

# DROP TRAILER METHOD (DTM) MONITORING IN MALAYSIA HAULAGE INDUSTRY

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## Abstract

Haulage operators had implemented drop trailer method (DTM) monitoring not merely focus to the drivers and prime movers but also it trailers. Movement monitoring has been the culture of the haulage operator's which consists of two areas; local (LD) and out station (OS) delivery. The hauliers had implemented trailer movement tracking and terms and conditions of services (T & C) to discourse DTM issues as to optimize trailers utilization. This implementation is an important mechanism to ensure that users will be bear on it contract. The hauliers is so anxious on their trailer utilization. Wide-ranging monitoring and coordination of deliveries are efficient and cost effective because they benefit from reduced lost times, opportunity costs, enhanced trailers utilization and better managed trailers detention periods. A large element of this is the correct planning and monitoring for each delivery. This paper had deliberated the aspect of trailers detention that imposed to users in managing DTM. The implementation and enforcement of T & C by hauliers are critical to ensure the trailers utilization can be optimized.

**Index Terms**-- Drop trailer method, haulage industry performance, fleet optimization, movement monitoring, terms and conditions

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## INTRODUCTION

Haulage Organizations can't stand to overlook the significance of all around to monitor their fleets deployment. Fleets monitoring includes taking a look at numerous fleets of their operations as to enhance profitability (Daniels, 2013). At the point when a trip arranging is not legitimately observed, it might bring about sudden and developed lingering time. This can bring about DTM movement standing inactive while still on the clock. Now and again, over the fleets lingering time may drive organizations to lease trailers for transient utilize or to buy more trailers than is essential for the occupation. The Malaysia haulage organizations work 40 to 50 percent a larger number of trailers than are required to carry out the container movement. Likewise, trailer lingering is frequently the aftereffect of more major issues that can include opportunity costs.(Allen and Liu, 2004).

## THE PROBLEM

A numeral of studies by Vojko Potocan, (2006), Parwani K & Jagadeesh R, (2012), Bolstorff, P (2007) and Bowersox, DJ (2002), have viewed into the approaches engaged to improve the drop trailer performance for the benefit of trucking companies, they only emphasized management of fleets that monitored based on the prime movers but not for it trailers (Jamaludin T, 2003), (Sapry H.R, 2016) & (Oyster Bay, NY: ABI Research, 2005). An appropriate tracking system and monitoring, manual data collection is vital as to gather information about the trailers in yard. Identification numbers and status of whether it is empty or full is fraught with obstacles such as lack of timeliness, costly and inaccuracy. According to M Sreenivas (2008), only a good coordination between each component would bring the maximum benefits. Proposed by Yahya N (2016), Global Position Satellite (GPS) to consider the application can covers on the reporting capability in which it can generate report that desired by users. Report should include fleets activities, start and stop times, deviation from planned route, idling time as well as trailer turn around either in daily, weekly or monthly basis. Sumanth (1984), mentioned that efficiency refers to the extent to which resources are used to achieve desired results. Hence, it is crucial for container trucking industry', to sound plans their drop trailer

monitoring comprehensively so as to extend the performance of it trailers. Therefore, with such inadequate studies being embarked, this investigation turn out to be a spinning in varying the insufficiency.

## OVERVIEW OF DTM INMALAYSIA HAULAGE INDUSTRY

Malaysia Haulage industry is sustained to record positive growth in malice of a puzzling economic undergo. Hence, many operators were presented after 1991 in reaction to increase for healthier services and cater the upsurge in request. Meanwhile, the haulier has been progress from five hauliers in 1999 to more than 220 operators presently. It had demonstrated in the growth of total fleet from 2,131 prime movers and 10,701 trailers in 1999 to 4,500 over prime movers and 24,000 over trailers nationwide (MHA, 2014). The ratios number of trailer per prime mover is around 5 to 7:1. Normally in this industry, whereby a container that needs to be loading or unloading is left mounted on its chassis at its starting point or ultimate destination. It is frequently the circumstance that a container is left at a place for days composed with its trailer and is used as a cushion warehouse by users. Despite the fact that, Miller (1990), determined on customer service, using five dealings: request date, first acknowledgement, published interval, last acknowledgement, and last positive acknowledgement. Each measure was associated with a shipping planning and timeline encompassing from pickup to drop-off. Mentzer and Konrad (1991), registered a collection of efficiency and effectiveness performance measures in five categories: transportation, warehousing, inventory control, order processing, and logistics administration. The trailers availability for operation is acknowledge expressively affected by the movement of a drop-trailer method operation. This principally backed from great number of trailers while left at the users premises or at ports which unable to be utilized for the delivery. Nevertheless, the prime mover which hauled the trailer can be separated from the trailer and deployed for another movement elsewhere. Besides, other factor that affecting the turnaround time of the trailers is a distance of haulage. Since the shipper and consignee are situated over a broadly spread geographical area, the movement

turnaround time and accessibility of both prime movers and trailers are constantly the core challenge to the hauliers. This could be the purpose the industrial ratio for container haulage in Malaysia (prime mover to trailer) is typically considered to be at high site at 1: 5 to 7 versus other countries in Europe merely having a ratio 1:3. Moreover, only a limited of studies by Oyster Bay (2005), Parwani K and Japadeesh R (2012), Lovelock and Gummesson (2004), Peter Mbutia Gitahi, Dr Kennedy Ogollah, (2014), Mauro Vivaldini, Silvio R I Pires (2012), and Zaly, M. and Zaid, Z. (2007), have examined the performance evaluation in haulage industry. In fact, the practice in the existent haulage industry requires trailers to be deployed in optimal level Christopher M, (2011).

**PLANS DTM MONITORING**

Fleets monitoring is began from movement delivery is commenced (Bowersox, Closs & Cooper, 2002; David J. et al., 2016; Forslund, 2007; Azlan M et al., 2014; Fabricio, 2004). The Malaysia Hauliers put on similar concept which the drop trailer movement monitoring is a process of managing fleets, commencing with the container unit being collected/picked up and lifting off from it trailer. Since the number of trailers are huge, customers and location are scattered the hauliers had restraint in monitoring the trailers. Therefore, the hauliers had taken an action by establishing trailers detention monitoring program which can optimize the trailers utilization. In sustaining viable, the container trucking industry should be more focus on trailers management in order to upsurge trailers turn around efficiently. With better trailers performance dimension in place, the container truckers will focus on optimizing the numbers of trailers according to the needs of the customers and reducing the trailer maintenance costs. Unfortunately, empirical studies particularly in Malaysia context have been less than stimulating. Therefore, exploratory research is vital to resolve this insufficiency.

**RESEARCH OBJECTIVES**

This study is to investigate the applicability of drop trailer method monitoring in Malaysia Haulage Industry. This is preliminary study for a more comprehensive investigation in future. The explicit objectives of this study purposes:

1. To investigate the present DTM monitoring that has been practiced in Malaysia haulage industry
2. To examine an effectiveness of Terms and Conditions of Services (T&C) which implemented in DTM monitoring.

**METHODOLOGY**

The qualitative methodologies are chosen as the research design for this study. Furthermore, the researcher had been in the course of frequent participant aptitudes in understanding the occurrences. Consequently, the researcher rest on much on the opinions speak out by the participants to study the scenario (Creswell, 2013). Evidences was gathered as much as possible where the questions turned wider and further open-ended questioning had been applied for the participants to share their views. Therefore, greatest opinions had been based on participants' experiences that involved historical norms. As such, this study applied the Qualitative Research Approach in order to ascertain the details of applicability of drop trailer method monitoring in Malaysia Haulage Industry. On the other hand, the qualitative method is appropriated for this study as it states greater depth in understanding issues. In exact, it refers to meanings, definitions, concepts, metaphors and descriptions of several elements (Berg, 2001). This approach allows exploration of a phenomenon by using wide foundations (Baxter & Jack, 2008). Actually, it is the strength of qualitative research to bring complex textual descriptions, particularly on this topic which cannot be performed quantitatively. In this study, the interview method of qualitative research is used by researcher to collect data from selected 3 container haulage players that have

significant presence in Peninsular Malaysia. In line of the confidentiality and requested from the respondents, the details of the respondents are unable to reveal instead being identified as Company 1, Company 2 and Company 3. The respondents are holding a role of Manager, Operation Manager and Head of Branch in the companies respectively.

**FINDINGS AND DISCUSSION**

DTM monitoring is vital to determine the resourcefully of trailers utilization that are being used to generate maximum movement delivery. By having right approach, haulage players are capable to ascertain the growth of the company and implement enhancement according to the business requirement. Data collected from interviewees penetrating out those matters contributed to the DTM movement monitoring in this topic. This segment revealed the significances from the interview in order to deliver answer for research questions.

**A. The Practiced of DTM Monitoring in Malaysia Haulage Industry**

The container haulage operation by road is a dedicated form of transport, which is designed to haul only containers. It consists of a prime mover or a traction unit and a trailer unit upon which a container is loaded. The traction unit can be attached to or detached from the trailer unit. The trailer unit is designed to take two 20-foot containers or a single 40-foot container. Essentially, container movement planning decisions are made within the monitoring planning context which are resources delivery and collection of the movements from beginning until the shipment is completed. In this segment, in the directive to answer the DTM monitoring that had been practiced by hauliers, the elaborations are based on the case studies of company 1, company 2 and company 3.

Findings on DTM monitoring practiced by Malaysia Haulage Industry are summarized in Exhibit 1.

**Exhibit 1.** Findings on DTM Monitoring Practiced by Malaysia Haulage Industry

<p><b>Issues Addressed:</b> The Drop Trailer Method monitoring in Malaysia Haulage Industry.</p>
<p>How does the present DTM monitoring being practiced by haulage industry?</p>
<p><b>Respondent Company 1:</b> Manager (Supply Chain Services)</p> <ul style="list-style-type: none"> <li>• Customer service department will be communicating with customers on the DTM readiness for trucking out.</li> <li>• Every DTM journey movement is always different by its nature, so that monitoring the movement by looking at the trend from past record is critical this will enable them to check the location of every each of the DTM movement.</li> <li>• Monitoring of Journey movement is the coordination of vehicles movement from one point to another to ensure the delivery of customers request are fulfilled.</li> <li>• Besides, the prime movers and trailers monitoring is also essential to ensure maximum utilization is performed. So the haulage operator must monitor this movement closely. It is important to know the estimate times of each journey and how long that the loading or unloading of goods be done.</li> <li>• Date and time of movement received by customers will be the reference to determine the time taken for completing each movement. Customer need to endorse the RFT upon arrival as a proof of shipment received.</li> <li>• Movement delivery is haulier serious business, the fleets without proper monitoring may impact their revenue.</li> <li>• Revenue is generated based on every single trip that delivered. The readiness time that furnished by customers will be the timeline to pick up the shipment.</li> </ul>

<ul style="list-style-type: none"> <li>In curbing the DTM idling at customer place beyond the free period, close monitoring the shipment is important.</li> </ul>
<p><b>Respondent Company2:</b>Operation Manager</p>
<ul style="list-style-type: none"> <li>DTM will be monitored based on the delivery location either local or outstation.</li> <li>Operation department will monitor the DTM movement following the requirement date requested by customers, example; a few customers wanted the container in the morning and other few customers required in the late evening. The operation people will deploy the equipment's accordingly.</li> <li>Before delivery is made drivers must ensure the preliminary inspection toward their prime mover and trailers being performed, it takes 10 to 15minutes to check the prime mover and trailers condition.</li> <li>Drivers will be trained to gain effective ways to handle their fleets. Basically drivers were hired based on their working experiences and characters.</li> <li>Close monitoring enable the haulier to perform 3 or 4 delivery on that particular day and could increase DTM productivity.</li> </ul>
<p><b>Respondent Company3:</b> Head of Branch</p>
<ul style="list-style-type: none"> <li>Prior to monitor the DTM movement for short or long haul, the customer service staff will be collecting the request for transport (RFT) from operation department for container that had been delivered to customer.</li> <li>In the RFT stated the date and time of delivery made, from there, they begin to monitor the period of trailers been parked at customer premise.</li> <li>Normally customers will inform the readiness of the consignment by themselves or through their forwarding agent.</li> <li>Under the terms and conditions of haulage service any RFT, it must be submitted to Haulage Company one day in advance from the date of delivery.</li> <li>The reason for having an advance submission is assuming as ample time for the transport planner to plan and monitor the delivery.</li> <li>Next to that once the supervisor received all the RFT from customer's service department then only they will do the journey planning and monitoring for the next day operation.</li> <li>Besides, the planner will monitor the DTM based on customer's location. The monitoring and distribution of the DTM will be following the order in haulage systems</li> <li>Operation department will monitor the prime movers and trailers to ensure the fleets can perform smooth delivery.</li> <li>DTM monitoring is performed based on any order available, furthermore, the priority will be given to the customer who has submitted RFT in advance.</li> </ul>

**B. The Effectiveness of Terms and Conditions Implementation in DTM Monitoring**

Trailer detention charges of the haulage operators are based on the terms and conditions of services (T&C) that being established with the customers prior business dealing is commenced. The rates of trailer detention charges are stated in the T & C, this initiative need to be implemented because the DTM revenue generated are based on the movements made but importantly to states that the DTM turnaround are the essence of the operating profit margin.

The deliberation of the Effectiveness of Terms and Conditions Implemented in Optimizing DTM Utilization are based on respondents Company 1, Company 2, Company 3.

Findings an Effectiveness of Terms and Conditions Implemented in Optimizing DTM Utilization are summarized in Exhibit 2.

**Exhibit 2.** Findings an Effectiveness of Terms and Conditions Implemented in Optimizing DTM Utilization

<p><b>Issues Addressed:</b> The Drop Trailer Method monitoring in Malaysia Haulage Industry.</p> <p>How effective the implementation of haulage terms and conditions of services in DTM monitoring?</p>
<p><b>Respondent Company 1:</b>Manager (Supply Chain Services)</p>
<ul style="list-style-type: none"> <li>Trailer detention charges is a good mechanism in ensuring customers will not detained the DTM movement.</li> <li>The marketing staff will explain clearly on the terms and conditions to customers. So that the customers will fully aware on the service contract.</li> <li>Customers will avoid the unnecessary delay to the trailers or else they have to pay an extra charges.</li> <li>Without T &amp; C in place, haulier can't imposed the trailer detention charges to customers and it will affect the DTM movement, this will resulted in reduce trailers productivity and difficulty to charge trailer detention</li> <li>T &amp; C Strategies may include in reducing or expanding the number of the trailers made available to any single customer and building incentives into the negotiated fee tariff so that profit is maximized and utilization of trailers is minimized.</li> </ul>
<p><b>Respondent Company2:</b>Operation Manager</p>
<ul style="list-style-type: none"> <li>Hauliers must apply the terms and conditions of services which agreed by their customers.</li> <li>The trailer detained by customer beyond free period time will be charged trailer detention charges.</li> <li>Lenient to implement the T &amp; C will affect the DTM movement e.g. the trailer that suppose can perform three (3) or four (4) delivery on that particular day perhaps only able to perform one (1) trip so this will be an opportunity lost to haulier.</li> <li>It is important to specify minimum acceptable service levels and to establish procedures to ensure that the agreed levels are being met and to consider whether they need to be reviewed. Service agreement attention is focused on what a particular services actually served</li> </ul>
<p><b>Respondent Company3:</b>Head of Branch</p>
<ul style="list-style-type: none"> <li>Containers movement delivery must be in accordance to the haulage administration terms and conditions.</li> <li>Deferral is a circumstance in which something happens later than it ought to or the measure of time that they should sit tight to something that is a late.</li> <li>Delay in DTM movement is a disturbance in the delivery either asked for by the client or because of uncontrollable conditions or any outside elements.</li> <li>Delays in delivery of holders increment the aggregate transportation and variables cost and consequently the budgetary misfortunes that they needed to acquire because of the expanded cost of exchanges.</li> </ul>

**CONCLUSION**

DTM movement monitoring and collection which particularly focusing to optimize trailers deployment. Consequently, the present DTM monitoring is applicable in drop trailer method movement in Malaysia Haulage Industry. Subsequently, drop trailer method monitoring and implementation of T & C were necessary as a mechanisms for haulage operators to optimize trailers utilization. As conclusion, this overview and general evaluation is to tie the gap between the academic literatures with the real world practiced. On the academic fact of sight, the

findings had donated in the direction of the fleets movement management theory and framework headed for a new scene in the context of managing drop trailer methods movement. Explicitly, this study has enormousness the knowledge drop trailer method issue by providing empirical evidence on monitoring concept which has bridge the gap from a normal monitoring involving driver, prime mover and container unit but towards the trailers monitoring management approach. The findings described in this context resulting from successful implementation by Malaysia Haulage Industry and can serve as a guideline for the organization that operated drop trailer method.

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