The study of Delayed Problems on Concentrated Latex Transportation from Thailand to Malaysia

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Abstract

Most of C/L (Concentrated Latex) exporters usually outsource lorry-tanker transportation services for export to Malaysia. This study had been investigated due to the founding of delayed problems for transportation that were the highest record as customer complaints to transporters which affected company's image and reliability for customers. The purposes of this research are to study C/L transportation process from Thailand to Malaysia to investigate its problems in each process and to identify cause of delayed problem on concentrated latex transportation from Thailand to Malaysia. Data of this qualitative study were collected through in-depth interview by eight informants from five transporters in Songkhla province (Thailand) and Malaysia, present by using narrative description.

The results appears that there are 3 points of transportation problem affected to delayed delivery that happened during C/L transportation process, including 1) The lorry-tanker maintenance system 2) The export formalities. These two points are controllable. 3) The traffic jam and unexpected situation which are uncontrolled.

This research suggests that the exporters should set standard of lorry-tanker maintenance system, study more on how to select efficient transporters to operate high service quality for C/L transportation, negotiate with customers, make transportation planning, keep up to date on the daily news and use GPS for tracking. For further study, the opportunity and frequency of problems occurred in each step of transportation procedure should be investigated to cut the root cause of delayed problems for building sustainable trade and adding value to both exporters and customers.

Keywords: Delayed problem, Transportation, Concentrated Latex transportation

Introduction

Thailand is the first ranking of the world for rubber products export, also quantity of rubber production output has been continuously increased (The Economist Intelligence Unit Limited [EIU], 2014, p. 84). Songkhla province is as one of the biggest rubber planting area at amount 2,062,626 Rai (Office of Agricultural Economics, [OAE],

2014) which made Sonkhla province has plenty of C/L (Concentrated Latex) production factories, 25 factories (Thai Rubber Association [TRA], 2014). The main purpose of rubber industry in Southern Thailand is to transform the raw material for export via delivery through Sadao Customs which are various modes of transporation such as rail transport and truck or tanker transport.

In order to increase operation efficiency, company should concentrate about transportation management because it's the principle for the top successful of overall supply chain (Phiwdam, 2013) and it can create economic value by providing conveniences of place and time as customer's required. In C/L exporter's perspective, outsourcing is needed for transportation and C/L delivery by lorry-tanker has been chosen usually for most of them because it facilitates customers to discharge C/L from the tanker to the storage tank directly for immediate using in customer's production lines.

Nevertheless, the transportation would be highly satisfied and value added when it not only reaches destinations on time but also quantity and quality are on specification (Sutthiwathanarueput et al., 2004) which is basic factor for competitive advantage of each C/L production factories because the nature of C/L was clearly specified and it has no physical differentiation, thus, transportation activity could be compared as company's representative that encourages more value of product. However, the studies found the barriers causes of unsmooth delivery, for instance, hijack cases and C/L stolen during transportation by adding water for replacement. (Thai Latex Association [TLA], 2014) It affects company's reliability for customers.

In addition, according to the results of complaints of latex exporters that issued to their transporters from AA & BB companies (C/L production and export company), it found that delayed problem of transportation was mostly issued in year 2013 – 2-14 at 62.50% for AA company (AA Company, 2014) and 74.29% for BB company (BB Company, 2014) which is more than half of all customer complaints record. Therefore, exporters should pay attention to study and solve these mentioned problems urgently because the heart of transportation is to delivery on time otherwise, it would affects long term negative impact to the company.

According to the above reasons, this study focus on delayed problems on C/L transportation from Thailand to Malaysia because the understanding of the causes are the way for managing and solving problem that would drive efficient transportation, reduce wastages from time and cost, create good image of trading for organizations which will be further value added for C/L transportation industry.

Objectives

1. To study concentrated latex transportation process from Thailand to Malaysia and to investigate its problems in each process.

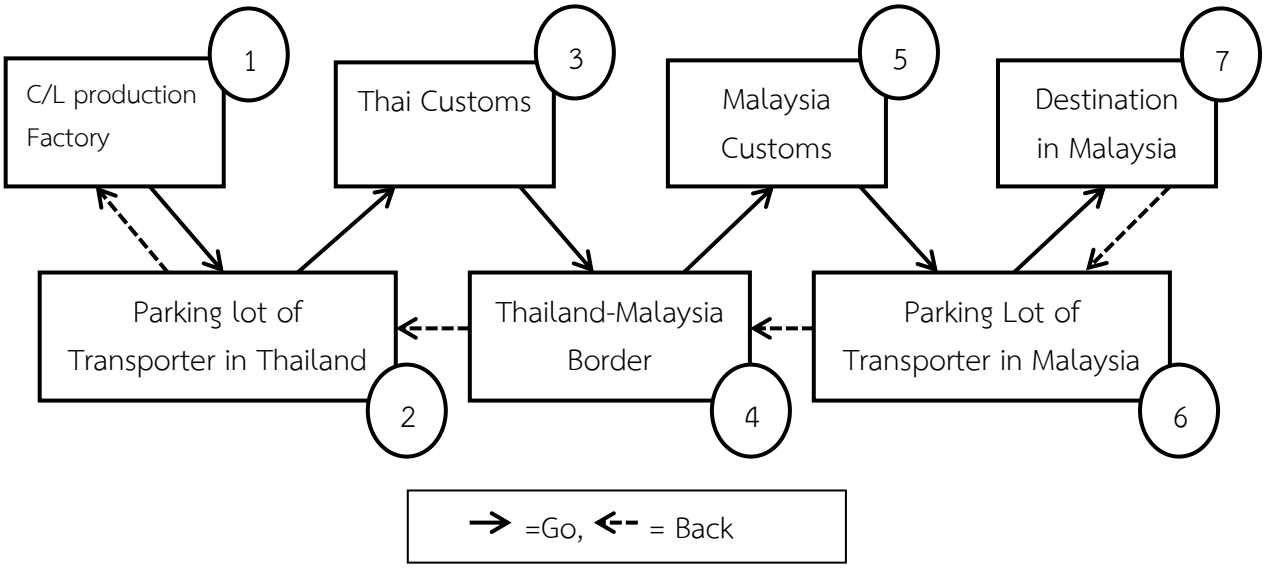
2. To identify cause of delayed problems on concentrated latex transportation from Thailand to Malaysia

Literature Review

1. Concentrated Latex transportation process from Thailand to Malaysia

From investigating the basic information of C/L transportation from Thailand to Malaysia of C/L exporters, it found that the processes and procedures of C/L transportation in each companies are quite similar which can be summarized as following figure 1.

Figure 1 Processes of C/L transportation from Thailand to Malaysia



The figure 1 shows processes of C/L transportation to Malaysia of C/L production factories in Songkhla province, starting from C/L loading to lorry-tanker at **C/L factory (1)** in the morning time. After that the lorry will be parked at the **parking lot of Transporter in Thailand (2)** for lorry-tanker condition check-up to be ready for delivery and for documents checking to export. At that time the header of lorry will be changed from Thai plate to Malay plate. Export formalities will be implemented after this at **Thai Custom. (3)** The products will be checked by staffs of Thai Customs for product release and then drivers go through **Thailand-Malaysia border (4).** There will be staffs of Malaysia Customs to operate import formalities and take product sampling at **Malaysia Customs (5)** and the lorry-tanker will be parked at **Parking Lot of Transporter in Malaysia (6)** to check products documents, label and seals as well as lorry-tanker

condition again and waiting for suitable time to deliver C/L to customer's factories. Almost drivers will wait to start leaving at the late night time. The lorry arrived **destination in Malaysia (7)** in early morning. After that, the lorry-tanker will be weighed-in and the product (C/L) will be taken for qualification test before discharge C/L into customer's storage tanks. Total of all processes takes time around 1 day.

After finished unloading C/L at customer's factory, the lorry-tanker will be sent back to use at the same process, except the customs because there is no goods carried. The lorry will be washed and clean before coming back to use again by the process as shown on dashed arrows **(7, 6, 4, 2, 1)** which also takes time around 1 day.

2. Problem analysis concept by using Cause and Effect Diagram

Cause and effect diagram also called "Fish Bone Diagram" because a completed diagram can look like the skeleton of a fish. The fishbone diagram identifies many possible causes for an effect or problem. It can be used to structure a brainstorming session. It immediately sorts ideas into useful categories. The major categories of causes of the problem that are generically used include; Man (people), Machines (equipment), Materials, Methods and Environments. (ASQ, 201

Research Methods

The data from this qualitative research was collected by In-depth interview by concentrating on investigate process on C/L transportation export to Malaysia. Primary data were reviewed by AA & BB companies who are C/L production and export to Malaysia by using lorry-tanker. The procedures of data collection to achieve the objectives are as follows

The Samples of this study are sampling by Snowball Selection to choose the sample that are in required specification, begin with the transporters have been using service by AA company, including transporters A, B & C. Then increase the sample by suggesting other similar transporters from the mentioned samples which including transporters D & E and continue collect data from both of them. Data collection will be stop after receiving similarity data from all samples. Semi-Structured Interview was used for this study.

The questions that used for interview focused on asking about causes of delayed problem and how to manage and solve the problems. There was telephone calling for appointment. Period of interview was during June 2015, implementation by face-to-face interview The questions were asked step by step as the question frame that created by based on Cause & Effect Diagram or Fishbone Diagram, consisting of 4Ms 1E (Man, Machine, Material, Method & Environment. Another question also was asked smoothly depending on each situation. There was voice recording during interview and finished the

interview until there is no point to have a question. After that, the data collecting from interviewing are interpreted words by words for analyzing related matters and concluding. Present by using narrative description.

Results

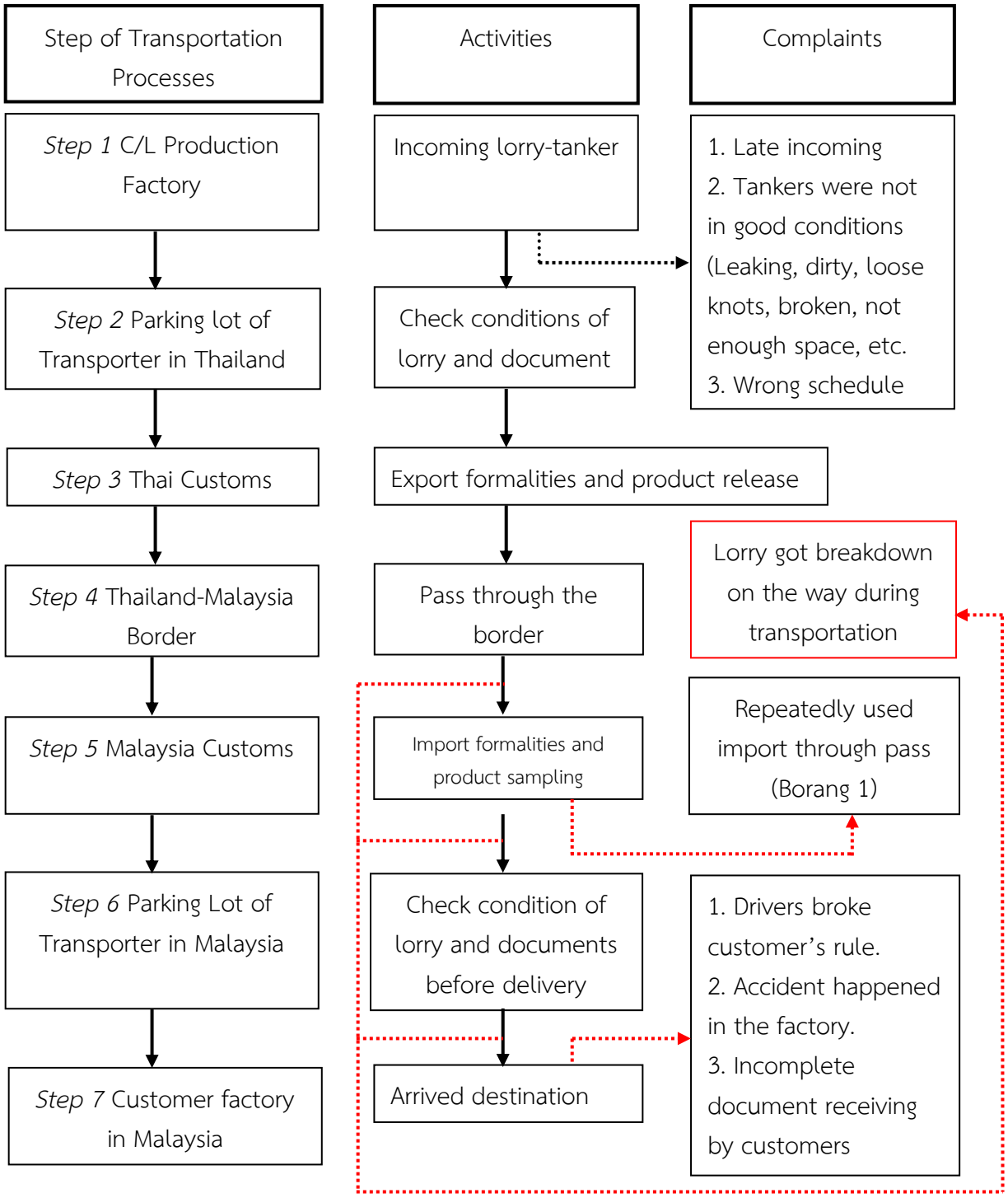
There were 2 sections of the results in order to answer 2 objectives of the study included the findings of primary data reviewed and the summary of samples interviewed as shown below;

Section 1: The findings of primary data reviewed by AA & BB companies from report of complaints of latex exporters that issued to their transporters in year 2014-2015 appeared that each matters of complaint could be occurred in every steps of process on transportation export to Malaysia. Many problems that cause complaining were found at the first step (C/L production factory) such as late incoming, tankers were not in good conditions (leaking, dirty, loosen knots, broken, not enough space, etc.) and wrong schedule. All these mentioned problems affects to delayed shipment to customers because the times of transportation will be taken for improving those mistakes instead.

The activity at process of import formalities (step 5) was also found the matter problem causing customer complaints which is the mistake about import-export documents. It also was found the problem of complaint at customer's factory (Step 7) including, driver broke customer's rules, accident happened in the factory and in complete document receiving by customers. Even though, the problems at step 5 and step 7 are not directly affects to delayed delivery but it still can make negative impact to exporters.

However, delayed problem from breakdown lorry almost happened on the way in Malaysia and the problems occurred in any step is related and affected to another following steps which impossibly cause delayed problem of transportation as the summary of customer complaints on process on C/L transportation export from Thailand to Malaysia (Figure 2)

Figure 2 Summary of Customer complaints on process of C/L transportation export from Thailand to Malaysia



Section 2: Five transporter companies were interviewed by 8 interviewees including 5 peoples from 3 transporters in Malaysia and 3 peoples from 2 companies in Songkhla province (Thailand). The interviewees are executive director, senior manager

and officers who are directly responsible for transportation management. The duration of each interviews raged between 1 and 1.5 hours.

First point, delayed problem of transportation caused by man problems including the problem from drivers, mechanics, coordinators and cleaners (Table 1). Transporters A, B, C & D commented that the mechanics is the most possible point causing delayed problem on transportation due to some of lorry's damages are over capabilities of company's mechanic so they need to use external repairing services which need to take time. Or the mechanics have to go from factory to the area that got breakdown on the way during delivery for repairing the lorry. It also takes too much time and affects to late incoming at customer's factory that conform with the study of Phiwdam (2013) which said that complicated and late maintenance affected to efficiency of transportation. Meanwhile, transporters E have different opinion because there are both internal and external mechanics in each city along transportation way which is faster repairing.

Table 1 Man problems

Case companies	Causes of man problems			
	Drivers	Mechanics	Coordinators	Cleaners
A	✓	✓		✓
B	✓	✓		✓
C		✓		
D		✓	✓	
E			✓	

Second point, delayed problem of transportation caused by lorry tanker (Machine) problems divided into condition of lorry-tanker problems and enough of lorry-tanker problem (Table 2). The condition of lorry-tanker problems are mostly commented that they are reasons of delayed shipment from transporters A, B, C and D due to their lorry-tankers are more than 6 years age and only simply eyes checking for lorry-tanker appearance is difficult to find the damages, delayed problems could be occurred implicitly as conformed with the research studied by Phiwdam (2013), appeared that standardization of maintenance system was more convenient to forecast time of lorry check-up and easy for planning lorry-tanker replacement cases. These mentioned problems were not found for Transporter E which related to the first point that mentioned about efficient time of repairing management.

Table 2 Lorry-tanker problems (Machine)

Case companies	Causes of lorry-tanker (Machine) problems	
	Condition of Lorry-Tanker	Enough of Lorry-Tanker
A	✓	✓
B	✓	
C	✓	
D	✓	
E		✓

Third point, delayed problem of transportation caused by equipment problems (Machine) including problems from tires and insufficient spare parts (Table 3). Transporters A, C & D faced tires problems because it was accident which is unexpected. The drivers need to stop driving immediately for safety when it got tires blow out as same as the case of lorry breakdown. Also spare parts problems are mentioned from transporters A, B & C. Some faced that the spare parts was difficult to purchase causing of insufficient spare parts until it becomes late repairing which finally affect to the customers. Transporter E is not faced this problem which related to the first point and second point that they can manage efficient maintenance system.

Table 3 Equipment problems (Material)

Case companies	Causes of equipment (Material) problems	
	Tires	Insufficient Spare parts
A	✓	✓
B		✓
C	✓	✓
D	✓	
E		

Forth point, delayed problem of transportation caused by method problems consisting of schedule arrangement, transportation route arrangement and export formalities (Table 4). The export formalities are mostly found as a cause of delay problems for transporters A, B, D & E. There are different reasons on facing this problem in each transporter; transporter A mentioned that it's because of shipping agent is hard to contact in urgent cases and the procedure of exporting is complicated, transporter B faced that the cooperated officers who are responsible for running export formality are not ready, transporter D mentioned that it's because of the traffic jam at the border and exporting forms complementary, and transporter E faced the problem by documents

mistaken of their own staffs which waste time for revising the documents to export, conformed with the study of Patcharawalai (2009) which said that document mistakes were the most problem founded on using transportation service. Meanwhile, transporter C's view is shown that the problem from export formalities is unexpected and out of control, for instance, traffic jam in festival time making delayed delivery. The government policy is also pay attention in this matter as there is the project of Sadao customs construction in another 500 Rai area to support trade expanding of service and reduce crowded situations. (Sitthichai, 2015)

Table 4 Transportation method problems

Case companies	Causes of transportation method problems		
	Schedule arrangement	Transportation route arrangement	Export formalities
A		✓	✓
B			✓
C	✓	✓	
D	✓		✓
E			✓

Fifth point, delayed problem of transportation caused by environmental problems which are traffic jam problem and unexpected situations problems (Table 5). Transporters A, B, C & E mentioned that the traffic jam affects to delayed delivery especially in the festival times due to there is no U-turn point at the main road that makes delayed problem by follow. Transporter D commented that the problem of traffic jam can be prevented by negotiation with customer to avoid delivery on the festival time and postpone delivery date. In addition, the unexpected situations also could be reasons of delayed shipment in the views of transporters B, C & E, for example, flooding and people protested along transportation way by blocking roads as well as C/L stolen and hijack during transport. In another side, transporters A & D mentioned that the unexpected situations can be avoided by good planning of the way to use for transportation and news updated before service, the delivery guide or manual also would be essential for the driver to solve facing problem to reach destination safely, similar to the study which found that the manual is beneficial for the drivers to study and understand over all transportation process, helping to develop driver's capability for implementation and also increase transportation efficiency. (Sanguansiri, 2015)

Table 5 Environmental problems

Case companies	Causes of Environmental problems	
	Traffic jam	Unexpected situations
A	✓	
B	✓	✓
C	✓	✓
D		
E	✓	✓

Conclusion and Discussion

To manage delayed problem for C/L transportation export to Malaysia by lorry-tanker, all five transporters faced different causes of delayed shipment problems. The problems from first point to the third point concerned about maintenance system management standardization of lorry-tanker to prevent breakdown lorry, insufficient spare parts and late repairing which are related to each other. This research suggested transporters manage the mentioned problems by improving lorry-tanker maintenance system to be more efficiency for totally checking-up the lorry-tanker before using which would reduce a risk of breakdown lorry during delivery. In addition, there should be better system of warehouse for spare parts management to encourage immediate usage when lorry got breakdown, and it's also important to send the mechanics to learn more about harder cases of repairing from external party to provide better service in lorry repaired in order to reduce delayed problem on transportation process for further.

The causes of delayed problems from the methods were mentioned to be parts of late delivery. Almost transporters concentrated on the problem in export formalities with different reasons, for instance, cooperation with the shipping agent, complicated procedures for exporting, service from officer of export formality section and documents mistake by staffs of transporters while some of transporters commented that the problems on export formalities are out of control. It showed that many factors and organizations are involved with these mentioned causes. For smoothly implementation to export, the exporters should study more on how to select efficient transporters to operate C/L transportation with high service quality in order to reduce mistake from less understanding of service providers. This would be a factor of consideration for decision making options in the use of transportation (Patcharawalai, 2009) and also can be controlled by transporters which will cut wastage of losing time to revise mistakes and would create the way to prevent delayed delivery problems.

For the causes of delayed shipment that come from other environments especially the traffic jam that most of transporters mentioned affect delayed delivery

with uncontrolled. Even though the problems occur unexpectedly, it's much better for transporters to prevent and avoid problem happening by negotiation with exporter to request for customers in Malaysia to postpone delivery date in order to avoid those uncertain situations. However, the negotiation should be in sense of customer (in Malaysia) satisfaction but not disadvantageous or to reach win-win situation. Another problem of transportation that affects to late delivery such as C/L stolen, flooding or protest that may concern to delayed shipment also should be managed as transportation planning, keep up date on the daily news to have information for negotiation with customer. In addition, GPS is good for lorry-tanker tracking as well because the lorry-tanker can be followed up in emergency cases every time in order to prevent delayed problems on transportation.

In the exporter's view, to make smoothly transportation for C/L export to Malaysia by lorry-tanker and to gain customer satisfaction completely, studying about the opportunity or frequency of problem occurred in each step of transportation procedure that affects to delay delivery problem should be conscientiously concentrated step by step for further analyzing and consideration. This would be beneficial to reduce the risk of problem happened and it is totally the way to cut the problem from root cause which sustainably built value added to both exporters and customers.

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