THE DEVELOPMENT OF SUPPLY CHAIN MANAGEMENT IN
THAILAND TEXTILE INDUSTRY

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ABSTRACT
Although Thai garments have been recognized for their reliable and acceptable quality, the manufacturers are losing their edges because of the high competition in global market. In order to gain back their competitive advantages, Thai textile manufacturers are required to put emphasis on the product development by using innovation to reduce production cost and to provide higher value added final products than the economy of scale productions like China and India. As a result, they need to create strategic partnership with suppliers, transportation, distributors and warehousing companies. This Supply Chain Management (SCM) strategy should be the most effective and efficient way for Thai textile manufacturers to stay successful.

This paper focuses on analysis of the current situation of Thai textile industry, especially on the strategy and application of SCM that could be utilized to improve our competitiveness. In addition, this paper discusses about what needs to be done in order to better manage the supply, relationship and collaboration among all elements in the chain.

KEY WORDS
Supply Chain Management Development, Textile Industry

1. Introduction
The textile industry plays a very important role in the economy of Thailand. According to the information from the Thailand Textile Institute (THTI), the export value of this sector in the year 2006 is about $US 6.8 billion, which has been increased about 2.1 percent from the export value in the year 2005. When considering the export values from years 2003 to 2006, as shown in Table 1, it is obvious that the output of this sector grew constantly through the period of time. Part of the growths was the results of cheap production costs, economic and politics stabilities, government support programs, and ability of the manufacturers to meet the customers’ requirements.

However, from the information in Table 1, the growth rate of export value is declining, alarmingly. In fact, it has been widely discussed that Thailand is now losing competitive edges and experiencing a diversion of investment to China and other Southeast Asian countries because of the recent higher production costs comparing with its competitors. Moreover, some other problems that are posed as threats to the industry are such: the lack of general and skilled workers; the lack of advanced production and quality control processes; unreliable raw materials and etc.

The aforementioned problems create vulnerable situation to Thai textile Industry. This situation can be referred to as the “Nut Cracker Effect”, which can be shown as Figure 1. The diagram suggests that the growth or output expansion of Thailand cannot rely primarily on expansion of investment, utilizing natural resources and cheap labor, anymore. Instead, Thai industry has to put more emphasis on acquiring knowledge and innovation through Research and Development processes. Moreover, it is suggested that the Thai textile manufacturers should work together as a cohesive, singularly competitive unit in order to be able to achieve in what many large, vertically integrated, multinational companies have tried and failed to accomplish.

Therefore, the manufacturers should put efforts to pare down the organization to focus on core capabilities while trying to create alliances or strategic partners with suppliers, transportations, warehousing companies, distributors and vendors, domestically and internationally, who are good at what they do. This team approach is widely discussed nowadays for it should be the most efficient and effective way to stay successful in business and is known as the practice of Supply Chain Management (SCM).
2. The Supply Chain Components-Ideal

Under the concept of Supply Chain Management, the series of companies that manufacture and provide products and services to consumers, including all the elements enabling and/or supplying the raw materials and components, production, delivery end products and services is called a supply chain. When individual firms in the supply chain makes business decisions that disregard the benefits of other chain members, this sub-optimizations create costs and additional waiting time along the supply chain, which in turn leads to higher end-product prices, lower supply chain service level and, finally, dissatisfying the end customers. Therefore, for the purpose of developing SCM in Thai textile industry, it is crucial to identify all the members in the chain from suppliers to end consumers and their relationship. On a large scale, the Supply Chain Management in textile industry is the development of linkages among the following segmented industries:

- Fiber Industry
- Spinning Industry
- Weaving Industry
• Knitting Industry
• Dyeing, Printing and Finishing Industry
• Embroidery Industry
• Garment Industry

Another key component in a normal supply chain is customers. In case of Thai textile industry, there are two main groups of customers: domestic and export.

At this stage, one can easily be misled by the thought of the ideal situation that might occur. Ideally, the supply chain of Thai textile would be self-completed since Thailand has all the key members, as mentioned above, already. With some assistance from logistics and distribution centers, the Thai textile products should be easily delivered to end-consumers as shown in Figure 2.

![Figure 2: Supply Chain in Thai Textile Industry](chart)

In reality, however, there are some other key players that have a major influence in supplying raw materials and in the trading process. Nevertheless, there are many broken links in the manufacturing chain as each segmented industry (e.g. Fiber, Spinning, Weaving and etc.) has ability to sell directly to international customers and some of the industry may have import raw materials from abroad instead of purchasing from suppliers in Thailand.

Therefore, the scope of the study has to be clearly identified in the development a more realistic supply chain in textile industry.

Hence, this research would focus on the strategy to develop a supply chain for exporting textile products in order to enhance the competitiveness of the country in global market. The subsequent sections describe how to develop supply chain that reflects the reality in textile industry, and which strategies and recommendations the industry should take into consideration in order to succeed in supply chain development.

3. Supply Chain Development–Export Oriented

The statistics for the importing and exporting of Thai textile and clothing show that Thailand has been importing and exporting same category of raw materials over the same period of time. For example, in 2006, the imports of woven fabrics, yarn and fibers were accounted for about $US 2.6 billion, while the exports value of woven fabrics and yarn was about $US 1.82 billion.

On the imports side, Thailand export-oriented apparel producers rely heavily on foreign sources that could provide high-enough quality of yarn and fabric in the necessary volumes. Major sources are providers with lower cost products, or corporate sourcing attached to Taiwan, Japanese and Korean textile manufacturers. In the apparel section, the major sources of imports would be China and Hong Kong for commodity-grade apparel, followed by the European countries and Japan for the designer-brand name apparel.

On the export side, garment is Thailand’s main textile export in the year 2006 ($US 3.2 billion), followed by woven fabrics and yarn ($US 1.82 billion). Thailand is highly dependent on exporting of foreign brand name apparel, produced under subcontract, to quota market, such as the U.S. and EU. As a result, the changing of the ordering policy of major buyers in the U.S. and EU would have a significant impact on Thai textile and clothing industries. Thus, it is recommended that the textile industry should diversify their market to other export destinations.

From the above information, it is reasonable to construct the supply chain model in such a way that each of the segmented industries in the chain (i.e., fiber, spinning,
weaving and etc.) can have access to international customers and some of the raw materials can be imported from international market, as well. This scenario can be depicted in Figure 3.

Nevertheless, in case of the garment industry, the actual exporting process usually involved with more members in the chain, which are:

- Agent
- Oversea importer
- Store buyer
- Retail distribution center

Among these key members, agent plays a more crucial role than others as s/he has to match the requirements of buyers to sellers and process the sale orders. Often, agent acts as a middle person, who holds a lot of information regarding sale transactions and tends not to reveal them to either sellers or buyers. In many events, neither sellers nor buyers know the real identity of their counterparts. The advantage of having agent is the convenience of both buyer and seller because agent takes responsibility of all communications and ensures the quality of the products. However, agent is considered as the main obstacle in the development of supply chain since agent prohibits the flow of information between buyers and sellers.

The example of supply chain that includes agent in the model can be depicted as in Figure 4, for which the garment manufacturer has to sell their products through agent. This model is also known as Standard Garment Sourcing Model (SGSM) in some literatures.

Note that the textile supply chain box on the right hand side of Figure 4 represents the actual supply chain structure in textile industry, as described in Figure 3.

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**Figure 3:** Supply Chain in Thai Textile Industry - Actual Situation

**Figure 4:** Supply Chain in Textile Industry with Standard Garment Sourcing Model
4. Recommendations on the Development of Supply Chain in Thai Textile Industry

Concerning the competition in global market, the following directions are recommended as the guidelines in order to develop supply chain in Thai textile industry for the sustainable growth and competitiveness.

- The manufacturers should try to avoid the use of agent. They should, at their best, try to have direct contact with customers in order to create the flow of information in the chain. The example model which agent is eliminated from the chain so the garment manufacturer can have a direct link with importer is known as Full Value Sourcing Model (FVSM), as depicted in Figure 5. Moreover, the situation will be a lot more improved for Thai garment industry if they reach closer and closer to their end-customers. As shown in Figure 6, ‘importer’ is removed from the diagram, Thai garment manufacturers get closer to store buyers and can establish relationship and supply chain network.

- In conjunction with the above recommendation, Thai manufacturers should cooperate, closely, with major buyers in designing and making prototypes and take roles as the participants in the trading process on fabric sourcing rather than just receive and process the orders with buyers’ or importers’ conditions.

- All segmented industries in the chain should create strength and develop their own brand for the domestic market before expanding to international market. This might be done through the expansion of investment and establishing business partnership. The noticeable advantages of business strengthening could be higher organizational competence, total cost reduction, more product varieties, more reliability in quality and lead time.

- Different segmented industries should try to support other segmented industries in order to create a supply chain domestically. This would help in strengthening the textile industry as a whole as each segment has their own expertise in analyzing the requirements of the end-customers.

- After the supply chain alliance has been formed, IT system and logistics infrastructure should be established. This could be done by the industry or could be the support from Thai government.

- Last but not least, human resource development is also an important aspect of supply chain management. Government and textile industry should, together, educate and train experts and their personnel to be able to come up with innovation in many aspects of textile industry.

5. Conclusions

This paper discussed the current situation of textile industry in Thailand. Some of the problems and obstacles that impede Thailand from successfully developing textile industry supply chain are also presented. In the end, the author describes some of the directions and recommendations about which way Thailand should pursue to strengthening this area of industry.
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