UNIVERSITI TEKNOLOGI MARA

MEASURING THE EFFECTIVENESS OF TRANSPORT MANAGEMENT SYSTEM (TMS) IN MONITORING DRIVER BEHAVIOUR: A CASE STUDY

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ABSTRACT

The Transport Management System (TMS) is a transformative tool that revolutionizes logistics operations by optimizing route planning, automating carrier selection, and providing real-time visibility. Controlling process fulfillment through the use of technology is highly effective and has a positive impact on businesses in today's digital age. One of the biggest challenges in the transportation and logistics industry is controlling all offsite assets, especially when it comes to managing and monitoring large vehicles driven by company drivers. The use of TMS is very suitable for controlling the driver's posture and driving style. This study to assess the effectiveness of a Transportation Management System (TMS) in monitoring driver behaviour in oil palm industry, propose a framework in measuring the effectiveness of the transportation monitoring system for palm oil industry, and justify the recommendation on how FGV Transport can improve the features of the TMS system in monitoring driver behaviour. Within this framework, it is proposed to use data envelopment analysis (DEA) techniques to identify inputs and outputs as indicators of effectiveness. The data used in this study comes from a selected transportation service company that implemented three transportation management systems since 2010. Some systems track the behavior of drivers while driving, which allow transportation company managers to assess the effectiveness of different routes taken by drivers, contributing to more efficient schedules. Managers can track its efficiency and provide feedback when improvements are needed. The use of TMS for real-time tracking also offers great safety benefits, especially in case of accidents. This study has also recorded data to measure the efficiency of each depot's TMS system from 2009-2010. The results of this study have identified several years and several depots that have recorded efficient and inefficient in measuring the effectiveness of TMS in the operation of each depot. In conclusion, this study has been able to measure the effectiveness of the TMS system to control driver behavior at each depot. In addition, some suggestions and added value have been given in this study for future improvements.

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CHAPTER 1
INTRODUCTION

1.0 Introduction

The chapter explains on the background of the study, the background of the industry and the background of FGV Transport Services Sdn Bhd. The chapter also highlights the problem statement and discusses on the objectives of the study, the scope, the limitation and the significance of study.

In the fast-paced landscape of global transportation, the integration of Information Technology (IT) tools has become a transformative force, reshaping the way goods move across borders. The adoption of advanced IT solutions in the transportation sector is not merely a trend; it's a necessity in an era where efficiency, transparency, and cost-effectiveness reign supreme. There is no denying that technology's contribution to logistics has had a significant impact on the industry. Advances in logistics systems enable industry players to be more competitive and deliver services that exceed expectations. The factors that measure the performance level of a logistics service are how quickly the service is provided at a competitive cost and how safe, efficient, and timely delivery is guaranteed. Based on the latest Global Logistics Market Report and Forecast, 2022-2027, the market is expected to grow at an average rate of 5.7%. Technology tools to improve the performance of the logistics market like global tracking systems Computer technologies like GPS, RFID sensors, Bluetooth technology and even big data.

In the dynamic landscape of global logistics, the implementation of Transport Management Systems (TMS) has emerged as a game-changer, reshaping the way goods move across borders. TMS is a comprehensive solution that goes beyond mere coordination; it optimizes, automates, and brings unparalleled efficiency to the complex web of transportation in the global supply chain. TMS serves as the backbone of global logistics, offering a unified platform for planning, executing, and monitoring transportation activities. Its ability to optimize routes, automate carrier selection, and provide real-time visibility has become indispensable in navigating the intricacies of the modern supply chain.

Worldwide, road traffic fatalities are a serious concern. The World Health Organization (WHO) estimates that car crashes claim the lives of 1.35 million people