS DE MALASIA EN LA APLICACIÓN DE PRÁCTICAS DE GESTIÓN MEDIOAMBIENTAL

RESUMEN

Objetivo: Resulta crucial comprender las motivaciones que subyacen a las prácticas de gestión medioambiental, o PGA, ya que pueden medirse como variables importantes para resolver los retos medioambientales de las empresas. Por lo tanto, el objetivo de la investigación es investigar las variables que aplican las técnicas de gestión medioambiental de sus establecimientos.

Marco teórico: El factor de conciencia y actitudes ambientales del Modelo de Influencias Externas sobre la Conciencia y las Prácticas Ambientales (MEAP) de Gadenne (2009) son variables adecuadas para representar la investigación. Basándose en el constructo del MEAP de Gadenne, la conciencia general, la conciencia de los costes y beneficios y las actitudes medioambientales son características de un individuo que demuestran su nivel de preocupación y receptividad hacia el medio ambiente.

Diseño/metodología/enfoque: El estudio pretende determinar los factores de adopción de prácticas de gestión medioambiental en el sector logístico malasio. Las variables introducidas proceden de una revisión bibliográfica sistemática de artículos y revistas relacionados. Los artículos se analizaron en función de características descriptivas, bibliográficas, metodológicas, de resultados y de citas.

Conclusiones: Según los resultados, es esencial que las pequeñas y medianas empresas adopten actividades medioambientales, como las relacionadas con la fuerza de las partes interesadas, la legislación medioambiental, los sectores industriales, el tamaño de la empresa, las características de los directivos, los recursos humanos, la competencia global, las estructuras organizativas, la actividad de las operaciones corporativas, las características y la posición de la innovación ecológica en la cadena de valor, la actitud estratégica y la posición geográfica.

Repercusiones sociales, prácticas y para la investigación: Este estudio es necesario para crear un nuevo marco que promueva el comportamiento de adopción de la AEM entre los propietarios de empresas logísticas. Este estudio conecta la investigación sobre la aceptación de la tecnología y la adopción de innovaciones con el comportamiento de concienciación medioambiental para paliar el impacto de la adopción de tecnología entre los propietarios de empresas.

Originalidad/valor: Dentro del campo de la aceptación de la tecnología y la adopción de innovaciones, este estudio supondrá una contribución sustancial al corpus de conocimientos, ya que avanza en el enfoque integrador del comportamiento de adopción de innovaciones.

Palabra clave: Prácticas de Gestión Medioambiental, Pequeñas y Medianas Empresas, Logística.

INTRODUCTION

Implementing environmental management practises, or EMP, can be researched as one of the key parts of addressing businesses' environmental issues; however, it is especially vital to research the key forces behind environmental management (Ibrahim & Jaafar, 2016a, 2016b; Ibrahim, 2015). Amer, Ismail, Jani, Othman, & Ibrahim (2022a); Ibrahim & Othman (2020); Murphy & Poist (2003) suggested several determinant and barriers to promote environmental regulations for the logistics sector, but they haven't discussed how EMP adoption is influenced by other issues. Lin & Ho, (2011) analysed the influences of organizational, technological, and environmental factors on the implementing of environmental practices on logistics industry in China. However, there several research on manufacturing firms that they should engage in environmental activities including environmental regulation, internationalization, strategic attitude, stakeholder pressure, company size, industrial sector, corporate operation activity, mangers' characteristics, human resources, organizational structure, environmental technology characteristics, and position in the value chain, and geographical location. Since not all industrial sectors are exposed to the same forms of pressure or to the same level, there is a definite need for research to uncover more potential elements that will influence the adoption of environmental management methods for the logistics business (Baqleh & Alateeq, 2023). Moreover environmental management practices adoption is to increase efficiency and synergy among business partners and their lead organisations by improving environmental performance, reducing waste, and saving money (Lin, 2014). The development of an industry-specific environmental performance measurement model based on the characteristics of the industry is also necessary, in addition to the fact that a standardised green performance measurement model is useful for comparing the environmental performance of businesses in various industrial sectors (Akmar et al., 2022; Kasdi et al., 2020; Rahman et al., 2020). There is a need to create a model for measuring environmental performance in the logistics sector. (Lin, 2014). Therefore, there is a need for additional research to examine the factors that influence the logistics industry's adoption of sustainability practices.

BACKGROUND

Ibrahim (2015) believes that environmental management is a key strategy for addressing national ecological issues and provides a theoretically significant framework for understanding environmental change. A clear and undisputed definition of environmental management may be challenging to answer since environmental challenges might involve both technical and social components. Idris & Ibrahim (2022c) Identify that environmental management is a multidisciplinary phenomenon that should be studied from a technical, managerial, and social standpoint. It is a complex, dynamic, interacting process with many inconsistencies. Additionally, environmental management takes into account regional and global differences and synergies as well as various viewpoints from governments, businesses, the public, and many other more specialised stakeholders (Idris & Ibrahim, 2022b).

Since implementing environmental management techniques can be seen as a key strategy for addressing organisations' environmental issues, it is crucial to research the dynamics that drive environmental management. Idris & Ibrahim (2022a) offered a number of motivators and barriers to establishing environmental regulations for the logistics sector; however, the study did not explain how the factors influenced the adoption of environmental management techniques. Lin & Ho (2011) examined how the organisational, technological, and environmental influences affected the adoption of environmental practises in the Chinese logistics sector. Although there are many reasons why manufacturing companies should engage in environmental activities, some of them include stakeholder pressure, environmental regulation, industrial sector, company size, manager characteristics, human resources, global competition, organisational structure, corporate operation activity, environmental and sustainable characteristics, position in the value chain, strategic attitude, and geographic location (Amer, Ismail, Jani, Othman, & Ibrahim, 2022b; Feisal, Amer, Jani, & Othman, 2022; Ibrahim, Feisal, Feisal, Amer, & Jani, 2019; Ismail, Amer, Jani, Othman, & Ibrahim, 2022). Clearly, while keeping in mind that not all industrial sectors are exposed to the same forms of pressure or to the same amount, there is a need to investigate more potential aspects that will influence the adoption of environmental management methods for the logistics business.

LITERATURE REVIEW

Malaysia Logistic Industry Outlook

Following Porter (1985) the value chain framework's "inbound logistics" and "outbound logistics" categories, respectively, are specific operations covered by value chain analysis.

Activities including receiving, storing, and inventory control of inputs fall under the category of inbound logistics. The processes required to send the finished product to the customers, including as distribution management, transportation, and warehousing, are referred to as outbound logistics. Due to time and data limitations, this article mainly concentrates on outbound logistics, despite the fact that the liberalisation of trade in services will have a significant impact on both "inbound logistics" and "outbound logistics" (Llanto & Navarro, 2012).

According to Marshall Cavendish report of 2013 (Cavendish, 2015), for 2013, the Malaysian logistics industry is looking at a year-on year growth of 9.5% to RM139.74 billion, compared with RM127.66 billion recorded last year. The report added that Malaysia's external trade is expected to increase by 6.5% to RM1.42 trillion in 2013, from RM1.34 trillion last year and meaning that it will help booth growth of the transportation and logistics industry, especially for import-export forwarding, air freight and ocean freight-related shipping business. The Malaysia government's continues support for logistic-related development and the country's strategic-geographical location would also propel growth in the industry.

Based on the report (Cavendish, 2015), Malaysia's total cargo volume including air, rail and sea, the volume will moderately grow at 5% to reach 530.67 million tonnes in 2013, up from 505.26 million tonnes in 2012. Total cargo volume by sea is estimated to increase 5% to 523.3 million tonnes this year, compared to 498.2 million tonnes handled last year. In 2012, containerized cargo made up more than 70% of total cargo throughput by sea in the country, of which 47% was handled by Port Klang, Selangor, Malaysia.

On a longer term, the Malaysian logistics industry is projected to expand at double digit compound annual growth rate (CAGR) Of 10.2% to RM207.4 billiom in 2017.

Malaysia Third Party Logistics (3pl)

Many industrial organisations now outsource their logistics operations to third party logistics (3PL) providers to concentrate on their core competencies as a result of the globalisation trend. A third-party logistics provider (3PL) administers, supervises, and provides logistics services on behalf of the shipper (Cheong Lee Fong, 2005). It also refers to the contracting out of some or all of the company's logistical operations to outside businesses. The primary justification for outsourcing is that businesses must concentrate their efforts on core tasks essential to their survival in the fiercely competitive global market while leaving the rest to specialised companies. Salleh, Ph, & Arabia, 2009; Sarkis, Helms, & Hervani (2010). The

expansion of 3PL services may also have been influenced by the fact that organisations must compete in a variety of industries that are logistically unique due to varying consumer needs (Cavendish, 2015; Cheong Lee Fong, 2005; Salleh et al., 2009). The investments made in specialised assets, technologies, and organisational approaches have made specialist integrated service providers of logistics services more effective (Salleh et al., 2009).

According to Marshall Cavendish report 2015, an enterprise known as a third party logistics provider (3PL) offers its clients outsourced logistics services for some or all of their supply chain management needs (Cavendish, 2015). An average 3PL provider focuses on providing integrated operating, warehouse, and transportation services that can be scaled and modified to clients' needs based on the demand and delivery service requirements for their goods or materials. Freight forwarders, courier services, and other businesses that provide outsourced logistics and transportation services are all included in the 3PL sector (Cavendish, 2015).

Malaysian Freight Forwarders

Ocean freight forwarders and air forwarders are two different types of freight forwarders that are specialised businesses in the logistics chain. As the shipper's representative, freight forwarders offer clearing and forwarding services in the early stages of the process. They offer services such freight consolidation, road hauling, and customs processing at the intermediate level. As multimodal transport companies, they can also offer door-to-door services at the very end (Llanto & Navarro, 2012; Tambovcevs & Tambovceva, 2010). Depending on company size, staffing levels, and number of branches, freight forwarders can provide the full spectrum of services or just a select few. In addition to handling imports and exports, many freight forwarders also serve as customs brokers. They can provide traders with the following particular services, (Davies, 1986; Llanto & Navarro, 2012; Markides & Holweg, 2006; Robert, Joe, & Gregory, 2003):

- Guidance on the most cost-effective routes and shipping costs
- Organizing the packing and labelling of the goods to be exported with the exporter
- Consolidating shipments from various exporters
- Handling customs clearance abroad
- Arranging insurance coverage for the shipping
- Preparing export supporting documents

- Translating communications in various languages
- Examining and providing guidance on ability to abide with the letter of credit.

FEDERATIONS OF MALAYSIAN FREIGHT FORWARDERS (FMFF)

Federations of Malaysian Freight Forwarders (FMFF) was registered as a National Association in September 1987 to represent freight forwarders in the logistics industry. The FMFF was approved and acknowledged by the Ministry of Transport as a national association in 2000 to represent the logistics sector. The FMFF currently has 1091 members nationwide, with several candidates awaiting approval. According to the State Association, FMFF membership is as follows:

- SFFLA - 589 company members.
- JOFFA - 241 company members.
- PFFA - 115 company members.
- KKFAA - 52 company members.
- SFAA - 84 company members.
- LFFA - 10 company members.

FMFF is a member of the Malaysian National Shippers Council, Asean Freight Forwarders Association, Federation of Asia Pacific Air Cargo Associations, and International Federation of Freight Forwarders Association . FMFF participates in a number of government forums, including dialogues with the Ministries of International Trade and Industry (MITI) and of Finance (MOF), the Customs Liaison Meeting, the MOT, the MLC, and the Trade and Facilitation Action Council (MITI), and it offers viewpoints from the business community for policymakers to take into account. The importance of FMFF members in Malaysia's 3PL industries (Llanto & Navarro, 2012), this research chooses all the members as a the correspondent for the survey.

Consumer Environmental Awareness and Individual Attitude

Multiple studies, including those from China, the United States, and Europe, have focused on consumer awareness of and attitudes regarding the adoption of environmental management methods (Amer, Siti, Ibrahim, & Aziz, 2019) and discovered that consumers' green purchasing patterns are positively correlated with their personal views toward the protection and improvement of the environment, their perceptions of fair trade, local production, and the availability of knowledge relevant to taking action. While Abbasi (2016)

highlights that one of the elements influencing customers' inclination to adopt green electricity is their favourable opinions toward utilising it. Plus, Amer, Kamal, Noor, Ibrahim, & Bahaman, (2010) investigate, consumers' cultural backgrounds and beliefs, as well as their awareness of and impact on the environment, play a considerable role in determining people's attitudes about the environment. Moreover Ibrahim, Pandiyan, Sundram, & Normalina (2019) conclude that policy makers must develop strategies that allow the formation of cultural and social capital within communities rather than attempting to make up for the loss of economic capital in order for environmental programmes to affect people's environmental attitudes to succeed. With this findings shows that individuals awareness and attitudes towards environment issues are important in implementing any environment performance tools in a company, and this includes environment management practices.

An individual with high awareness and positive attitudes on environment will involve in environmental sustainability activities such as waste reduction, green consumer behaviour, recycling, travel mode choice, energy saving, car-use, green purchases, energy conservation, travel behaviour, walking, bus-use, public transportation, cycling, ecological behaviour and morality, water conservation, pro-environmental mobility behaviour, organic food consumption, green consumerism, ethical behaviour, environment-friendly purchasing behaviour, ecological consumption, green consumption, ecological behaviour, pro-environmental behaviour, conservationism, environment-friendly behaviour, environment protection behaviour, ecological behaviour and personal norms, and pro-environmental attitudes are indicators of environmental behaviour and sustainability (Irwan & Ibrahim, 2021). All of these individuals preferring to choose greener lifestyle because they believes that the environmental problems are the consequences of their daily behaviour. Several research have also reported that having an environmental friendly attitude will lead to green behaviours and practices (Ibrahim, Pandiyan, et al., 2019; Irwan & Ibrahim, 2021).

Consumers have access to environmental sustainability activity and lifestyle information through electronic media, thus that they can choose suitable environmental friendly program or activities. Conversely, consumers do not use the information and bringing it to their lifestyle everyday (Jamil, 2020; Johan, Ibrahim, Jamil, Tarli, & Amer, 2019; Othman, Ibrahim, Amer, Jamil, & Masrom, 2022); additionally, customers with environmentally conscious attitudes search for more than just a product's green attributes before making a commitment to it in the acceptance of green technologies and goods. Consumers still adhere to their current lifestyles because they expect a number of benefits from technologies and products, including

decreased pricing and convenience (D. L. Gadenne, Kennedy, & McKeiver, 2009) According to Australian study, Australians have reduced their electricity consumption by 1.2% over the past year, which has resulted in cheaper power prices. The recycling of waste has seen an increase in green initiatives since 2006. For instance, Perth boosts its recycling to 40%, whereas Canberra, Adelaide, and Perth all increase recycling to 70% of their garbage.

Government support plays an important role in consumer awareness in environment sustainability. When it comes to government policies pertaining to environmental issues, consumers frequently advise economic incentives through discounts, grants, subsidies, and other programmes as motivators for investing in energy efficient products and services. (Lin & Ho, 2011). Consumers may be aware of the financial incentives provided by their state governments or the possibility of receiving assistance with grant applications. Alam, Ehsan, Muzzamil, & Mahmuddin (2000) noted that more needs to be done by the government to save the environment. Authorities like Environmental Protection Authorities (EPAs) typically serve as regulatory authorities for the numerous environmental laws and policies pertaining to solid waste, hazardous waste, climate change, water pollution, and other issues. The way that government environmental policies are carried out is also influenced by non-governmental groups, green movements, and grassroots activists (Ibrahim, 2015).

In recent environment situation, Ibrahim & Jaafar (2021; Ibrahim et al., (2020) reveals that through increased media coverage, official pronouncements, policies, and agreements, consumers are becoming more and more conscious of the value of preserving and enhancing the environment. The initial expense, however, is frequently cited as one of the biggest obstacles to consumer adoption of green technologies and practises. Financial incentives have been provided in certain nations to offset the upfront costs of adopting energy-efficient projects, such as the use of solar power and home insulation, and these incentives have helped to spur some consumer interest in the technology. Tinkov et al (2023) and Sharma & Gadenne (2014) found out that some consumers have stated that they would prefer to see the government play a more active role by enacting regulations that include mandatory standards for product performance, reliability, and durability, as well as tighter regulation to stop opportunistic businesses from performing subpar installation work. Additionally, prior studies have demonstrated that some consumers support the idea of imposing taxes, especially for polluters who are contributing to environmental issues (D. Gadenne & Ladewig, 2007); and prosecution of financial penalties for the use of inefficient technologies (Awa, Emecheta, & Ojiabo Ukoha, 2012). However, the implementation of such policies might be exceedingly difficult due to

potential opposition from businesses and consumers. Thus, it's still unknown how government policy affects how environmentally friendly customers are.

Sharma and Gadenne (2014) study discovered that most consumers support environmental sustainability, such as green purchasing, and found connections between social factors, attitudes toward green purchases, government regulations, and green actions. They assert that recycling, reusing, trash composting, and other environmentally friendly habits have a favourable, statistically significant relationship with consumers' views toward green products. With this study it would suggest that consumer attitudes toward environmental activities or practises may have caused the gap between attitudes and practises to close. This can be attributed to consumers' growing knowledge of the significance of environmental issues in terms of a future that is more environmentally friendly. The environmental behaviours of consumers and their environmental support, including efforts to donate money and volunteer their time for the preservation and enhancement of the environment, are positively correlated with social factors. Perhaps consumers in this case are more cognizant of environmental issues than other consumers, especially in trusted partnerships where one party has a lot of sway over the other.

THEORETICAL FRAMEWORK

The environment awareness and attitudes factor in Gadenne's (2009) Model of External Influences on Environmental Awareness and Practices (MEAP) is suitable variables to represent the research. Based on the Gadenne's MEAP construct; general awareness, cost benefits awareness, and environmental attitudes; these are the characteristic of an individuals to show the level of their concerns and responsiveness towards the environment.

General Awareness

Numerous studies have reported that business owner is concerned about their environmental impact (e.g. Groundwork, 1995; Roberts et al., 2006; Tilley, 1999). Though, empirical studies that relate attitudes to environmental performance have produced mixed findings. Schaper (2002) found no relationship between positive personal environmental attitudes and positive environmental performance. Tilley (1999) also reported a gap between the attitudes of small business owners and their environmental behavior. In contrast, Naffziger et al. (2003) reported that managers with a high level of concern for the environment expend more time and resources on environmental initiatives than those with a low level of concern.

Cost Benefit Awareness

Individual concerns on environmental issues are an important motivation for environmental responsiveness (Bansal, Pratima; Roth, 2000; Gadenne et al., 2009). The logistics companies may choose to adopt environmental-friendly processes and procedures regardless of whether they are required to do so by law, or whether they believe that profits will increase. An individual behaviour who devoted their time working in the company is believed to be affected by the beliefs and attitudes of the individual (Kaiser, Wolfing Kast, & Fuhrer, 1999; T. C. Lin et al., 1999), and for some, treatment activities towards the environment is an ethical issue.

Environment Attitudes

The attitude of the business owner has consistently been found to play a key role in determining the nature of the firm's engagement with issues of environmental sustainability, the intensity of that commitment, and the degree to which such behaviours are embedded in the firm (i.e. are they strategically integrated or ad hoc informal measures) (Dewhurst and Thomas, 2003). It is logical then to assume that the attitudes of the business owner of a company will dictate the direction the firm takes with regard to environmental action.

CONCLUSION

This research discussed the literature related to the background of environment management practice, the importance of the implementation towards environment sustainability, the benefits of EMP implementation, and Malaysia's logistics industry. This study is necessary to create a new framework for promoting EMP adoption behaviour among logistics business owner. This study connect technology acceptance and innovation adoption research with environment awareness behaviour in alleviating the impact of technology adoption among business owner. This study will make a substantial contribution to the body of knowledge in the field of technology acceptance and innovation adoption since it extends the integrative approach to innovation adoption behaviour.

REFERENCES

- Abbasi., H. (2016). Green Supply Chain Management in India: An Overview. *International Journal of Advanced Research*, 4(5), 385–390. <https://doi.org/10.21474/ijar01/594>
- Akmar, F., Salim, A., Musah, A. A., Ibrahim, I., Rizal, A. M., Akmar, F., ... Musah, A. A.

(2022). Factors Affecting Transactional Leadership Style at Engineering Sector in Malaysia
Factors Affecting Transactional Leadership Style at Engineering Sector in Malaysia, *1*(7), 327–334. <https://doi.org/10.6007/IJARBSS/v12-i7/13069>

Alam, S., Ehsan, S. D., Muzzamil, M., & Mahmuddin, B. I. N. (2000). Universiti teknologi mara, 40450.

Amer, A., Ismail, A. F. M. F., Jani, S. H. M., Othman, H., & Ibrahim, I. (2022a). determinant factor for strategic sustainable location decision model (SSLDM) for commercial development project. *International Journal of Health Sciences*, 4615–4622. <https://doi.org/10.53730/ijhs.v6ns2.6087>

Amer, A., Ismail, A. F. M. F., Jani, S. H. M., Othman, H., & Ibrahim, I. (2022b). determinant factor for strategic sustainable location decision model (SSLDM) for commercial development project. *International Journal of Health Sciences*, 6(April), 4615–4622. <https://doi.org/10.53730/ijhs.v6ns2.6087>

Amer, A., Kamal, M., Noor, M., Ibrahim, I., & Bahaman, S. B. (2010). Nurturing ‘ Green Community ’ , Culturing NGV Usage , A Case Study of Customer Acceptance In Lembah Klang . *Business*, (July), 7–8.

Amer, A., Siti, S. H., Ibrahim, I., & Aziz, N. A. A. (2019). Brand preferences in muslimah fashion industries: An insight of framework development and research implications. *Humanities and Social Sciences Reviews*, 7(1), 209–214. <https://doi.org/10.18510/hssr.2019.7125>

Awa, H. O., Emecheta, B. C., & Ojiabo Ukoha. (2012). Integrating TAM and TOE Frameworks and Expanding their Characteristic Constructs for E-Commerce Adoption by SMEs Electronic Commerce (EC). *Informing Science & IT Education Conference (InSITE)*, 18. <https://doi.org/10.1108/JSTPM-04-2014-0012>

Baqleh, L. A., & Alateeq, M. M. (2023). The Impact of Supply Chain Management Practices on Competitive Advantage: The Moderating Role of Big Data Analytics. *International Journal of Professional Business Review*, 8(3), e0679. <https://doi.org/10.26668/businessreview/2023.v8i3.679>

Cavendish, M. (2015). Malaysia Overall Industry Outlook, 1–10.

Cheong Lee Fong, M. (2005). *New Models in Logistics Network Design and Implications for 3PL Companies By New Models in Logistics Network Design and Implications for 3PL Companies*.

Davies, G. j. (1986). The role of exporter and freight forwarder in the United Kingdom. *Journal of International Business Studies*, 12, 99–108. <https://doi.org/10.1057/palgrave.jibs.8490590>

Gadenne, D. L., Kennedy, J., & McKeiver, C. (2009). An empirical study of environmental awareness and practices in SMEs. *Journal of Business Ethics*, 84(1), 45–63. <https://doi.org/10.1007/s10551-008-9672-9>

Gadenne, D., & Ladewig, J. (2007). the Influence of Australian Environmental Protection Authority Prosecutions on Corporate Environmental Disclosures. *Journal of Environmental*

Assessment Policy and Management, 09(03), 299–318.
<https://doi.org/10.1142/S1464333207002822>

Ibrahim, I. bin, & Jaafar, H. S. binti. (2016a). Factors of Environment Management Practices Adoptions. *Procedia - Social and Behavioral Sciences*, 224(3), 353–359.
<https://doi.org/10.1016/j.sbspro.2016.05.387>

Ibrahim, I. (2015). Title: Determinants of Environment Management Practices Adoption for Logistics Companies in Malaysia Author(s): Ibrahim, Irwan; Jaafar, Harlina Suzana Status: Accepted, 81.

Ibrahim, I., Feisal, A., Feisal, M., Amer, A., & Jani, S. H. (2019). The Effectiveness of Mass Marketing Communication as a Digital Logistics Tools in Promoting a New Online Public Service Platform, 8(4), 177–185.

Ibrahim, I., & Jaafar, H. S. (2016b). Adopting Environment Management Practices for Environment Sustainability: A Proposed Model for Logistics Companies. *Asian Business Research*, 1(1), 70. <https://doi.org/10.20849/abr.v1i1.28>

Ibrahim, I., & Jaafar, H. S. (2021). Determining the Adopting Environment Management Practices for Environment Sustainability: A Proposed Model for Logistics Companies. *New Innovations in Economics, Business and Management Vol. 2*, 169–174.
<https://doi.org/10.9734/bpi/niebm/v2/13297d>

Ibrahim, I., & Othman, H. (2020). A Study On Basic Health And Safety Knowledge That Influence The Safety At Maritime A Case Study Of Dd & I Engineering Sdn Bhd A Study On Basic Health And Safety Knowledge That ‘ A Case Study Of Dd & I Engineering Sdn Bhd ’ Irwan Ibrahim Mashitah Md Esa Ha, (September), 1–24.

Ibrahim, I., Pandiyan, V., Sundram, K., & Normalina, E. (2019). The Determinant Factors of Green Practices Adoption For Logistics Companies The Determinant Factors of Green Practices Adoption For Logistics Companies in Malaysia . A Case Study of PKT Logistics Group Sdn . Bhd ., 7(January), 13–23.

Ibrahim, I., Rahmat, A. K., Fadhiha Mokhtar, N., Amer, A., Halin, I. A., & Ratna Masrom, N. (2020). A Conceptual Framework of Halal Green Supply Chain Management (HGSCM). *2020 11th IEEE Control and System Graduate Research Colloquium, ICSGRC 2020 - Proceedings*, (August), 361–365. <https://doi.org/10.1109/ICSGRC49013.2020.9232483>

Idris, R., & Ibrahim, I. (2022a). Halal New Product Design for International Market Framework, 6(4), 9780–9787.

Idris, R., & Ibrahim, I. (2022b). Halal Organizational Service Quality Orientation from Employee ’ s Perspective, 6(4), 9771–9779.

Idris, R., & Ibrahim, I. (2022c). Halal Service Quality and Customer Satisfaction of Airlines Company : A Conceptual Framework, 6(4), 9762–9770.

Irwan, H., & Ibrahim, H. (2021). Smart Eco Resort City Sustainable Framework, 6(3), 1568–1574.

- Ismail, A. F. M. F., Amer, A., Jani, S. H. M., Othman, H., & Ibrahim, I. (2022). Halal product design accreditation. *International Journal of Health Sciences*, 6(April), 4623–4632. <https://doi.org/10.53730/ijhs.v6ns2.6088>
- Jamil, N. A. (2020). Aging Adult Housing Design Concept In Malaysia : A Safe And Comfortable Living Environment For The Aging Adult.
- Johan, Z. J., Ibrahim, I., Jamil, N. A., Tarli, S. M. M., & Amer, A. (2019). Lean production determinant factors in Malaysia paper manufacturer industry. *International Journal of Supply Chain Management*, 8(2), 977–982.
- Kasdi, S. A., Abdullah, M. H., Akmar, F., Salim, A., Amer, A., & Rahmat, A. K. (2020). the Determinant Factors of Green Maintenance Management Capabilities. *Global Research on Sustainable Transport & Logistics*, 884–891.
- Lin, C., & Ho, Y.-H. (2011). Determinants of Green Practice Adoption for Logistics Companies in China. *Journal of Business Ethics*, 98(1), 67–83. <https://doi.org/10.1007/s10551-010-0535-9>
- Llanto, G. M., & Navarro, A. M. (2012). The Impact of Trade Liberalization and Economic Integration on the Logistics Industry : Maritime Transport and Freight Forwarders. *Philippine Journal of Development*, XXXIX(71), 1–11. Retrieved from <http://dirp3.pids.gov.ph/ris/dps/pidsdps1219.pdf>
- Markides, V., & Holweg, M. (2006). On the diversification of international freight forwarders: A UK perspective. *International Journal of Physical Distribution & Logistics Management*, 36(5), 336–359. <https://doi.org/10.1108/09600030610676231>
- Murphy, P. R., & Poist, R. F. (2003). Green perspectives and practices: a “comparative logistics” study. *Supply Chain Management: An International Journal*, 8(2), 122–131. <https://doi.org/10.1108/13598540310468724>
- Othman, H., Ibrahim, I., Amer, A., Jamil, N. A., & Masrom, N. R. (2022). Evaluation of Service Quality and Resulting Customer Satisfaction of Malaysia Local Airlines Company. *New Innovations in Economics, Business and Management Vol. 5*, (June), 65–78. <https://doi.org/10.9734/bpi/niebm/v5/3296e>
- Porter, M. E. (1985). Creating and sustaining superior performance. *Competitive Advantage*. <https://doi.org/10.1182/blood-2005-11-4354>
- Rahman, A. A., Ghazali, A. Z., Puzi, F. F., Ibrahim, I., Haron, H., & Latip, N. A. A. A. (2020). Collaborative Network in Industry 4 . 0 Towards Sustainable Supply Chain Management. *International Journal of Development Research*, 10(03), 34838–34844.
- Robert, A. K., Joe, B. H., & Gregory, A. K. (2003). The financial impact of the Ocean Shipping Reform Act (OSRA) of 1998 on the Stockholders of Ocean Shipping and Freight Forwarder Firms. *American Business Review*, 21(1), 40.
- Salleh, A. L., Ph, D., & Arabia, S. (2009). Third Party Logistics Service Providers and Logistics Outsourcing in Malaysia, 13, 264–271.

Sarkis, J., Helms, M. M., & Hervani, A. A. (2010). Reverse Logistics and Social Sustainability, 354(January), 337–354.

Sharma, B., & Gadenne, D. (2014). Consumers ' attitudes , green practices , demographic and social influences , and government policies : An empirical investigation of their relationships. *Jornal of New Business Ideas & Trends*, 12(2), 22–36. Retrieved from <http://ezproxy.liberty.edu:2048/login?url=http://search.proquest.com.ezproxy.liberty.edu:2048/docview/1649108469?accountid=12085>

Tinkov, S., Tinkova, E., Babenko, I., Demina, V., & Fomicheva, L. (2023). Choosing a Scenario for Improving the Sustainability of Supply Chains in Construction. *International Journal of Professional Business Review*, 8(3), e01133. <https://doi.org/10.26668/businessreview/2023.v8i3.1133>