

A CASE STUDY OF DETERMINANTS DETENTION CHARGES FOR CONTAINER EXPORT SHIPMENTS

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ABSTRACT

The world trade and cargo transportation have been dramatically change based on the increasing demand for value-added logistics services and the integrated supply chains that looking forward to the concept of inter or multimodal transport systems. One of the international shipping businesses which apply the transport systems concept with numerous controls or regulations is export shipments. Within the integrated supply chains cycle in export shipment, when something goes wrong or when one of the key players fails to comply with the regulations, it can result in penalties, delays, and unexpected costs. In this case study, the researcher has selected one of the local forwarder in Johor Bahru that provides freight forwarding services and custom clearance for import and export shipments. It was identified that this company currently has to pay numerous extra costs, especially detention charges. Detention charges have been considered as extra costs that need to being waived by the forwarder company on behalf of the customer (exporter). This study is a qualitative in nature and the secondary data collected was analyzed using field observation based on analyses of invoices produced by the port operator. Findings for this study will be based on three months invoices of export containers shipments within October until December 2017. The results are in the form of frequency analysis and it can be interpreted by using graphs and tables through MS Excel. The researcher proposes the company to impose 1% deposit payment per export container from forwarding charges to cover the charge that incurred after gate closing time. Further, to cover another charge that incurred due to shut out or change of vessel, the researcher propose that all drivers in the company must able to check and report any defects in daily basis. This method can be cost effective as they can take early actions and supply sufficient hauliers to deliver customers (exporters) orders into port.

Keywords: *Export Shipments, Freight Forwarder, Detention Charges.*

INTRODUCTION

The world trade and cargo transportation have been dramatically change based on the increasing demand for value-added logistics services and the integrated supply chains that looking forward to the concept of inter or multimodal transport systems. As a result, high quality of logistics services together with the effective and efficient integration of transport systems offered by a maritime operator (i.e. a shipping company or port/terminal operator) has become an important issue (Song & Panayides, 2012).

In maritime industry, ports are offering a range of services and operating under different organizational structures. Differentiation of pricing structure to the port user is one way for the ports to gain competitive advantages. Basically, port charges for container export shipment cover container loading and storage which include detention. Detention is a charge to the shipper for the use of liners equipment after the expiration of the free time (FMC, 2015). The detention-free time period depends on the agreement between the shipping line and customer (exporter). Detention charges have been considered as extra costs that need to being waived by the forwarder company on behalf of the customer. The charges are usually issued by port operators and the rate is different based on case by case. If containers are late to enter the port and exceed the time given, this shipment can be charged detention charges such as gate closing time or the containers might shut-out from the shipment and have to wait for another vessel at the port.

By selecting one freight forwarder as a case study, in general, the purpose of this study is to explore the detention charges that the studied company has to bear. Freight forwarder is a person or company who has made the contract with a customer (exporter/importer) to carry goods on their client's expenses performing all other related actions (Burkovskis, 2008). One of their roles is to arrange cargo movements by involving all modes of transport including air, sea, road and rail freight. Further, they also review the related documentation such as commercial invoices and shipper's export declaration, Bill of Lading. The freight forwarder should obey with the contract of transport goods once they confirmed the received order. In specific, there are two objectives of this study. The first objective is to study the detention charges that incurred after gate closing time. This charge incurred when the laden container has reached at port container terminal by exceeds the closing time. The duration of gate closing time given will be eight hours before the vessel arrive at the port. The second objective is to study the detention charges that incurred due to shut out or changes of vessel. This charge incurred when the container had to shut out from the nominated original vessel. Usually it will take minimum one day to wait for another vessel at the port.

This study has chosen one of the local forwarder in Johor Bahru area (i.e. ABC Company) as a case to be studied who provides freight forwarding services and custom clearance for import and export shipments. Currently, ABC Company concentrates more on arrangement of Full Container Load (FCL) services. In addition, ABC Company also manages chartered services for conventional cargoes such as liquids or gas from pipelines to tankers. Besides that, the company operates haulier services to carry 40ft high cube container in import and export business. To date, ABC Company has 17 prime movers

and 81 trailers which being operated actively surrounds Johor. As a broker appointed by the Royal Malaysian Customs Department, the company manages several services such as obtaining import and export approvals, tariff rate advice on cargo, negotiating costs involved for import transactions and meeting other requirements specifically based on prescribed laws.

Nowadays, ABC Company has to pay numerous extra costs, especially detention charges which have impacted its income flow that is not continuously stable due to the profit imbalance. The effectiveness of the company depends on their customers and hauliers performance in the movement of goods. At the end of each year, ABC Company received a lot of export shipment orders. Most of the shipments will be transported by containers and most of the reasons were due to the clearance of stock or seasonal demands.

This study offers various contribution and practical implication. By identifying the factors on related issue, ABC Company can determine the opportunities of improvements and they can upgrade their performance to become a greater forwarder in Johor Bahru.

PROBLEM STATEMENT

Usually at the end of the year, the customer (exporter) request lots of orders to export the containers. During the process, a lot of difficulties faced by the ABC Company such as late receive information from the customer to truck out the laden container from their factory to port, cannot supply enough hauliers due to maintenance problems, and etc. Based on the stated problems, it can cause detention charges that being charged by port operators.

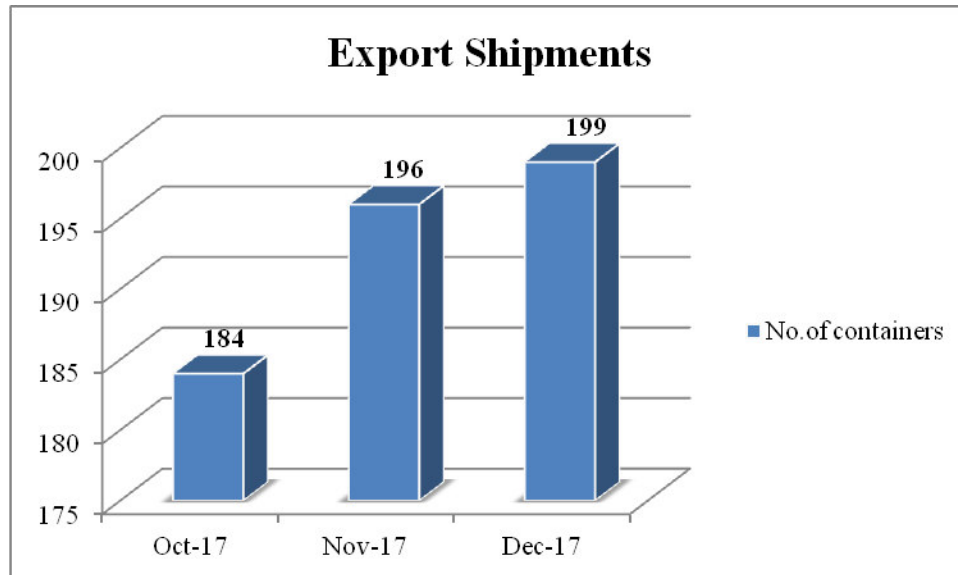


Figure 1
Export Shipments via Containers

Figure 1 shows total containers that being exported by 3 regular customers (exporters) surround Johor. As we can see, the numbers of containers were slightly increased from October until December 2017. The size of containers for these shipments was 40ft high cube and types of cargoes were finished goods. Most of the orders had being shipped to China, United Kingdom, and Turkey.

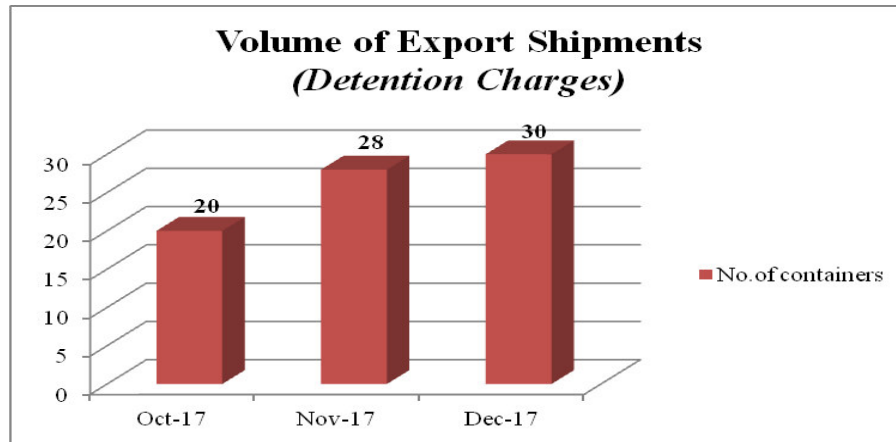


Figure 2
Volume of Export Shipments (Detention Charges)

Meanwhile, Figure 2 shows volume of containers that being charged for detention charges was also increased from October until December 2017 based on the customers (exporters) shipment orders (refer Figure 1). However, the total amount of detention charges in Ringgit Malaysia (RM) was not similar accordingly due to different ports tariff rate.

LITERATURE REVIEW

Free Time

Based on FMC (2015), “free time” is generally used in the industry as a period of time which no detention charges will be applied for the use of a container, in addition to basic freight costs. Therefore, customers who are involved in export shipments need to have efficient and strategic supply chain activities to avoid detention charges within the free time given. “Free time” varies for each shipping line, but generally ranges from seven to ten calendar days (including public holidays and weekends) depending on the type of container used.

Cargo Handling Charges in Port

According to Wilmsmeier (2012), port operation services nowadays has being separated since the terminals of one port might have different operators and port services. In

general, port charges can be assigned by services that divided into two categories such as services to vessels and services to cargo (PPIAF, 2007).

There were three related activities that have been included in services to cargo such as transfer of cargo between ship and dock or storage, transfer of cargo between storage and outside the gate, and intermediate containers storage in the yard between the ship and yard transfers for a specified number of work days (free time).

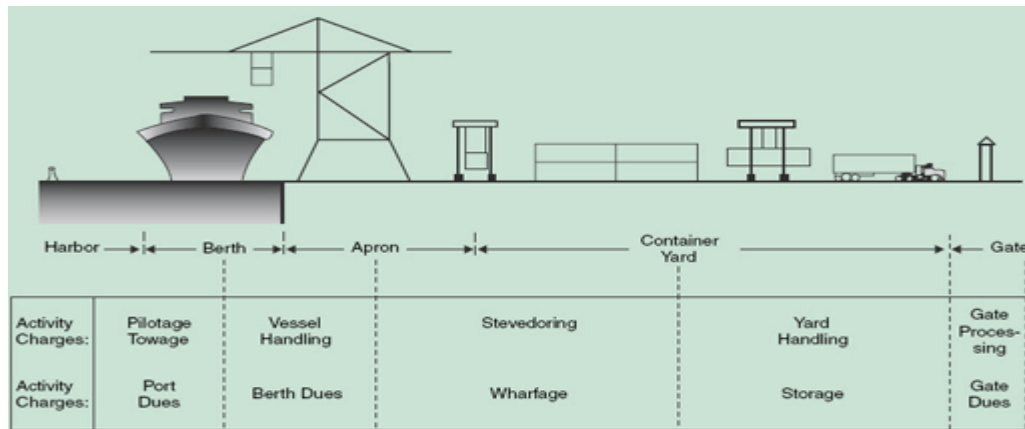


Figure 3

Relationship between port charges and the location where the charge is incurred (*sources from PPIAF, 2007*).

Port Tariff Rate

Closing Time Charge

There were different tariff rate that has being issued by Johor Port Berhad and Tanjung Pelepas Port for closing time charge.

Johor Port Berhad

Closing time charge that enshrined in Johor Port Authority Act 1963, 2011 stated that a port user shall pay the closing time charge to the Authority for receiving export containers at the container terminal less than eight hours from the estimated time of arrival of the vessel at the rate as specified in Part 18 of the Third Schedule.

Table 1
 Part 18 - Closing Time Charge for Receiving Export Container at the Container Terminal [By-Law 43]

Item	Closing Time Charge	Per Container	
		20 feet in length (RM)	40 feet and above in length (RM)

1.	Receiving containers at the container terminal less than eight hours from the estimated time of arrival.	45.00	70.00
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Port of Tanjung Pelepas

By referring to PTP Terms and Conditions of Business (2018), there were three types of miscellaneous charges for export FCL containers.

- a) Where the FCL export container is delivered after established cut-off, with the prior approval from port but before the arrival of the vessel, the following charges shall be payable as per below:

Table 2
 Closing Time Charge for FCL Export Container before Arrival of the Vessel

<i>Per Container</i>		
<i>Up to 20 feet in length</i>	<i>Exceeding 20 feet but not exceeding 40 feet in length</i>	<i>Exceeding 40 feet in length</i>
RM70	RM105	RM115

- b) Where the FCL export container arrived after the closing time prescribed by the PTP and after the arrival of the vessel but is accepted by the PTP for direct loading onto a vessel or storage on deck, the following charges shall be payable:-

Table 3
 Closing Time Charge for FCL Export Container After Arrival of the Vessel

<i>Per Container</i>		
<i>Up to 20 feet in length</i>	<i>Exceeding 20 feet but not exceeding 40 feet in length</i>	<i>Exceeding 40 feet in length</i>
RM210	RM315	RM345

c) Charges for opening and closing of gate cut-off time

Table 4
 Opening and Closing of Gate Cut-Off Time

<i>Per Container</i>	RM20
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Shut Out Containers and Change of Vessel Charge

Johor Port Berhad

Based on (Johor Port Authority Act 1963, 2011) stated that:

- (1) A port user shall pay to the Authority the shut-out containers and change of vessel charge for the containers which are received but not shipped on the originality nominated vessel's voyage but instead shipped by another vessel's voyage at the rate as specified in item 1 of Part 19 of the Third Schedule.

Table 5
 Part 19 – Shut-Out Container or Change of Vessel [By-Law 44]

<i>Item</i>	<i>Shut out or change of vessel</i>	<i>Per Container</i>	
		<i>20 feet in length (RM)</i>	<i>40 feet and above in length (RM)</i>
1.	Container received but not shipped on the originally nominated vessel's voyage and subsequently shipped by another vessel's voyage	45.00	70.00

- (2) Any container referred to in paragraph (1) shall be entitled to a free storage period of one hundred and twenty hours commencing from the time of receipt of the containers at the container terminal in-gate, and the storage shall be calculated after the expiry of such free storage period until the actual time of berthing of the vessel on which the container is to be loaded based on the rate as specified in Part 4 of the Third Schedule.

Table 6
 Part 4 – Storage Charge for Container [By-Law 32 and Paragraphs 44(3) and (4)]

Item	Type of Container	Per 24 hours or part thereof	
		20 feet in length (RM)	40 feet and above in length (RM)
1.	Laden or empty normal container or normal container containing non-dangerous goods or dangerous goods Group III (Import/Export)	4.00	8.00

(3) A port user shall pay any extra movement in the handling of containers at the rate as specified in item 1 of Part 21 of the Third Schedule.

Table 7
 Part 21 – Miscellaneous Container Charges [By-Law 46]

Item	Type of Service	Per lift per container or part thereof	
		20 feet in length (RM)	40 feet and above in length (RM)
1.	EMC (Extra Movement Charge)	45.00	70.00

METHODOLOGY

This research is a case study and has being conducted to explore the detention charges for container export shipments at one of the local forwarder in Johor Bahru, Johor Darul Ta'zim. This study is a qualitative in nature. Content analysis was carried out to analyse the secondary data such as invoice from Johor Port Berhad and Port of Tanjung Pelepas for detention charges. The secondary data collected will be analysed using field observation, based on analyses of invoices produced by the port operator.

In conducting case study at ABC Company, this study focused on the three local customers that export their cargoes by monthly basis. The factories of the local customers were being located at Muar and Tangkak, Johor. The three months data related to the export containers shipments was collected and analyzed starting from October to December 2017. The results of this study are in the form of descriptive or frequency analysis and graphically presented by using graphs and tables through MS Excel.

FINDINGS AND DISCUSSION

Before researcher revealed the data findings, further explanation about export cycle will be clarified based on Figure 4 as per below:



Figure 4

Illustration Diagram of Export Cycle by Land Transport in ABC Company

Based on Figure 4, detention for exports begins when the exporter picks up a container from the shipping line facility and ends when the exporter presents the loaded container for export at the terminal. Container detention charges are imposed by shipping lines for containers kept beyond the assigned “free time” and not returned to the designated location within that period. Usually, the customer (exporter) who liaised with the local forwarder company in this case study will be granted a five-day detention-free time period.

All data has been analyzed through online Port Web System. The invoices of detention charges have been billed by Johor Port Berhad (JPBi, 2017) and Port of Tanjung Pelepas (PCOP, 2017).

Detention Charges for Container Export Shipment

Data in Figure 5 shows total amount of detention charges that has been charged to ABC Company within October until December 2017. Even though the volume of export containers were slightly increased within the selected months (refer Figure 1), the amount of detention charges in Ringgit Malaysia (RM) has being fluctuated based on different tariff rate in port terms and conditions. Further details on detention charges will be analyzed due to the highest amount (RM 3,326) on November 2017.

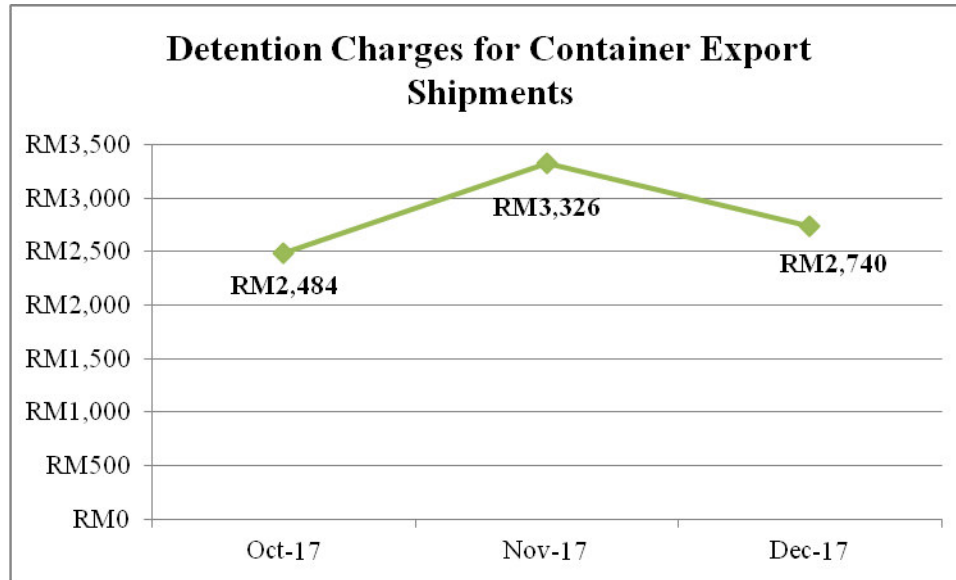


Figure 5
 Detention Charges for Container Export Shipment

a) Detention Charges That Incurred After Closing Time

Table 8 shows the duration differences (Port Closing Time vs. Container Actual Time Enter Port) & Total Charges Incurred after Closing Time.

Table 8
 The duration differences

No. of container	Export Container Terminal (Port)	Estimated Time Departure (ETD)	Port Closing Time	Time-in (container enter port)	Duration Differences (After closing time)	Charges Amount (RM)	Description
1	Johor Port	16/11	14/11 @ 15:00	15/11 @ 08:53	17hrs 53ms	70	Refer Table 1 (Johor Port Authority Act 1963, 2011)
2	Johor Port	17/11	14/11 @ 01:00	14/11 @ 20:40	19hrs 40ms	70	Same as above
3	Johor Port	17/11	14/11 @ 01:00	14/11 @ 20:39	19hrs 39ms	70	Same as above
4	Johor Port	19/11	15/11 @ 15:00	15/11 @ 21:38	7hrs 38ms	70	Same as above

5	Johor Port	19/11	15/11 @ 15:00	15/11 @ 17:43	2hrs 43ms	70	<i>Same as above</i>
6	Johor Port	19/11	15/11 @ 15:00	16/11 @ 03:34	12hrs 34ms	70	<i>Same as above</i>
7	Johor Port	19/11	15/11 @ 15:00	15/11 @ 23:45	8hrs 45ms	70	<i>Same as above</i>
8	Johor Port	19/11	15/11 @ 15:00	16/11 @ 13:51	22hrs 51ms	70	<i>Same as above</i>
9	Johor Port	23/11	21/11 @ 09:00	21/11 @ 09:29	29ms	70	<i>Same as above</i>
10	Johor Port	23/11	21/11 @ 09:00	21/11 @ 20:00	11hrs	70	<i>Same as above</i>
11	Johor Port	28/11	24/11 @ 06:00	24/11 @ 20:52	14hrs 52ms	70	<i>Same as above</i>
12	Johor Port	28/11	24/11 @ 06:00	24/11 @ 20:18	14hrs 18ms	70	<i>Same as above</i>
13	Johor Port	28/11	24/11 @ 06:00	24/11 @ 21:00	15hrs	70	<i>Same as above</i>
14	Johor Port	28/11	24/11 @ 06:00	24/11 @ 13:57	7hrs 57ms	70	<i>Same as above</i>
15	Johor Port	5/12	4/12 @ 15:00	4/12 @ 16:09	1hr 9ms	70	<i>Same as above</i>
16	Johor Port	8/12	6/12 @ 14:00	6/12 @ 15:55	1hr 55ms	70	<i>Same as above</i>
17	Johor Port	8/12	6/12 @ 14:00	6/12 @ 16:25	2hrs 25ms	70	<i>Same as above</i>
18	Johor Port	5/12	2/12 @ 02:00	2/12 @ 2:23	23ms	70	<i>Same as above</i>
19	PTP	-	-	-	-	125	Refer Table 2 & Table 4 (<i>PTP Terms and Conditions of Business, 2018</i>)

20	PTP	-	-	-	-	125	<i>Same as above</i>
21	PTP	-	-	-	-	125	<i>Same as above</i>
22	PTP	-	-	-	-	125	<i>Same as above</i>
23	PTP	-	-	-	-	335	Refer Table 3 & Table 4 (<i>PTP Terms and Conditions of Business, 2018</i>)
24	PTP	-	-	-	-	335	<i>Same as above</i>
25	PTP	-	-	-	-	335	<i>Same as above</i>
26	PTP	-	-	-	-	335	<i>Same as above</i>
Total amount :						<u>3,100</u>	

The information presented in Table 8 proves that the containers have entered the port after closing time with various duration differences. However, all the containers managed to being shipped by the original nominated vessel according to the Estimated Time Departure (ETD). It can be concluded that the customers (exporters) provide the laden container in last minute and has inform late to truck out the container from their factory.

b) Detention Charges That Incurred Due to Shut Out or Changes of Vessel

Table 9 shows the total Charges Incurred Due to Shut-Out Container or Changes of Vessel.

Table 9
Total Charges Incurred Due to Shut-Out Container or Changes of Vessel

No. of container	Export Container Terminal (Port)	Estimated Time Departure (ETD): <i>Original Nominated Vessel</i>	Estimated Time Departure (ETD): <i>Another Vessel</i>	Port Closing Time	Time-in (container enter port)	Charges Amount (RM)	Description
1.	Johor Port	2/12/2017	6/12/2017	5/12 @ 15:00	1/12 @ 12:45	70 (shut out container)	Refer Table 5 (<i>Johor Port Authority Act 1963, 2011</i>)
2.	Johor Port	16/11/2017	20/11/2017	16/11 @ 16:36	11/11 @ 16:36	70 (shut out container)	Refer Table 5, Table 6 &

						70 (extra movement charges)	Table 7 (<i>Johor Port Authority Act 1963, 2011</i>)
						16 (storage)	
Total amount :						<u>226</u>	

Referring to Table 9, the amount of charges incurred due to shut-out container or changes of vessel will be charged higher than the charges incurred after closing time. The related charges are for the use of labor, shore handling equipment, rental yard machines and port facilities (use of installations and wharfage) (Wilmsmeier, 2012).

Besides receive late information from the customer (exporter), ABC Company also always has difficulties to supply sufficient haulier due to maintenance problems. Therefore, this situation will put them at risk to bear the charges on behalf of the customer (exporter).

RECOMMENDATION / FUTUREWORK

The researcher has determined that detention charges for export shipments occur when the customers (exporters) violates the port operator terms and conditions. Practically, port operator will charge the detention charges to ABC Company. Even though ABC Company will bill to the customer back, most of the time they always being responsible to make early payment to the port operator. As a middle man, this situation cause difficulties towards ABC Company as they need to absorb some of the charges amount on behalf of their customers every month. There are two recommendations that will be recommended by the researcher for this case study.

First, researcher proposes to ABC Company to impose 1% deposit payment per export container from forwarding charges to cover the charge that incurred after gate closing time. For example, by calculating deposit 1% from the forwarding charges which approximately by RM 1,000, it will being equivalent to RM 10 per container. Customers (exporters) will pay the deposit before the shipment based on the quantity of containers that have been booked. However, not every export shipment will be charged on detention charges. Therefore, ABC Company will take the deposit payment as collateral to bear unprecedented charges from the port operator. By end of the year, if there are any balances from deposit payment, ABC Company will return back to the customers. This is one of the initiatives to make sure that the customers (exporters) will improve their commitment by providing the laden container on time and truck out from their factory based on the time required.

Second recommendation will focus on the responsibilities of ABC Company by ensure their hauliers always in a good condition and sufficient to cater the export shipments. This is one of the alternatives for them to waive the detention charges that incurred due to

shut-out from the vessel. According to Melan and Zainuddin (2016), transport operator is responsible for the condition of the hauliers by doing daily inspection according to procedures and checklists. The inspection is to assess whether the hauliers are safe for the movement or should be off the road for repair and maintenance aspects. Therefore, researcher proposes that all drivers in ABC Company must be able to check and report any defects in daily basis. The report must be made in writing form and being recorded to detect any major breakdown. This method can being cost effective to ABC Company as they can take early actions and prevent sudden failure of the haulier movement.

This research is focus on the detention charges for container export shipments that has being charged by port operators to ABC Company in Johor. Future research is suggested to explore the detention charges that being charged by other container port operators in surrounding Malaysia.

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