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Innovative Solution for Barriers of Green Logistics in Food Manufacturing Industries

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Abstract
In this era of technology, logistics has been started to play the crucial part for economic world. Ministry of Natural Resources and Environment (NRE), Malaysia, carbon dioxide emissions from energy usage in industries showed the highest percentage. Most of the manufacturers will face environmental issues because they not aware about green logistics. The study investigated the Green Logistics implementation in food manufacturing industries in Johor Darul Takzim. Three objectives were tested using data generated from research instruments. This thesis analyzes the understanding and awareness of green logistics, determine the barrier that prevent the implementation of green logistics and identify the ways to implement green logistics in food manufacturing industries in Johor Darul Takzim. A total of 47 food manufacturing companies selected to participate in this study from the Federation of Malaysian Manufacturers directory. The questionnaires were sent to a representative of each company. Result of data analysis showed the barrier that prevents food manufacturing companies in Johor Darul Takzim to implement green logistics is Lack of Organization Encouragement. Result showed the best ways to implement green logistics is limiting the number of distribution trips to reduce the carbon footprint.

Keywords: Supply chain, Management, Food industry, Environment

INTRODUCTION

In this era of technology, logistics has been started to play the crucial part for economic world. [1] stated that companies sees opportunities to increase their competitiveness and modify the company's operations when have larger focus on logistics. We have logistics concepts in every sphere of national society and economy. [2] stated that logistics had passed over 50 years which is a key determinant in business performance.

Logistics was utilized to clarify incorporated practice between the systems of transportation, stockpiling, and treatment of items which move from material source through the production network framework to the last purpose of offer or utilization, which is the key variable of business performance [3]. Logistics is important transport element in every aspect of daily life.

Transportation system is the consistency transportation means, and existing courses geographic area where the things can be conveyed [4]. There are different types of modes such as air, sea, rail, land and truck. According to [4], utilizing one transportation modes it can influence the adaptability, size of shipment and rate of delivery. [4],[6] stressed the tradeoff between responsiveness and efficiency where it is based on the cost and speed of transport.

According to a report from the Ministry of Natural Resources and Environment (NRE), Malaysia, carbon dioxide emissions from energy usage in industries showed the highest percentage (35%) followed by transportation (21%). Two primary sources of carbon dioxide emanation were blazing coal utilized as a part of power era and petroleum that utilized for engine transport [5]; [6]. Carbon dioxide outflows from transportation comprise of discharges from the ignition of fuel for all transportation activities without consider the whole division aside from universal marine fortifications and global avionics.

Thus it leads to environmental pollution which mankind faces every day which is excess emission of toxic gases is from the food based industries. At the rapid development of food based industries, the needs for as the activities of manufacturers becoming more advanced, the manufacturers don't aware that the activities they were doing giving big impact to the environment. The environmental awareness had given rises to the impact on changes of climate, together with depletion of non-renewable resources and pollution [7-8]. The consumers also don't conscious of the damage being imposed on the environment.

It is indicated that environmental issues keep on growing. Recent studies showed that in the future in Asia, most of the manufacturers will face environmental issues [9],[10]. According to [11], the logistics stated new technology, new management, and new knowledge opinion. With the initiation of new monetary, for example, data economy and system economy and logistics industry has created to the bearing of the specialization and scale. In any case, the increment of the measure of logistics, changes of logistics administration and expansive size of the logistics offices and instruments the impact of the logistics framework on the natural environment has turned out to be more serious. [12] and [13] stated that transportation showed 8 per cent of the carbon emissions worldwide and it cause damage to the environment to a large extent. According to [14], the transport emissions arises higher rate compared to other sectors and approximately will reach 80% by 2030 which is higher than currently unless changes occur.

To solve this problem, the idea of "green logistics" was conceived in some developed nations. At present, green logistics is still a full new idea, and it is absence of developed