THE DEVELOPMENT OF MODEL TO IMPORT RAW MATERIAL FOR CLOTHES UNDER MANAGEMENT BASED ON THEORY LOGISTICS AND SUPPLY CHAIN: CASE STUDY OF ABC (THAILAND) CO, LTD.

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Abstract- The objective of research : 1.To study the issue and form of importing raw materials clothes by management based on the theory of logistics and supply chain case study of ABC (Thailand) Co., Ltd. 2.To create an appropriate format in the import of raw materials by sea. And 3.To increase the performance related to the operational model to import raw materials clothing by sea re-constructed. As well as the cost of transport to import raw materials from overseas by boat with the highest effectiveness and efficiency. The research results reveal the process development follow by management based on theory logistics and supply chain, could authentically reduce the cost through the application of logistics and supply chain approach; transportation cost, defective or failure cost, and lost and damage cost. Those will directly affect the production and delivery processes, and can create competitive edge in the market; however, one disadvantage is the higher labor cost. Therefore, this is Thailand's opportunity in terms of presenting potential on lingerie export business to the world market. As a result, the business could bring currency into the country which could give a good answer for this research

Keywords- Import raw material for clothes, Logistics, Supply Chain.

I. INTRODUCTION

Several companies in clothing industries had to be shut down or removed their production base out of Thailand due to many competitive factors especially higher wages compared to the new bases such as Vietnam, India, Sri Lanka etc. One of the main factors was imported raw material for clothing production which caused its manufacturing costs increased and the entrepreneurs could not avoid this situation. They had to import this raw material from abroad because of the customer's orders. As a result of this, the customers were the one who made specifications for resources, types or size, and form of the materials for their orders. In the mean time, the existing material in Thailand could not be full filled their satisfaction both in quality and variety. Consequently, importing raw and essential materials was one of logistical cost. If logistics management strategies were implemented, the causes of high value of importing cost could be found. The significances of the problems revealed that importing material for clothing manufacturing was the key factor to producing enough products to the customer needs. The entrepreneurs had to face with increasing cost situation from the main problems in importing materials which were. 1) Spending more time in importing methods and process which led to delay materials delivery for producing. 2) High price in import process. 3) Possibility in goods damaging and lost during shipment which the entrepreneurs could not be avoidable to importing. Accordingly, the researcher was interested in studying the patterns of importing raw materials by sea using in clothing industries in order to enhance the effectiveness of importing and decline overall cost in transportation. The study of problems, guide lines, and patterns of importing raw materials by sea was conducted in order to create an appropriate pattern of the process. Despite of management and enhancement their potential with brand new pattern for the concerning people in operating toward the importing raw materials by sea was implemented in logistics process and supply chain in order to support possibility of continuous production which satisfied the customer needs with continuous production. Importing raw materials from abroad to produce clothes worthily and effectively was required feasible planning, strategically logistics management and potential supply chain. These were considered as the most important factors that could save the cost of production which led to improving their potential in competition. Additionally, it was in accordance with the government's strategy arranged for Thailand becoming AEC member in the near future.

1.1 Objective of Study – Project Relevance and Application

1.1.1 To study about the problems, guide lines and patterns of importing raw materials by sea in case study of ABC (Thailand) Co., Ltd.

1.1.2 To establish the appropriate patterns of importing raw materials by sea with strategic management in case study of ABC (Thailand) Co., Ltd.

1.1.3 To boost up the capacity of concerning people toward the new pattern of raw materials importing for clothing industries.

Scope of Study, Assumptions & Limitations

According to the purposes of the study, the researcher stipulated the scope of the study as the followings:

1. Population or the targets of the study were the 130 employees of ABC (Thailand) Co., Ltd. from management level to operational level in Procurement Department, Importing Department, and Inventory Department which were divided into below:

1.1 management level 10 persons

1.2 managers / Supervisors 20 persons

1.3 operating officers 50 persons

1.4 operating officers from transportation companies 25 persons

1.5 officers from authorized customs brokers 25 persons

Expected Results

The most effective process and procedures of importing raw materials for clothing industries by sea provides the best pattern, simple procedures and short process which can be less spending time and cost of raw materials importing. It can decrease logistics cost of companies which can increase their competitive potential even they pay high wages than others.

Giving work satisfaction to the related operating officers both inside and outside the organizations which are the followings.

- It is the benefit for the importing department as they can spend a reasonable time systemically, reduce papers, shorten time spent in each procedure, and be convenient to follow up their works. Additionally, the procurement department who purchases raw material can apply this concept to plan the orders effectively with low cost of logistics but still receive quality goods as expected.

- Inventory management is also granted the benefit in storage and distribution accurately.

- Reducing the impact toward production lines about delay so that the orders cannot be finished on time.

II. DETAILS EXPERIMENTAL

The study of The Development of model to import raw material for clothes under management based on theory logistics and supply chain: case study of ABC (Thailand) co., ltd. was conducted by documentary research and the related literatures were as below:

Concept and theories about CPFR (Collaborative Planning Forecasting and Replenishment)

Ratchanee Radkhuenkhan (2009) proposed the concept of CPFR that it was aimed to improve and corporate between buyers and suppliers. Both of them agreed to make a plan, sales forecast, and replenishment in order to create an accordance among buyers and suppliers through information technologies (IT) which could make them up-to-date. As logistics and supply chain management was significant in business association which was covered from upstream to downstream or it could be said that from suppliers to end customers. Everyone should corporate each other in order to exchange their information; for example, raw material order, inventory, production, transportation and delivery, therefore they could reduce the cost and increase customer's satisfaction. As a result of this, applying CPFR process was a collaboration in supply chain to visualize goods demand throughout the chain and delivery goods or raw materials exactly to the actual needs of the customers. Consequently, ordering and delivery was effective, so called Order fulfillment, and storage management in adequacy with the needs, then the cost could be declined and boosted sales figure including provided quality service to the customers. Collaboration establishment by information sharing or created a single set of information was made to bring about forecast process that was closed to customer’s demands. The cost of production was avoided from Bullwhip effect which was affected to inventory cost increasing too high and causing damages. It also affected to the competitive capability in business. Moreover, only collaboration among several units in supply chain like manufacturers and suppliers was not enough as the manufacturers could not aware of the next level of supply chain. Collaboration establishment required unity and trust between all partners in supply chain. Concept of CPFR was based on the intimacy between suppliers and customers. If each unit planed and worked separately without synchronization with each other, there was a gap occurred in between services and increased much costs of organization. It should be started with information sharing that everyone could accessed to data in order to learn about others thoroughly based on collaborative relationship. In the group, members consulted together about how much each point could reduce its cost and how to reach at the peak was required integration of information from each unit in the organizations.

According to the study of CPFR, it could be concluded that CPFR was the collaboration between buyers and suppliers in planning, goods forecast and replenishment through information technology leading to the counterparts could update and exchange data to each other. While Supplier Relationship Management or SRM was a new idea in logistics management and pattern of Collaborative Transportation Management or CTM was a collaboration in transportation aimed to develop corporation in relation between buyers, seller, transportation service provider and outside logistics agent. The researcher brought CPFR, SRM, and CTM model to apply in the study of process of methods and procedures of model of importing raw material from oversea by shipment in order to improve their service, effectiveness,and cost related to goods transportation. Additionally, this study was concerned about the process of the delivery of clothing through logistics agents which was deemed to be the strategy to boost up their potential in logistics activity management. It could be said that logistics created collaboration led to alliance in problem solving together. The result was reasonably synthesized in order to discover the

new working process under the collaboration from all units which were ABC (Thailand) Co., Ltd. staffs from Procurement department, Inventory of raw material Department, and Importing Department dealing with suppliers including outside counterparts in the collaborate network chain as logistics service providers. The researcher interviewed with the following people namely operating officers related to making orders, people in importing department and inventory department about integration of all procedures in importing raw materials intending to study the Collaborative Planning Forecasting and Replenishment. The interview also was made concerning about transportation collaboration related to information and movement that the manufacturers and buyers cooperated with transportation service providers in order to manage goods delivery with efficacy and effectiveness in below figure 1

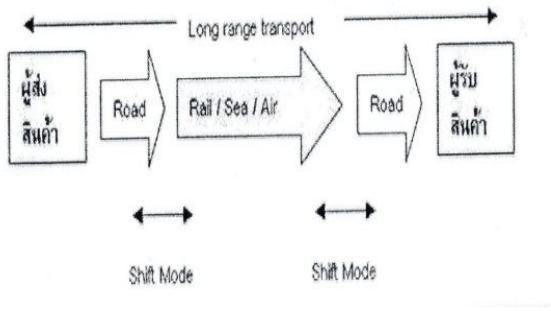

Figure I - . International Transportation

Research tools

This study applied 2 types of research tools which were primary tools and secondary tools.

Part 1 Primary tools

1. Interview with the concerning operating officers who work in order department, importing department, and warehouse keeping raw materials was conducted related to overview of importing process in both 2 types, including the detail of each step, source of expenses, patterns, duties of each activity, time consumption together with recent problems and obstacles. The researcher prepared the interview to exchange information in structural format.

2. Observation on working and operation in each activity to find out how importing process in both 2 types was.

3. Using questionnaire about the assessment of importing formats that the operating officers feel the most satisfaction and to find the best format of importing as well as strengths and weakness of it.

Part 2 Secondary tools

1. Collecting the actual data in the process, and the order of activities in procedures in real operation that people accepted or used in general in transportation process that the entrepreneurs has proceeded in present time. Data has been collected since the raw material was moved into the containers at the place of origin in China until it was delivers to Hong Kong and Thailand respectively. When the goods had reached to the destination, they were delivered to the warehouses at the factories. It could be said that data collection was to reflect organizational working structure, and it also had been made into a chart of business process mapping showing flow and connection of data using information system of internal and external working of organization.

Data analysis and synthesis

This study was based on qualitative analysis and quantitative analysis.

Part 1. Qualitative analysis

Phase 1. The study of process and procedures of importing raw materials by sea including expenses of 2 types of goods transportations were composed of international transportation expenses, managing expenses, and custom formality. Domestic transportation expenses was made data analysis by concept of PDCA which was a guideline for working process analysis to study recent problems. Moreover, the concept of CPFR, SRM and CTM was applied in building collaboration of alliance in order to deal with the problems together. Then the result was synthesized reasonably to discover the new working process under the collaboration from all units which were ABC (Thailand) Co., Ltd. staffs from Procurement department, Inventory of raw material Department, and Importing Department dealing with suppliers including outside counterparts in the collaborate network chain as logistics service providers. All result was summarized and edited the content, making graph and comparative chart in 5 ways as follow.

1. Discovery and study in order to improve into better procedure focusing on the purpose of research.

2. Considering the possibility of the process, assessing the strength and weakness, evaluating the effectiveness to make further analysis.

3. Making data analysis from observed and edited data in order to reveal key variables for the whole process and to discover the causes of the problems including strength and weakness from charter 1 added to consider in the analysis as well.

4. Trial and improve procedures.

5. New process should be consistency, accurate and feasible. In order to avoid defects occurred in the future, post-test is required to set standard and accurately implement.

Phase 2. The study of concepts and theories of management of collaboration in development for cooperation in between organization and outside organization according to the concept of CPFR, SRM and CTM was made. Such organizations were composed of Procurement department, Inventory of raw material Department, and Importing Department

from Garment (Thailand) Co., LTD. and suppliers including collaborate network chain as logistics service providers in order to specify format of collaboration which led to this research happened.

Phase 3. The Study of chain integration strategic creating by the activities connecting between inside the organization and outside organization through data integration was initiated. Data had been flown since starting order – delivered – transportation. The pattern of the new integration according to the related concepts and theories was applied to establish the pattern of process of importing raw materials which was mainly based on the collaboration management.

Phase 4. Studying about cost of raw material transportation in present time and also the cost probably might occurred was made when the new strategy was applied to change or improve.

Phase 5. Studying of the initiative of E-Logistics method to integrate transportation – custom formality (shipping) – delivery in the same direction that was focused on instant information technology system called ERP or Enterprise Resource Planning. However this system cannot be implemented to cover all detail of transportation.

Part 2. Quantitative analysis

The questionnaire related to importing pattern was designed in order to reveal what was a satisfaction, strength – weakness of each pattern of importing materials. The consideration was made mainly upon its utility of time and management.

Then, the analysis process was undertaken based on the following principles.

Part 1. Time recording for working of the 2 importing patterns had been made on the delivery date from the country of origin, to the containers, until reached to the port in Thailand, pass the custom formality, and ended the process at the warehouse of the importers or the factory. This record was made to ensure that the order of raw material was delivered on time that production was operated exactly and accurately according to the quality and price specified on the order. The report was exhibited the analyzed value using chart showing the operation both in descriptive text and flow chart.

Part 2. The costs of transportation of the 2 importing patterns had been considered from the country of origin to warehouse of the importers or the factory of the manufacturers. The result was shown with average and percentage.

Part 3. Comparison the process and procedures of the 2 importing patterns in cost of transportation in all expenses, all damages including quickness of delivery throughout strength and weakness was exhibited in chart of analysis.

III. RESULTS AND DISCUSSION

The results of analysis according to the 3 purposes of the study that the researcher made were as the followings.

Part 1. Establishing the proper pattern and process of importing raw materials by sea.

Logistics management was required which shown in the chart below presented importing process and management.

1. Picture exhibited importing with 3 types of container services namely Type 1: CFS/CFS, Type 2: CY/CFS which the 2 types were the present condition before improvement, while Type 3 : CY/CY was the pattern using after improvement in below figure 2, 3, 4

TYPE 1

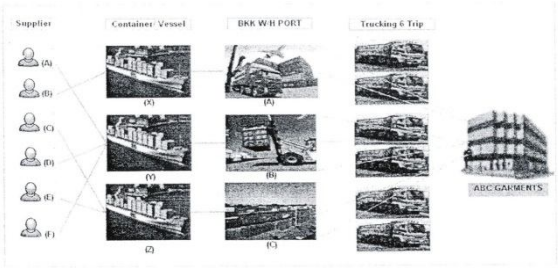

Figure 2 - Pattern of importing in LCL with container services type CFS/CFS

TYPE 2.

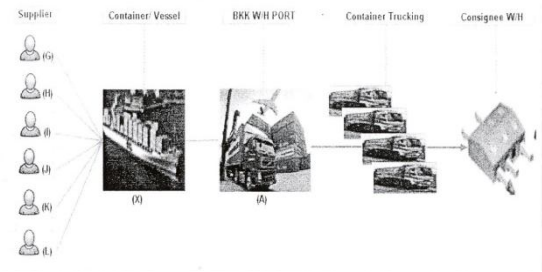

Figure 3 - Pattern of importing in FCL with container services type CY/CFS

TYPE 4.

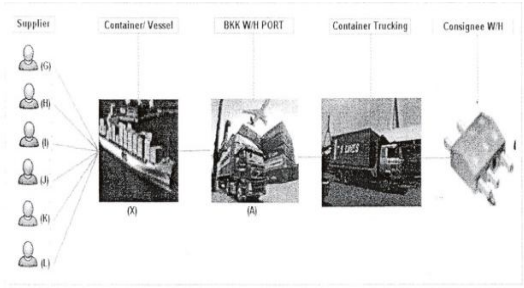

Figure 4 – Pattern of importing in FCL with container services type CY/CY

2. Importing Management. The comparison of the procedures showing the flow of documents before and after improvement revealed that the procedures were decreased and spent shorter time. As a result of this the operation of importing and logistics service providers, both transportation providers and authorized customs brokers, were more convenient and quicker and reduced errors. According to table 4 showing process in the part of after improvement was the missing part that cut off, and were presented to document flow.

Table 1. Comparison of time spending in importing management for Before/After improvement.

	Before	After	Advantages
Time to wait for goods delivered.	**3** Days	**1** Day	Left more time from papers managing in importing department and ware house to spend for other activities.
Operating time of importers of buyers	**3** Days	**1** Day	
Damages	**2,200** pcs. / **8,800฿**	None	
Lost	**6** pcs. / **1,014 ฿**	None	

Table 2 Comparison of goods transfer management in sea port for Before/After improvement.

	Container Yard	Open container to transfer goods to container yard at sea port or custom	After release, goods are transferred into truck and delivered to the factory
Before	✓	✓	✓
After	✓	×	×

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