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Exploring the Challenges of Green Logistics Implementation in the Malaysian Logistics Sector

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ABSTRACT

Green logistics referring to the environmentally adoption and socially responsible practices in manufacturing and logistics. It aligns to sustainable development goals. Growing public awareness of environmental issues has increased interest in green logistics, as traditional methods contribute to environmental degradation, waste, and carbon emissions. Although many logistics companies are beginning to recognize the importance of green practices, adoption in Malaysia remains limited. This lack of implementation has continued to result in significant environmental harm. The purpose of this study is to explore the key barriers and challenges that prevent Malaysian logistics companies from embracing green logistics. A qualitative approach was employed, using interviews and observations to gather in-depth insights. Respondents were selected through purposive sampling, and thematic analysis was conducted to identify common themes and patterns within the data. Findings from this study aim to provide a deeper understanding of the obstacles faced and suggest possible pathways for greater adoption of green logistics practices.

Keywords: Green Logistics, Sustainable, Logistics Companies, Green Practices, Qualitative Study

INTRODUCTION

Green logistics referring to the adopting green practices in the manufacturing and logistics of goods. The organizations need consider the environmental and social aspects in order to ensure sustainable development. The term "green logistics" is described as the implementation of supply chain management practices and strategies aims to minimize the effect of goods distribution on the environment and energy, focusing on material handling, packaging, transportation and waste management. Green logistics includes the comprehensive management of products and information flow, including forward and backward, in an environmentally friendly way, from the starting point to the end point to fulfil and exceed customer requirements. In addition, green logistics will bring benefits to various aspects. By implementing green logistics mechanisms, the related costs of logistics management can be reduced to the maximum extent, while ensuring the necessary environmental safety [1]. Implementing green practice allow the organizations to improve organizational, economic and environmental performance. Subsequently, improve the possibility of logistics industry. Furthermore, leveraging green logistics by the

organization also contributions better economic production, productivity and income. Due to its inherent business interests and legal mandates, green logistics practices have become necessities of logistics industry [2].

However approximately thirty percent of the total final energy consumption is accounted for by the transportation sector, making it one of the greatest consumers of energy ever recorded in the world. In fact, the transport sector, including logistics activities, has become one of the major emitters of CO_2 emissions, resulting in critical air pollution [3]. This situation arises because a large portion of logistics company operations involve the use of heavy vehicles, long-distance transportation, and high-frequency deliveries. To make matters even more worrisome, around 91–96% of the energy that is utilized by delivery vehicles is still derived from fossil fuels, specifically oil, which is categorized as a source of energy that does not replenish itself [4]. The negative impact of the logistics sector on the environment and climate change is receiving increasing attention from society.

In Malaysia the transport industry contributes second largest sources of CO2 emissions after electricity and heat production, while the industrial sector coming in third. The transportation sector in Malaysia shows an increase in the use of fossil fuel energy between 2018 and 2024. Solaymani (2021) [5] had revealed that in 2018, the transport sector accounted for 36.4% of the overall energy consumption (23,555 ktoe). However, the percentage continued to increase to about 38% in 2019 (25,004 ktoe) and returned stable to 34.29% from 2020 to 2023 [6]. This situation becomes an obstacle to the implementation of sustainable development. As a result, there is a growing need for logistics services in Malaysia to be more environmentally friendly and able to implement green logistics efforts in a wider range of ways.

To ensure sustainability in environmental management, Malaysian logistics businesses' awareness of and preparedness for green practices are crucial. However, most of previous studies determine that the level of adoption green logistic implementation among logistics companies is still scarcity [7, 8]. Consequently, the exploration of challenges and barriers that prevent logistics companies from adopting green logistics needs to be done. Determining the barriers that hinder the majority of logistics companies from implementing green logistics is crucial to a successful implementation of green logistics among Malaysian logistics companies. Additionally, because Malaysia and other nations have distinct organizational cultures, legal frameworks, and economic environments, the obstacles and challenges that exist there may differ from those in other nations. Therefore, the main goal of this study is to explore the challenges and barriers that prevent logistics companies from adapting to green logistics.

Additionally, based researchers review, it is found that there are still limited studies focus in exploring in-depth the challenges and barriers of adopting green logistics among Malaysian logistics companies using qualitative approach. This resulted in a gap and motivated to the researcher to conduct this study.

This study involves the primary data collected via conducting in depth personal interviews. It is important to address several on the elements of experience, significance, and viewpoint from the perspective of participants. Braun & Clarke [9] stated that this situation provides the respondent and researcher with equal status in the dialogue. Using in-depth interviews allow the researchers to gain insights and understanding the complex, sensitive issues and aligned to a specific topic. Implementing green logistics is a complex decision that need to be decided by the logistics companies. Hence, interviews approach is the most suitable method in order to uncover the challenges that could go beyond the usual clichés from the logistics companies.

Sampling Frame

The population of this study is Malaysian logistics companies. A sample of this study is Malaysia logistics companies that have knowledge and experience in implementing green logistics. The study unit analysis involves several incorporates individuals from different organization roles. Among them are General Manager, Group Commercial Head, Group Operation Head, Assistant Manager of Freight and Chief Executive Manager.

Sampling Techniques

The sampling method for this study composed of purposive sampling. According to [10], purposive sampling is defined as judging rather than randomly selecting respondent. In this study selected of informants or respondents is based on personal judgement or inclusion criteria such as the informants should have professional knowledge and insights needed in the implementation of green logistics in companies.

Data Collection Method

The semi structured interviews via face to face interview were conducted. WhatsApp interviews and phone call interviews were also used with respondents to seek clarification in case the first data collection received from respondents was not clear. All the interviews session was recorded with informants' consent as evidence for this research.

Data Analysis

The data collected and analyzed using hematic analysis. There are few steps in conducting thematic analysis. First, began with familiarizing data collected. Second is generating initial code. Third and fourth involves searching for themes and reviewing themes. Fifth and final steps involving defining and naming themes and writing the report.

LITERATURE OVERVIEW

Logistic is the comprehensive management involves all activities incorporates warehousing, transporting goods, inventory control, material handling, and all associated information processing needed from one point to another via supply chain. The main roles of logistics companies involving organizing, controlling, planning and execution flow of goods from purchasing through manufacturing and distribution to the end user [11]. As the backbone of the supply chain, logistics is recognized as being essential to promoting economic growth, boosting commerce, and assisting with corporate efficiency.

The demand of domestic and international logistics services increases tremendously, this situation has driven to increase fueled usage [12]. The transportation in logistics operations is widely known as a major contributor to environmental pollution and become global challenges. One of the serious environmental problems is that the carbon emission of logistics industry is the main source of environmental pollution [13]. Therefore, the modern business environment such as circular economy and green logistics has put forward as a new requirement for the development of logistics companies [14].

Green Logistics

Various explanations of green logistics practices. According to [15], green logistics practices is defined as a collection of environmental sustainability principles, strategies and practices which companies can integrate into their logistics operations to mitigate the impact of logistics activities on the environment, improve social well-being, enhance company performance and increase their market competitiveness. As mentioned by [1], green logistics includes reviewing strategies and measures aimed at reducing environmental impacts, such as greenhouse gas emissions, noise pollution and accidents related to logistics operations. Its main goal is to attain a state of sustainable equilibrium between economic, environmental and social goals. Reynolds (2024) [16], refers to green logistics practices as the practice and strategy of supply chain management to reduce the environment and energy consumption of goods distribution. Kurbatova et al. (2020) [17] determines green logistics practices refer to the leveraging of sophisticated logistics activities and state-of-the-art equipment to reduce pollution and enhance the efficiency of logistics resource utilization.

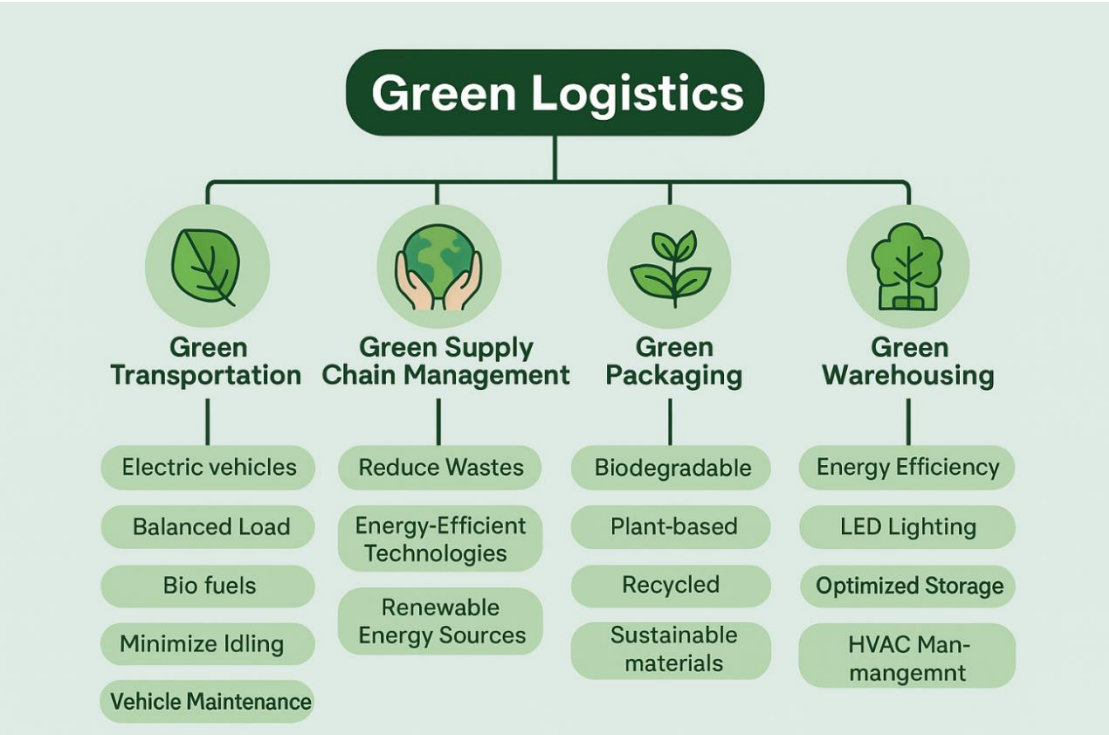

Figure 1. Green logistics practices that can be implemented in companies (*Source*: [18])

Green logistics operations can be categorized into five operations, including green purchasing, green production, green transportation, green packaging and reverse logistics. Green purchasing includes the purchase of goods or services that cause the least harm to human health and the environment while meeting the needs of the buyer [19]. Green production produces goods and services in a way that 6 generates minimal waste and incorporates eco-friendly initiatives. It involves the incorporation of environmental management strategies into the production process to prevent environmental damage and improve efficiency [20]. Green transportation is the logistics activity which reduces the emission of hazardous gases [15] compared with existing transportation services. It has fewer negative consequences on human well-being and the environment. Green packaging is defined as the environment-friendly packaging that made from ecological materials which can be recycled or reused, is easy to degrade, promotes sustainable development, and harmless to the environment, human and animal's health [21]. Reverse logistics involves transporting the end products from its ultimate destination to another destination in order to obtain value or ensure proper treatment. It can mitigate the environmental impact by reducing waste.

Advantages of Green Logistics

Benefits of green logistics can be classified into green logistics, green warehouse and green management system [22]. Green logistics is a value-added method, which has a positive impact on individuals, environment and economic profitability. Under the category of green logistics, economic performance is used to measure energy saving and emissions reduction, and waste is reduced to reduce negative environmental impact. Moreover, optimizing the layout is an example of green warehouse. It will minimize the movement and increase the productivity of the firm in energy conservation. Thus, it can reduce costs and increasing profit.

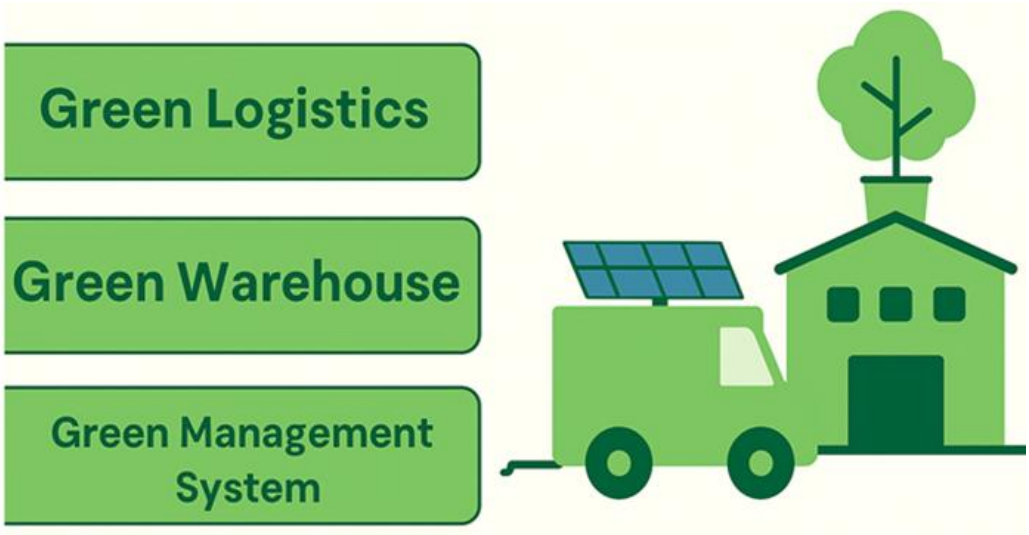

Figure 2. Three Advantages of Implementing Green Logistics (Source: [18])

The green management system can boost the morale of employees to practice green management system and make their work easier. The eco-friendly practice such as adopting electric saving air conditioner that will result in successfully saving cost for electricity. Barut et al. (2023) [23] in his study provides extend viewpoint on green transportation and green packaging. Georgie (2019) [21] highlights that green logistics will effectively utilize the existing production resources of the organization. Green logistics will help an organization to position itself as an environmentally friendly product. Green logistics will significantly save cost, improve supply chain optimization, enhance business performance, obtain a green certificate to enter new markets and create differences by designing products that meet environmental requirements. Furthermore, [24] highlight that by implementing green logistics, it could benefit logistics companies with high daily demand.

Challenges and Barriers of Green logistics Implementation

Based on the literature review summarized by [25], it is pointed out that at list there are 16 barriers in implementing green logistics practices. Among many barriers found by the researchers, the major obstacles in implementing green logistics practices lies in the pressure on setup green logistics implementation cost, lack of technology and technical capabilities, lack of knowledge and lack of policy and regulations [26].

2.1.1 Burden on initial implementation cost.

The entry cost to green logistics hinders the sustainable development of enterprises or reduces the willingness of enterprises to adapt to the new certification schemes [27]. High set up cost may impede the logistics companies from implementing green ideology [28]. This situation will undermine the implementation of the green logistics strategy. In addition, study by [29] reveal that most companies could not apply green logistics practices due to a lack of funds.

Lack of Technology and Technical Capabilities.

The key to developing green logistics not only depends on the green logistics concept establishment, however it also involves green technology applications. Hence green logistics initiatives in transportation firms would be impossible to adopt without technological advancement system [16]. Insufficient technical capabilities among workers in leveraging green logistics would be an obstacle for the green logistics implementation progress low and lower comprehensive efficiency. Subsequently, divert from the long-term development interests of enterprises.

Lack of Knowledge. To achieve the objective of becoming more sustainable, both buyers and logistics service providers must have the essential knowledge [27]. It is worth noting that the lack of knowledge at any stage of logistics operations seems to hinder the company's ability to solve sustainable development problems more effectively. According to the findings of [30], the green logistics concept in many logistics companies is still comparatively less known, the significance of implementing green logistics is not fully grasped. As a result, the role of green logistics has not been fully exerted, which is not conducive to the improvement of the comprehensive level of logistics companies and their future development.

Lack of Policy and Regulations. Even if the formulation of new laws and regulations is usually conducive to a more sustainable future, there are cases where companies have to deal with laws and government regulations that have a negative impact on green logistics [27]. According to the findings of [30], the presence of remaining loopholes was found in the current system and no developmental system and policy system for green logistics management companies have been formulated, resulting in slow progress in implementing green logistics and low overall efficiency in logistics companies. The green logistics policy lacks clear and quantifiable goals, and the implementation departments rarely set periodic quantitative standards and overall goals, which makes it difficult to effectively promote the implementation of the policy [26]. Due to the lack of effective supervision and evaluation mechanism, it is difficult to evaluate the policy and its implementation in practice is not reasonable.

Research

This section will discuss the finding from this study. The findings will be presented about respondents or informants that are involved in this study, informants' organization, green logistics practices that has been conducted on informers' companies and challenges facing by informers' companies during implementing green logistics.

Background of the Informants

There are 5 informants that have been involved in this study. The informants are from different logistics companies. Table 1 shows background of the informants.

Table 1. Informants Background

Company Name	Informant Name	Position	Length of Employment
Company A	Mr. N	General Manager	9 months
Company B	Mr. Z	Head of Group Commercial	12 years
Company B	Mr. S	Head of Group Operation	12 years
Company C	Mrs. Y	Assistant Manager	4 years
Company D	Mr. K	Chief Executive Officer	21 years

Five informants have been selected for interviews in this study. Majority of informants have work experience in logistics companies for more than 4 years. Mr. K from Company D has longest work experience compared then others. The highest position of the informers in this study is Mr. N, general manager for Company A.

Green Logistics Practices among Informer's Companies

Table 2. Green Logistics Practices

Company Name	Green Logistics Practices
Company A	-Embarked electric Vehicle (EV) -Change diesel-powered material handling equipment (MHE) into battery operated -Paperless -Reduces unnecessary idling vehicles

	-Proximity to warehouse
Company B	-Change diesel-powered material handling equipment (MHE) into battery operated -Using recycle pallets -Reduces unnecessary idling vehicles - Adopt safety protocol (fatigue management & schedule maintenance protocol)
Company C	-Change single fuel vessels to dual fuel vessels -Paperless -Use digital technology to optimize logistics process
Company D	-Paperless -Change general purpose containers to refrigerated containers -Use digital technology to optimize logistics process

During an interview with four informers, they are sharing an experience implementing green logistics in organization. Table 1 illustrates several sustainable equipment that have been adopted by Company A, B, C and D. An example, Company A embarked on using Electrical Vehicle (EV). Besides, Company A and B changed all diesel-powered material handling equipment (MHE) into battery-operated. Furthermore, Company C changed from single fuel vessels to dual fuel vessels. By adopting sustainable equipment in organization will assist informers' companies to achieve net zero carbon emission by reducing carbon emissions and air pollution. This effort has contributed to build a more sustainable environment.

Companies A, C and D successfully reduced paper in daily operations. Using less paper will contribute to a more sustainable environment by minimizing paper waste and indirectly able to diminish waste disposal activities at landfill sites. In the other hand Company B has decide to use recycled pallets in their warehouse rather than buy a new pallet. This practice able to minimize the need for new resources and the company is also able to cut operations costs. Company D changed all the general-purpose containers to refrigerated containers. The capacity of refrigerated containers can be maximized, and more goods can be loaded compared to general-purpose containers because refrigerated containers do not need to leave some space to ensure good ventilation during the transportation of perishable goods. This will reduce the number of trips required and reduce fuel consumption, thus reducing carbon emissions. Meanwhile, it helps to reduce wastage because there is an appropriate temperature in the refrigerated container to ensure that perishable goods will not deteriorate during transportation.

To achieve lower fuel consumption and reduce carbon emissions Company A and B are practicing idling reduction. Idling reduction reduces the unnecessary idling of vehicles. The engine is required to be switched off if the trucks need to idle more than 15 minutes to reduce carbon emissions. Besides, proximity warehouses are built to shorten the distance between businesses and consumers which will speed up the delivery time, reduce carbon emissions and reduce fuel consumption. Company A adopted proximity warehouses to cater automotive movement instead of transiting from a distance warehouse.

Safety protocols is crucial, and it will ensure the safety of life for every lorry driver on the road. When the drivers drive for a portion of hours, the driver must stop to have a rest, switch off the engine. After half an hour the driver will restart the journey. Company B adopts safety protocols such as fatigue management. This will help in controlling the fatigue level of the drivers, reduce accidents and minimize carbon emissions. Thus, contribute to better sustainable environment. At the same time Company B also implemented truck schedules maintenance protocols. The trucks will be regularly maintained to ensure that they are in good condition. The trucks will be sent to government agencies for routine inspection to ensure that the trucks meet the standards set by the government such as the trucks in good condition, produce less smoke and carbon emissions, reduce accidents and contribute to a cleaner environment.

Challenges during Green Logistic Implementation

Although there are many environmental contributions from green logistics practitioners, however several constraints hindering the smooth implementation of green logistics unable to denied by each informer. Among the challenges discover from this study such as obstacles, limitations, and hardships faced by logistics companies during green logistics implementation.

Limited Knowledge on the soul of Green Logistics practices

Understanding the roles and contribution of green logistics to organization, environment and society is crucial among top management and workers. By building a solid foundation about green logistics roles and contribution among workforce can effectively advocate for green logistics implementation within organizations. Mr N, Mr S, and Mr K agreed that limited awareness, knowledge and understanding among employees about green logistics contribution is the main barriers for organizations during the beginning process of green logistics implementation.

Mr N: Lack of knowledge is one of the major obstacles in us in implementing green logistics. Green logistics is a new topic in the logistics industries and something that they carry values at the future, that's why we are embracing this. The knowledge is very important. So, when the knowledge is right, then it will attract you and you show interest; if you don't have the knowledge, you cannot show interest. In today worlds, people don't have much time, and on top of that u ask them to make sure all is green, then people will get bored in doing all these 39 instructions. You need to make them realise this is very important for us, for the future and carry generous of weight in terms of environmental issues, then people will try to give more attention to it.
Mr S: Because the knowledge is not coming from the school we are now coming halfway. We look at other countries, for example: US, Europe, Japan, Indonesia. Other companies have already prospered, globally they are there, but now Malaysia are struggling to go up there. Why? Because we have these problem. We don't have awareness campaign from the beginning.
Mr K: At the beginning, many people do not know what green logistics is. There is lack of awareness among the employees. So, it is hard for us to implement.

Ineffective Support among Top Management

The importance elements among top management is full support and commitment during the process of green logistics implementation in organizations. Effective leadership, motivation and guiding from top management become a strong driven for organization to successfully achieve common goals and encouraging commitment among employees.

However, in reality, according to Mr. N and Mrs. Y ineffective support from top management sometime can be occurred and this situation can make implementation of green logistics become challenging and will take long duration to complete.

Mr N: Top management commitment is one of the barriers. If the top management is not committed, then it becomes a barrier for you to implement green logistics. If there is no support, no monetary fund to implement, there is no budgets and policy in the organizations, then the failure of implementation is greater.
Mrs Y: Lack of top management support is another important barriers, top management is important in providing resources and encouraging employees to learn new technologies. Lack of top management commitment is another important obstacle because top management is the party that determines whether or not a company adopts green logistics.

According to Mrs Y, the reason ineffective support among top management occurred is because the top management does not involve on the implementation process from the beginning. This situation has made the top management don't have ample knowledge about the planning of some committee.

Mrs Y: Lack of green logistics knowledge or skills is another barrier top management is found not involve from the early stage of the green logistics implementation.

Financial Constraints

Financial constraints refer to the limitations related to financial resources in an organization. Cost of investment is one of the important elements in financial constraints. Cost of investment refers to the cost involved in investing in the technology, equipment or systems which required in facilitating green logistics practices. According to the answers obtained through the interview, four of the informants agree that cost of investing is the barrier during the process of the implementation of green logistics practices. Cost of investment affects the adoption of green logistics infrastructure, such as EV trucks and solar panels due to high cost of investment. Below shows the information given the informants where cost of investment is the barriers in implementing green logistics.

Mr N:
There is high cost of investments. When we talk about clean energy, we talk about solar panel investments, it is very high cost. So we invested almost millions on solar panels. The energy we get we have to sell to government, which government can make use for other people, clean somebody else waste or carbon emission. So it helps both ways also, it will not directly help but indirectly I am contributing to the industrials in cleaning the environment. That investment is very high. So we encountered that kind of investment and it is not cheap. So the board also must be convinced that you are doing this for good otherwise they think why you are wasting investors' money.
Mr Z: We want to have all EV trucks; we do not want all diesel trucks. But that we have to look into financial situation, how strong we are. We love to have EV trucks, but we need to have strong financial stability. Mrs Y: These barriers include the initial investment required for adopting environmentally friendly technologies and infrastructure, such as electric vehicles, solarpowered warehouses, or waste management systems.
Mr K: The cost of adopting green technologies and infrastructure is high such as EV trucks, solar powered vehicles, route optimization software.

High Operations Green Logistics Cost

Cost of operation refers to the cost incurred in the operations in an organization such as labour cost, fuel cost, administrative cost and etc. According to Mrs. Y, and Mr. Z cost of operation is the barrier during the process of the implementation of green logistics practices. The operating cost of implementing green logistics includes training cost, operational and maintenance cost, and fuel transition cost which will increase the financial burden of the company. Below shows the information given by the informants where cost of operation is the barriers in implementing green logistics.

Mrs Y: The costs associated with training employees and reorganizing supply chain processes to align with green initiatives are also factors to consider. Additionally, ongoing operational and maintenance costs green logistics practices compared to traditional methods.
Mr Z: The cost of using Diesel Euro 5 B7 is higher than using Diesel Euro 5 B10. The cost of using electricity is also more expensive than using diesel. In addition, it incurred cost to conduct training for the employees about the new technology or infrastructure. This will add to the burden on our company.

In conclusion there are four main challenges for green logistics implementation that has been determined from in depth interview with five informers. The potential challenge that can hinder organization from adopting green logistics are that has been explored in this study are limited knowledge on the soul of green logistics practices, ineffective support from top management, financial constraints, and high operations green logistics cost.

DISCUSSION

This study explores the challenges and obstacles faced by Malaysian logistics companies in implementing green logistics practices. Four logistics companies were involved in this study, namely Companies A, B, C, and D. The findings revealed that although these companies have started to implement green logistics practices within the company such as electric vehicles, battery-operated equipment, digitalization, paperless systems and warehouses built close to the Company. However, Companies A,B,C and D still face major obstacles that limit their efforts from implementing overall green logistics practices.

First, limited knowledge and awareness among employees as well as some upper management staff. This challenge has been identified as a major obstacle for many logistics companies. The lack of a basic understanding of the environmental, economic and social benefits of green logistics implementation has made it difficult for organizations to foster internal support to transform from traditional logistics practices to more sustainable practices.

Second, there is a lack of support from top management for the implementation of green logistics practices in the organization. Without direct involvement and continuous support from top management, the implementation of green logistics in an organization will fail due to lack of motivation among staff, lack of financial allocation,

absence of policies and policies and lack of solid planning. That's why it's important to have continuous involvement and support from top management.

Third, financial constraints are the most critical challenge for the majority of organizations in the implementation of green logistics. The initial implementation to bring green logistics practices to life undeniably involves high green infrastructure costs. This involves purchasing activities such as EV trucks and solar-powered systems to replace diesel-powered trucks, and fossil fuel electricity systems. It is undeniable that this transformation involves costs that will create a heavy burden especially for companies that do not have strong financial stability. That is why incentives from the Government, NGOs, and certain agencies are very important.

Finally, the operational costs associated with green logistics (e.g., training, fuel transition, maintenance) are much higher than traditional methods. This has hampered a Company's ambition to shift from conventional practices to more sustainable practices despite realizing that green practices will provide long-term sustainability benefits.

These issues reflect the gaps that need to be addressed through a combination of internal leadership development, employee education, and external policy and financial support from various parties.

CONCLUSIONS

In conclusion, this study identifies four key challenges faced by Malaysian logistics companies in implementing green logistics. These challenges are limited knowledge of top management and organisational staff, lack of support from top management, financial constraints and high operational costs. While many companies have shown a willingness to adopt environmentally friendly logistics practices, some of the obstacles faced have slowed down or hindered effective implementation within the Company.

The following actions would be suggested to improving the situation for challenges implementing green logistics among Malaysian logistics companies:

- *Develop strong foundation among employees to understand the main roles of green logistics* is the important roles for top management level. Develop awareness and enhance knowledge among employees on green logistics contribution on organization, environment and society sustainable needs to be done first by the management. With good knowledge on green logistics contributions, it will make the employees having clearly understand the real reason why the organization start to adopt new reforms. This can also avoid the existence of groups among employees that resist to change.
- *Create multifunction team, involvement top management from various functions is required.* All functions and personal in organization are required to involve from beginning until the end of the green logistics implementation in organization. Top management from various department such as financial, operations, purchasing or warehouse and also workers are required to conduct simultaneously discussion on the planning, implementing, controlling and monitoring the green logistics implementation in an organization. With simultaneity discussion able to avoid miss understanding among top management and consensus decision making easier to achieve.
- *Government authorities is an important element in regulatory and legal constraints.* Government authorities play a vital role in providing clear and appropriate guidelines to ensure the legitimacy and reliability of emerging green logistics. Governments can implement several efforts to assist companies dealing with high operational costs and limited financial resources, particularly in the context of promoting sustainability and green logistics. Some initiative can be provided by government to motivate green logistics implementation continues among logistics companies are:

    - ***Financial Incentives and Grants:*** Governments can offer financial incentives such as grants, subsidies, or tax credits to companies that invest in sustainable practices and technologies. This could include subsidies for purchasing energy-efficient vehicles, installing renewable energy systems, or implementing eco-friendly packaging solutions.
    - ***Low-Interest Loans and Financing Programs***: Providing access to low-interest
    - loans or financing programs specifically tailored for green initiatives can help companies afford upfront investments in sustainable infrastructure and technologies. This reduces the financial burden and promotes long-term cost savings through improved efficiency.
    - ***Technical Assistance and Training:*** Offering technical assistance, training programs, and workshops on green logistics and sustainability practices can help companies develop the knowledge and skills necessary to implement cost-effective solutions. Government agencies or industry associations can facilitate these programs to ensure broad participation and adoption.

- ***Public Procurement Policies:*** Governments can leverage their purchasing power through sustainable procurement policies that prioritize suppliers and contractors with strong environmental credentials. This creates a market demand for sustainable products and services, benefiting companies that invest in green logistics.

To ensure that this green logistics practice can be implemented by every logistics company, a holistic approach involving various stakeholders is needed. This is to ensure that each party understands the concept, goals and benefits of the implementation of the practice. In fact, the involvement of various parties is also expected to overcome the problems related to the cost of implementation. The indirect goal of the Government of Malaysia to drive Malaysia's logistics sector towards environmental sustainability, operational efficiency and long-term competitive advantage will be easily achieved.

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