

An In-Depth Study of the Emergence of Mini-Maestro in Supply Chain Governance and Their Influence to Logistics Industry

By

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Master of Business Administration

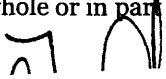
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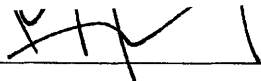
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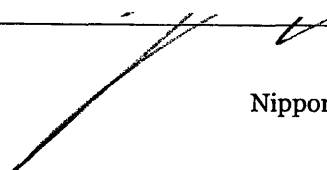
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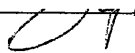
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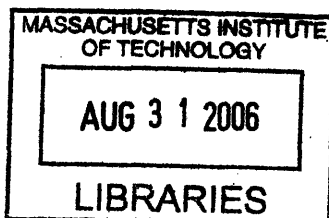
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**An In-Depth Study of the Emergence of Mini-Maestro in
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Abstract

Faced with declining margins, many large trading firms have expanded their scopes of sourcing and supplying goods, to include the management of the supply chains and inventories as a mean to improve the operational efficiencies, and thus, overall margins. In some instances, these firms have chosen to undertake the responsibility of logistics themselves through their own subsidiaries. The emergence of these “mini-maestro” (a term coined by Professor Bitran) has shifted the balance of power with regards to the decisions of supply chain governance and the movement of goods. These models may have huge implications to established logistics service providers such as UPS. While the models may pose new challenges to the existing logistics service providers, they may open up new opportunities for the existing logistics service providers as well.

In this thesis, I will perform an in-depth study on one of the mini-maestros, Li & Fung Trading and its subsidiaries, with particular focus on investigating the underlying forces and the core competencies that make Li & Fung the leader in its field. This thesis will also analyze the degree of maturity of its logistics unit, IDS Logistics, and explore the areas in which established logistics service providers can add values to the chain.

Thesis Supervisor: Professor Gabriel Bitran
Nippon Telephone and Telegraph Professor of
Management

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Chapter 1 Introduction

1.1 Thesis Objective

The objective of this thesis is to validate the emergence of mini-maestros in the supply chain networks. While the concepts of coordination, such as information integration and collaboration among business partners, are well in-place and implemented in the supply chain network, these mini-maestros have expanded their scopes beyond the traditional coordinators roles, and have taken on the management of the supply chain governance within their networks. Such transformations potentially enhance their competitive advantages and pose new challenges to the traditional logistics players such as DHL, UPS, and FedEx, to name a few.

This thesis attempts to analyze the underlying forces that these firms have harnessed to become the Maestros or Mini-Maestros in their supply chain network. This thesis will also explore in detail the transformations in the marketplace that foster the creation of these Maestros or Mini-Maestros.

1.2 Research Approach

The concept of mini-maestro was introduced by Bitran et al., in *Emerging Trends in Supply Chain Governance: The Role of System's Integrator and Trading Firms*¹. In the paper, the authors have identified several firms, which have transformed

¹ G. Bitran, S. Gurumurthi, S. L. Sam, *Emerging Trends in Supply Chain Governance: The role of Systems Integrator and Trading Firms*, 2005.

and re-positioned themselves to assume the role of mini-maestros, in their respective industries.

This thesis is the continuation of the works done by Bitran et al². where the primary research focus is on the emergence of mini-maestros in the trading and retail/distribution industries in which Li & Fung Trading and Integrated Distributions Service (IDS) are chosen as the primary research subjects. Two suppliers in Thailand and one in Malaysia were also being interviewed to collect facts and data to support the case. In all cases, non-predisposing and open-ended questionnaires were asked to the top and senior management of these organizations to gather the information. The data are then synthesized and presented in the chapters that follow.

1.3 Thesis Structure

The structure of the thesis is shown in figure 1.1.

In Chapter 2, a literature review on the evolution of supply chain is presented by referring to the Five Level Evolutions model³, and the works done by Birtran et al.. Detail descriptions of the mini-maestros models are also presented in this chapter.

In Chapter 3, the interview case of Li & Fung Trading is presented. The first section of the chapter provides the background of Li & Fung Trading, and the subsequent sections analyze the business models, the strategies and the transformations that take place in Li & Fung Trading on the supply chain governance issues.

² G. Bitran, S. Gurumurthi, S. L. Sam, *Emerging Trends in Supply Chain Governance: The role of Systems Integrator and Trading Firms*, 2005.

³ F.J. Quinn, C.C. Poirer, *A Survey of Supply Chain Progress*, Supply Chain Management Review, 9/1/2003.

In Chapter 4, the second interview case of IDS is presented. The layout of the sections is similar to Chapter 3 but the priority is to focus on the different competences that IDS has capitalized on, in playing the role of mini-Maestro in its networks.

In Chapter 5, the discussion on the impact of mini-maestros on the traditional logistics providers (LPs) is presented. The discussion covers the challenges faced by the LPs and new opportunities that LPs can pursue in the new business environment.

Chapter 6 presents the summary of the findings and the conclusion drawn from the research. In this chapter, future research directions are also presented.

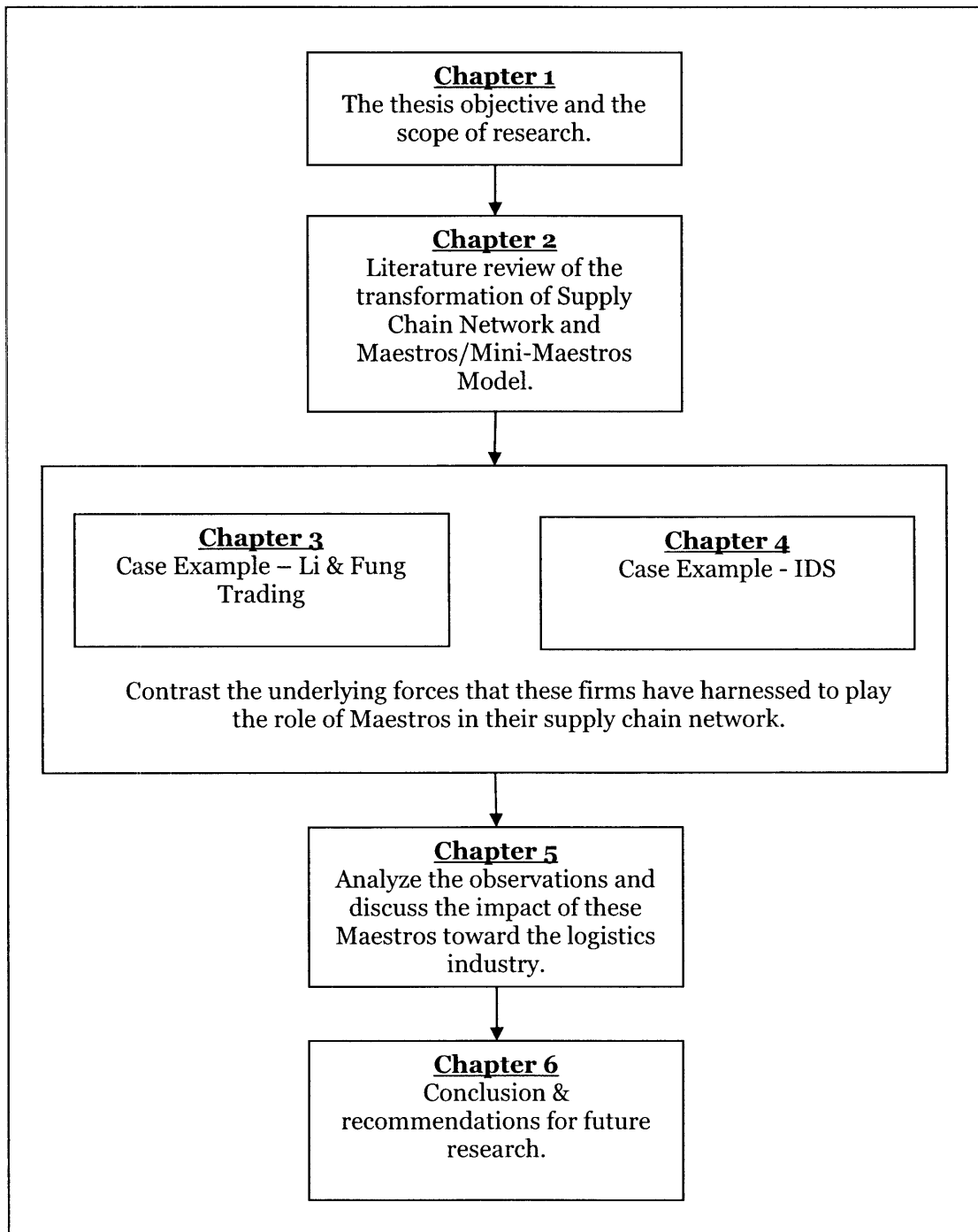


Figure 1-1 Thesis Structure

Chapter 2 Transformation of Supply Network

2.1 Introduction

The objective of this chapter is to provide a framework to study the mini-maestros model. In this chapter, the author will explain the definitions and terminologies used in the industry and in this document; perform the analysis on the transformations in the supply chain industry, and define the key characteristics of mini-maestros.

2.2 Definitions

A Supply chain network is a coordinated system of entities, activities, information and resources involved in moving products or services from suppliers to customers. A Supply chain is an instance of supply chain network in which raw materials, intermediate materials, and finished goods are procured exclusively as products through a chain of processes that supply one another.

Traditionally, these activities are conducted in hierarchical, one dimensional and sequential manner. In the last few decades, the model has shifted to a fragmented network in favour of strategic partnerships with external entities⁴. This disintegration leads to a much more complicated network configuration and the traditional term, supply chain, is no longer sufficient to describe the system. Hence, the term “supply network” is introduced by industry analysts and professionals to reflect the intricate

4 G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Roles of System Integrators and Trading Firms*, page 2, 2005.

links and relationships among different players⁵. According to Lazzarini⁶, the supply chain would represent the “flow between firms engaged in sequential stages of production” while the supply networks would be the “inter-organizational relationship” inside a particular industry or group.

In this thesis, the supply network is defined as a pattern of temporal and spatial processes carried out at facility nodes and over distribution links that add values to customers, through the manufacture and delivery of products. They comprise of the general state of business affairs in which all kinds of material (work-in-process material as well as finished products) are transformed and moved between various values-added points to maximise the values for customers⁷.

2.3 The Evolution

The impacts of these changes in definitions and terminologies are enormous. They reflect the dynamic and transformation that has taken place in the industry for the past decades. C. Poirer and F. Quinn’s⁸ have described this evolution by using the Five Levels Evolution model they derived.

5 D.d. Graeve, *Framework for the Study of Government in the Supply Networks of Wal-Mart: the “Enlightened Despot” Model*, 2004.

6 S. Lazzarini, F. Chaddad, M. Cook, *Integrating the supply chain and network analyses: the study of netchains*”, *Journal on Chain and Network Science*, 7-22, 2001.

7 http://en.wikipedia.org/wiki/Supply_network.

8 C. Poirer, F. Quinn, *A Survey of Supply Chain Progress*, *Supply Chain Management Review*, 2003.

In level 1, companies focus on integrating the functions within their internal organization and beyond the enterprise to achieve process improvement. In most cases, companies use the Supply Chain Operations Reference (SCOR) model of “plan, source, make and deliver” as the reference to guide their efforts. At this level, the emphasis is placed on two major areas of sourcing and logistics. As a result, the immediate benefits of such integration are a dramatic reduction in the number of suppliers and logistics providers (LPs), rationalization of product offerings, and an increase in the leverage of buying volume.

As companies start to recognize the savings being generated and strive for corporate excellence in their supply chain processing, they will move into the level 2 integration. In level 2, the focus is in integrating the organization to the best provider of end-to-end product and service delivery. Logistics operations begin to focus on asset utilization and effectiveness of the delivery system to achieve accurate and timely delivery. At this level, demand management becomes an important factor as forecast accuracy is essential to accurate planning and manufacturing.

In level 3, inter-enterprise activities begin and business networks take shape among carefully selected business allies. Strategic sourcing to important suppliers becomes a key characteristic in this level. With advanced communication and collaboration technology, key customers are empowered to configure the products and services they need. At this level, benefits are achieved through reduced cycle time, shorter time to market, and effective utilization of assets. It is also at this level that the traditional supply chain networks start to disintegrate.

In level 4, the collaborations between customers and suppliers intensify. Companies begin to work more closely with the upstream and downstream partners. The

focus shifts to establishing a position of dominance in an industry for a particular network with the aid of key end-to-end constituents. Technology plays a crucial role as an enabler at this level. On the supply side, companies emphasize and invest in supplier relationship management (SRM) tools to enhance values for themselves and their suppliers; on the demand side, customer relationship management (CRM) initiatives involving data sharing are used to develop joint strategies and business goals to increase revenues for themselves and their customers. At this level, the roles of Channel Master⁹ or Maestros take shape.

Level 5 is more theoretical rather than actual. At this level, all supply chain networks are connected and companies compete by using technology to gain market dominance. Companies that reach this level will achieve an unprecedented level of order accuracy and cycle-time reduction across end-to-end networks that are completely enabled electronically.

This thesis will focus on level 3 and level 4 of the activities that create the conditions for the emergence of the mini-maestro concept.

2.4 The Emergence of Maestro

According to the research conducted by Bitran et al¹⁰, the fragmentation state cannot sustain and eventually, an independent third party will step up to assume control and govern a portion of the supply network. Such disintegrations have been observed in

9 R. Hoppe, *Outlining a Future of Supply Chain Management – Coordinated Supply Networks*, 2001.

10 G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Roles of System Integrators and Trading Firms*, page 2, 2005.

some industries where outsourcing and off-shoring have become common strategies in sustaining competitiveness.

One of the most common factors that drive firms to seek outsourcing or off-shoring activities is the comparative advantages offered by contracted firms over in-house activities conducted by the OEMs themselves. Moreover, with the advancement of internet and IT technology, OEMs can now collaborate with the extended suppliers and partners seamlessly. Hence the issues of manufacturing locations are no longer major concerns of managers; instead, managers focus on seeking new techniques to improve costs and operational efficiencies.

The above observations are true in the industries where the technology adoption rate is high, for example, in the electronics manufacturing industry. Many Original Equipment Manufacturers (OEMs) have divested the expensive and cost-intensive manufacturing jobs to contract manufacturers such as Flextronics, Solectron, and Sanmina, to name a few. In the automotive industry, not only has disintegration taken place but re-integration has also occurred in other formats. Bitran et al. cited the example of GM and Ford where they spun-off their internal units to form subsidiaries or independent companies, and re-engaged these companies as system suppliers. Under such circumstances, the system suppliers have stepped up to assist the automakers to manage the upstream suppliers to improve the efficiencies.

The same effect also can be seen in the apparel and textile industry, where razor thin profit margin has driven brand owners to outsource most of their works to locations where production cost is low to achieve price competitiveness. However, collaboration between the brand owners and suppliers are much more complicated because the usage of technology is somewhat limited and the span of electronic connectivity among the

suppliers is much smaller in the apparel and textile industry as compared to the automotive and the electronics manufacturing industries. As a result, there are gaps for third party companies to take on the system integrator roles to collaborate all the activities between the brand owners and the suppliers. In his paper, G. Bitran et al have named these 3rd party companies as the maestros of the supply network.

2.5 The Characteristics of Mini Maestro

By definition, maestro is a neutral third party company which coordinates the network and aligns the incentives. However, such a role is hard to attain as the principals or brand owners see no incentives to buy into the coordination made by such a maestro¹¹. Moreover, most principals and brand owners do not want to be locked-in by a single maestro. Hence, in their studies, G. Bitran et al. have observed that another kind of neutral third party has emerged to take charge of part of the networks, instead of the whole entity. These players are called mini-maestros of the networks and they play the similar roles as the maestros but at smaller scales as shown in Figure 2-1.

¹¹ G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Roles of System Integrators and Trading Firms*, page 2, 2005.

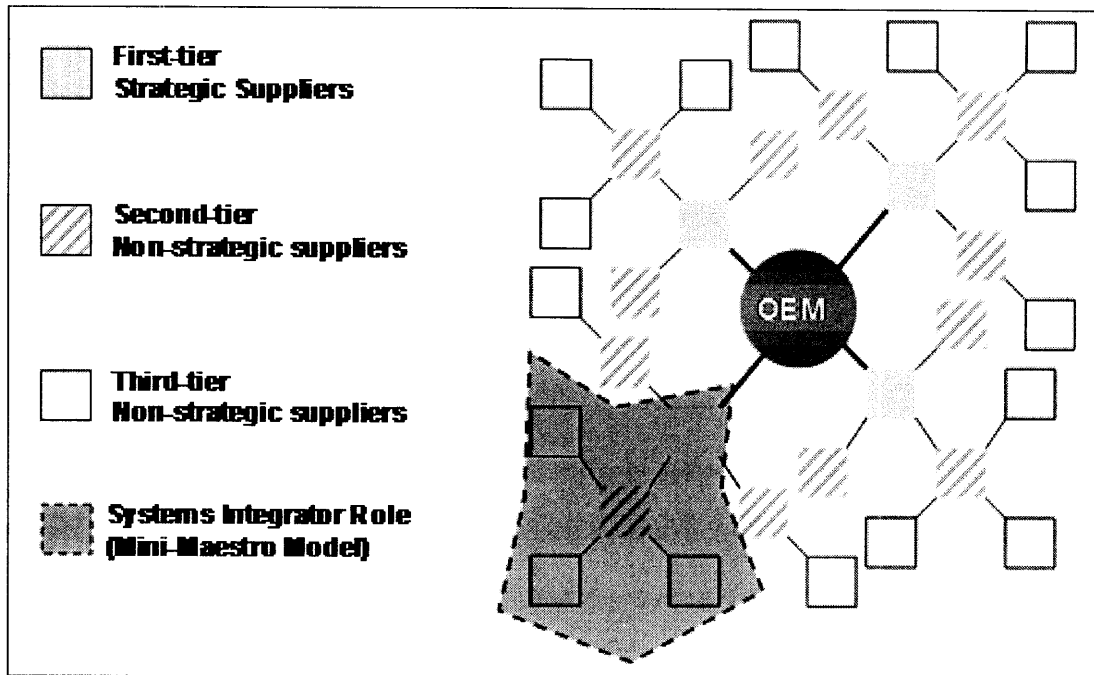


Figure 2-1 Mini-Maestro Model

One important characteristic which mini-maestros must possess is their ability to cope with the co-existence of both new and old states of supply network within their business models. In the new state of the supply network, the system is within a paradigm shift from “manufacture-to-supply” or inventory-based logistics (“push” logistics) to “manufacture-to-order” or replenishment-based logistics (“pull” logistics). The reliance is shifting from maintaining inventories aimed at approximately satisfying the demand to a comprehensive data collection system insuring, mainly through on-demand transport, that supply matches with demand. While a push logistics system involves a limited level of integration among suppliers, manufacturers and distributors, a pull logistics system tries to achieve a higher level of efficiency through integration. However, it is highly doubtful that a pure pull logistics system can be established. Hence, the mini-

maestros act as brokers in the network in which both push and pull systems can co-exist to optimize the resource allocations amongst nodes in the network.

In the next two chapters, findings from field interviews will be presented to validate the emergence of mini-maestros in apparel and retail/distributions industries; and to analyze the underlying forces that they have exploited to become the mini-maestro within their supply network.

Chapter 3 Interview Case – Li & Fung Trading

3.1 Introduction

This chapter presents the interview case of Li & Fung Trading Ltd (Li & Fung) which was conducted in January 2006. The chapter will also outline the macro-economic conditions that transform the global apparel and textile industry, the evolution of Li & Fung's business models and its business direction in the future.

3.2 The Company

Li & Fung was founded in Guangzhou in 1906 by Fung Pak Liu and Li To Ming. Initially, the company traded porcelain and silk, and then they diversified into bamboo and rattan ware, jade, ivory, handicraft and fireworks. In 1937, Li & Fung Ltd established its office in Hong Kong, and the company began to export garments, toys, electronics and plastic flowers, on top of its original product lines.

In 1973, the company went public on the then Hong Kong Stock Exchange. In 1989, the company was taken private in a management buyout exercise as part of a reorganization of the family's interest. Li & Fung was then restructured into two core businesses, namely export trading and retail. In 1992, the export trading business was listed in the Stock Exchange of Hong Kong in its present form, Li & Fung (Trading) Ltd¹².

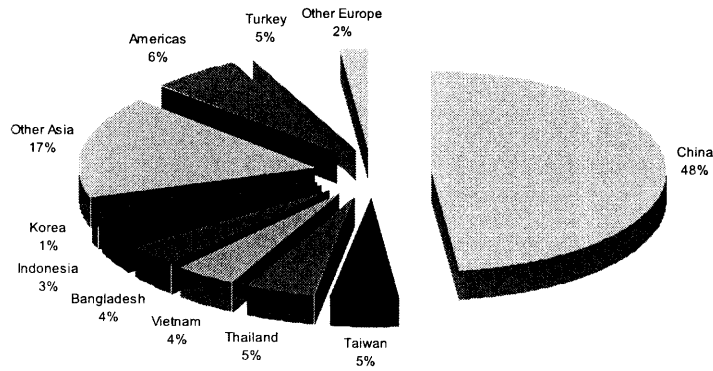
¹² Sources from Hong Kong Trade Development Council website, <http://www.tdctrade.com>.

3.3 The Business

The core business of trading firms is to source for goods per the customers' specifications at the lowest cost and sell the goods at the highest possible price. Hence, the ability to reach out to different suppliers networks plays an important role in maintaining the firms' competitiveness. Li & Fung follows the similar path in building its trading business' empire. With more than 7000 suppliers in its database, it is one of the largest trading firms in the world¹³ with suppliers present in several many continents as shown in Figure 3-1:

¹³ Sources from Hong Kong Trade Development Council website, <http://www.tdctrade.com>.

Countries of Origin of Li & Fung Suppliers



Sources: Li & Fung
R. Meredith, *Commercial Crossroads*, Forbes Magazine, page 41, 2006

Figure 3-1 Countries of Origin of Li & Fung Suppliers

A good example of Li & Fung sourcing network can be exemplified through Topper the Trick Terrier, a toy dog that can talk and stand on its head as shown in Figure 3-2.

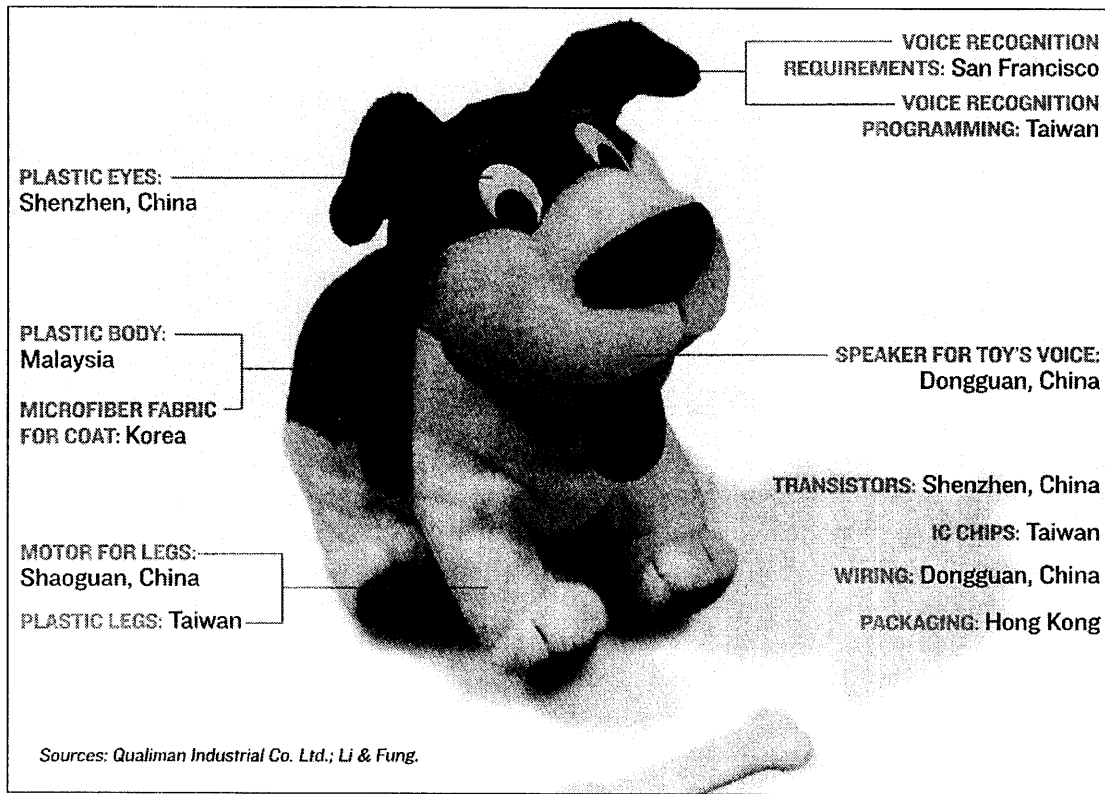


Figure 3-2 Topper the Trick Terrier

From its office in Hong Kong, Li & Fung team coordinates the suppliers to put this toy together. In 2005, 75000 copies were made by Qualiman Industrial Co. in Nanhai, China for Li & Fung's American customer, the Original San Francisco Toymaker Inc., at which the toy was selling for \$29.95 in the US¹⁴.

In their paper, Bitran et al. have outlined some of the operation models that made Li & Fung a successful trading firm. For example, Li & Fung shares the costs and benefits along its value chain, cultivates high degree of mutual dependence and trust

¹⁴ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 37-38, January 2006.

among the suppliers in the network, uses Information and Communication Technology (ICT) as an enabler to facilitate the flow of information, and enforces social contracts to bind the relationships among the players within the network¹⁵. As the result of these tactical actions that Li & Fung employs, Li & Fung has been able to coordinate its sourcing activities more effectively than many other trading firms.

The next few sections will explore the strategic elements that Li & Fung engages to be the mini-maestro within its network in the apparel and textile business. The apparel and textile business contributes 65% of revenue to Li & Fung annually. In fact, the economy impacts of Li & Fung apparel business are tremendous to many domestic and international economics. In 2005, 3.7% of America clothing imports, worth USD2.7 billion, came through Li & Fung; it was also Turkey's largest clothing exporter; and a quarter of Vietnam's apparel export flowed through them¹⁶.

3.4 The Apparel and Textile Industry

3.4.1 The Migrations of Textile & Apparel Industry

The first factor that changed the business dynamics of textile and apparel industry was the migrations that occurred over the past decades. The first wave of migration took place from North America and Western Europe to Japan in the 1950s and early '60s. The second shift was from Japan to the "Big Three" Asian apparel producers

¹⁵ G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Role of Systems Integrator and Trading Firms*, page 17-21, 2005.

¹⁶ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 37-38, January 2006.
N. Chen, *Interview Session with Li & Fung*, January 2006.

(Hong Kong, Taiwan and South Korea) in the '70s and '80s. In the past 15 years, the third migration has occurred from the "Big Three" to other developing economies around Asia¹⁷. According to the data compiled by U.S. Department of Commerce, the Asian Big Three plus China were responsible for two-third of apparel imports in 1983, but their shares have dropped to 29 percent in 2001. There has been a shift within Asia from the Big Three to the growing importance of successive waves of exporters: first China, followed by Southeast Asia and then South Asia¹⁸ as shown in Figure 3-3 (refer to Appendix B for larger image).

¹⁷ G. Gereffi, *Outsourcing and Chaing Patterns of International Competition in the Apparel Commodity Chain*, Duke University, 2002.

¹⁸ Compiled from official statistics of the U.S. Department of Commerce, U.S. imports for consumption, customs value.

U.S. APPAREL IMPORTS BY REGION AND COUNTRY, 1983-2001													
Region/Country Source		1983		1986		1989		1994		1998		2001	
		Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%
Northeast Asia	China	759	8%	1,661	10%	3,439	13%	6,338	17%	7,180	13%	8,853	14%
	Hong Kong	2,249		3,392		3,977		4,393		4,494		4,282	
	South Korea	1,685		2,581		3,342		2,245		2,047		2,355	
	Taiwan	1,800		2,621		2,489		2,269		2,224		1,907	
	Macao	132		329		417		605		1,019		1,126	
	Total	6,623	68%	10,483	60%	13,663	54%	15,850	43%	16,963	31%	18,523	29%
Southeast Asia	Indonesia	75		299		645		1,182		1,857		2,344	
	Thailand	125		213		483		1,006		1,733		2,151	
	Philippines	319		473		1,083		1,437		1,797		1,919	
	Malaysia	93		257		664		1,051		1,360		1,256	
	Singapore	193		386		621		472		307		299	
	Total	806	8%	1,598	9%	3,436	13%	5,168	14%	7,054	13%	7,968	12%
South Asia	Bangladesh	7		154		422		885		1,628		2,101	
	India	220		344		636		1,309		1,636		1,927	
	Sri Lanka	126		257		426		871		1,342		1,534	
	Pakistan	32		92		232		506		771		1,017	
	Total	385	4%	847	5%	1,716	7%	3,573	10%	5,377	10%	6,580	10%
Central America and the Caribbean	Honduras	20		32		113		650		1,905		2,438	
	Dominican Republic	139		287		723		1,600		2,358		2,286	
	El Salvador	7		11		54		398		1,170		1,634	
	Guatemala	4		20		192		600		1,150		1,634	
	Costa Rica	64		142		384		686		827		774	
	Jamaica	13		99		255		454		422		188	
	Other CBI	142		207		284		151		516		648	
	Total	389	4%	797	5%	1,985	8%	4,538	12%	8,349	15%	9,602	15%
Mexico	199	2%	331	2%	709	3%	1,889	5%	6,812	13%	8,328	13%	
All other countries	1,328	14%	3,283	19%	4,909	18%	5,859	16%	9,318	17%	12,989	20%	
	TOTAL APPAREL	9,731	100%	17,341	100%	25,518	100%	36,878	100%	53,874	100%	63,789	100%

Source: Compiled from official statistics of the U.S. Department of Commerce, U.S. imports for consumption, customs value

Figure 3-3 U.S. Apparel Imports by Region & Country, 1983 - 2001

The initial objective of the migrations of manufacturing jobs from US and Europe to Japan, the Asian Big Three, and China was primarily for economic reason – the most labour intensive segments of the apparel chain should be located in the lowest wages regions or countries. However, the data shows that towards the end of 90s, the imports from the Central America and the Caribbean have increased even though their wages are often considerably higher than China's. This finding counters the argument of cheap-labour which was prescribed earlier.

In fact, the most important policies that dictate the apparel imports are quotas and preferential tariffs. The policies do not only affect the volume of apparel imports but they also affect the location of apparel export activities. Consequently, the tasks of

coordinating the manufacturing and export processes become extremely complicated. Faced with these difficulties, many brand owners and manufacturers have resorted to outsource these responsibilities to third party companies which specialize in managing these tasks. Due to its size and suppliers network, Li & Fung typically benefits from these business environments because it can shift the orders and manufacturing process within its network. Indeed, the competitive edge of Li & Fung is far beyond the ability in shifting orders and production locations. According to Dr. Victor Fung, the strengths of Li & Fung lie in its capability to play the advisory role in advising their customers of where and how to source their apparels and its deep understanding of the underlying business dynamics of the apparel and textile industry. As an example, he cited that in 2005, Li & Fung advised its customers to keep shipments from China stable (as opposed to increasing) when members of World Trade Organization (WTO) were negotiating about the elimination of quotas and preferential tariffs for apparels. As expected, Europe and America were alarmed by a surge in clothing export from China and imposed restrictions on those imports. The impasse incident took months to resolve and many apparels business owners in US were hit very heavily because boatloads of their “Made in China” clothing were stranded at sea¹⁹. On the contrary, almost all Li & Fung’s customers were unscathed from the incident because Li & Fung have diverted some of the orders to other Asian and Caribbean countries before the outcome of the negotiation was known. Even though the wages of the labours at those locations were higher than China, most of Li & Fung customers were registering profits during that period because most of their competitors were stock-out.

¹⁹ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 37-38, January 2006.

N. Chen, *Interview Session with Li & Fung*, January 2006.

While the objective of quotas and preferential tariffs is to protect developed countries from being flooded with low-cost imports that can potentially, threaten their domestic industries, the intended objective has created an opposite outcome. Protectionism heightens the competitive capabilities of developing countries' manufacturers. In order to stay profitable, many manufacturers learn to manufacture more sophisticated products that earn more profit margins than simple ones. On the hand, brand owners in developed economies are forced to absorb the higher costs or while sourced for new suppliers. There are others who start to outsource higher end products, such as private label goods, to these manufacturers (this phenomenon will be presented in detail in the next sections).

Trading firms or exporters are not spared from the challenges of rising costs among its suppliers. In this aspect, Li & Fung has tried to circumvent the challenges by continuously searching for new low cost production locations before they are affected by the transformations that take place in the industry. This strategy is confirmed by a director of Li & Fung in his article, *Hong Kong Oldest Trading Firm Remains at Cutting Edge*. According to him, while most apparel manufacturers were investing heavily in setting up plants in China, Li & Fung has shifted their focus to the Indian subcontinent. By acquiring Dodwell, Li & Fung has acquired a network of Dodwell's suppliers and low costs apparel manufacturers in this region²⁰. When regulatory problems such as quota issues arise, Li & Fung is able to shift their productions to India and other locations where the quota issue is less prominent²¹.

²⁰ W. Ong, *Hong Kong's Oldest Trading Firm Remains at The Cutting Edge*, <http://tdctrade.com>, 2005.

²¹ N. Chen, *Interview Session with Li & Fung*, January 2006.

3.4.2 The Shift in Distribution Model

As the US apparel and textile manufacturers outsource their jobs to Asia, the distribution model within US undergoes transformation as well. Traditionally, retailers are the apparel manufacturers' main customers. However, as consumers demand better values (at lower cost), retailers increasingly turn to cheaper imports goods to fulfil the customers' requirements. According to the data from American Apparel Manufacturers Association (AAMA), in 1975, only 12 percent of the apparel sold by U.S. retailers was imported; by 1984, retail stores had doubled their use of imported garments²². By 1980s, many retailers began to compete directly with the national brand names of apparel producers and marketers by expanding their sourcing of "private label" (or store brand) merchandise.

Private label goods generate higher profit margins than the national brand because they eliminate the middlemen in the chain. The emergence of private label programs have also led to the creation of new business models among the retailers. Some retailers take on the entrepreneurial functions of normal apparel manufacturers, such as product design, fabric selection and procurement, and garment production or sourcing. Some focus on managing the brand names and stores as competitive assets to generate significant economic rents, while outsourcing the production works to a few capable manufacturers²³.

²² American Apparel Manufacturers Association (AAMA), *Apparel Manufacturing Strategies*, Arlington, VA, 1984.

²³ G. Gereffi, *Outsourcing and Changing Patterns of International Competition in the Apparel Commodity Chain*, Duke University, 2002.

The new trend in private label goods impacts the traditional Li & Fung's model which depends on volume to achieve economies of scale. In the new model, the volumes from individual retailers shrink as most retailers focus on fashion items which have shorter shelf-life and turn-around time to meet the seasonal fashion cycle. In order to compensate for decreasing volumes from individual retailers, Li & Fung needs to increase the number of orders from broader sets of retailers or private labellers. In 2000, Li & Fung acquired Colby International to expand its customers' base. The acquisition of Colby gave Li & Fung access to some of the famous departmental stores like Macy's, JC Penney, Target, and Kohl's, to name a few; as well as a list of prestigious private label retailers such as Eileen Fisher, Crate & Barrel, and Royal Velvet.

Li & Fung also re-engineers its business models to optimize its operations and re-position itself to assume the "lead firm" role along its value chain for these retailers. By definition, "lead firm" needs not be the traditional vertically integrated manufacturer, nor does it have to involve in making the finished goods. However, lead firm controls access to the major resources, such as raw materials, manufacturing skills, suppliers' networks and new technology. The most important characteristic of a lead firm is it dictates when, how, and where manufacturing take place, and how much profit accrues at each stage of the chain. An example of how the lead firm model works can be exemplified through the following Eileen Fisher example in Figure 3-4.

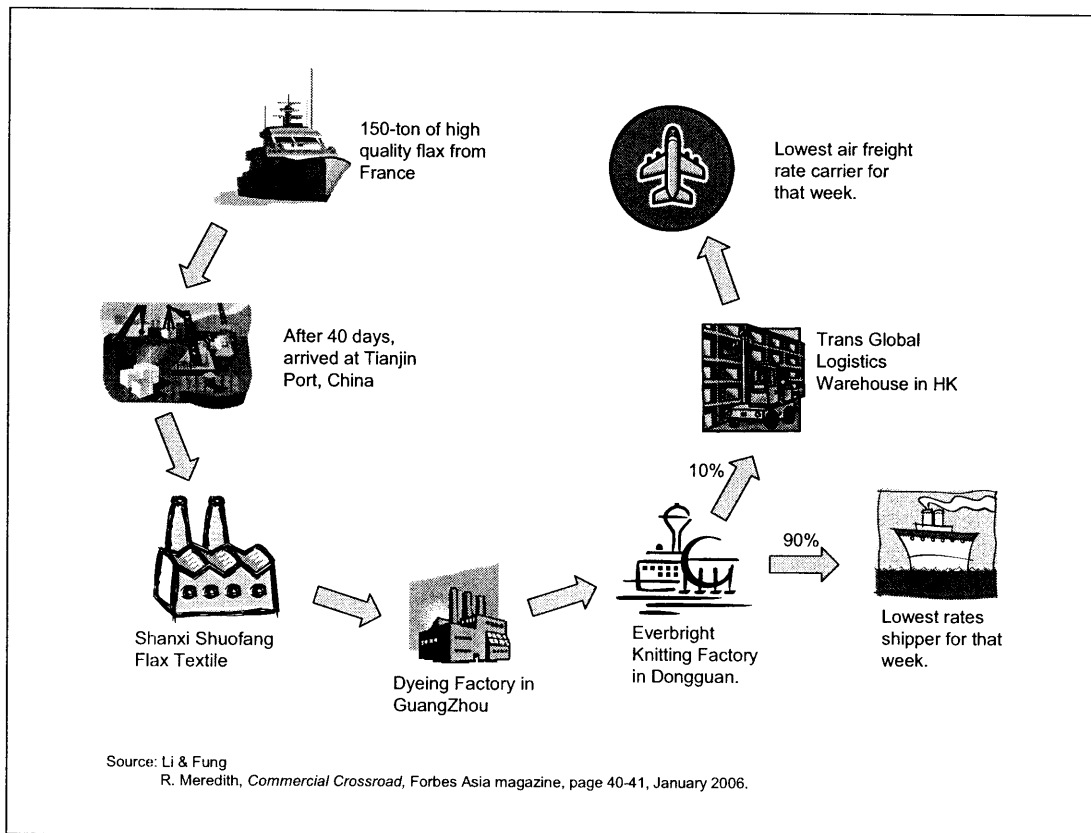


Figure 3-4 Example of Lead Firm Operating Model

Every two months, Li & Fung orders 150-tons shipment of high quality flax from France. The goods take 40 days to be shipped to Tianjing Port in China. The bales are then being transported by trucks for 225-mile to Shuozhou, where Shanxi Shuofang Flax Textile factory is located. The flax is cleaned, spun, combed, bleached, dried, spun into yarn and rolled into spools in this factory. Before the spools leave the factory, purchasers from Li & Fung visit the plant to check the quality of the spools and to make sure that there are enough yarns to produce the goods. Once the inspections and orders are confirmed, the yarns are sent by trucks to the dyeing factory in Guangzhou.

Once the dyeing process is completed, they are transported to Everbright Knitting Factory in Dongguan, where the yarns will be knitted into sweaters and clothes. As part of the processes, Li & Fung sends the quality assurance team to inspect the production lines before and during the manufacturing process, and after the goods are manufactured to ensure that the manufacturer maintains the standard as per the customers' specifications. After the last inspection, the goods will be transported across the border to Hong Kong for shipping. 90% of the goods are shipped by sea, while the other 10% of the more expensive designs are shipped by air²⁴. According to Li & Fung, the shippers (both sea and air) are selected based on the competitive bidding process with the lowest bidder winning the shipment order²⁵.

3.4.3 The Intervention of Technology

The second factor that altered the landscape of textile and apparel industry was the restructuring of the channel model, due to the advancement of technology. The maturation of bar-code, point-of-sales scanning devices and electronic data interchange (EDI) technology in providing immediate and accurate information to the stores has prompted the emergence of "lean retailing" concept.

²⁴ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 37-38, January 2006.

²⁵ N. Chen, *Interview Session with Li & Fung*, January 2006.

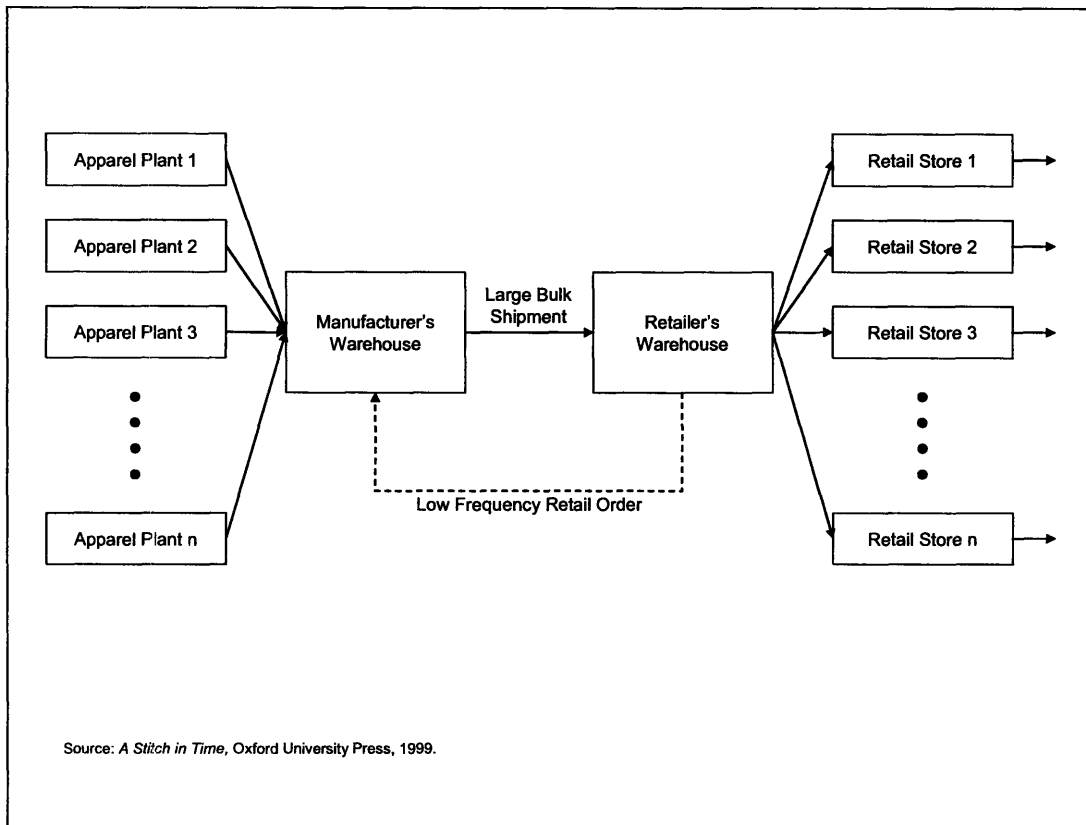


Figure 3-5 Traditional Supply Chain Model

In the traditional structure, retailers have very poor visibility over the transactions occurring at the point-of-sales, as well as the inventory level in the stores and warehouse. In order to avoid shortages, retailers replenish their goods in large amounts and keep them in the warehouse as “safety stocks”. Moving upstream, the manufacturers face similar challenges. Since manufacturer cannot forecast the orders from the retailers accurately, manufacturers produce the goods based on the previous orders patterns. Again, in order to avoid goods shortages, manufacturers produce more or order more supplies from the suppliers to stock the goods in the warehouse. At each stage, the excesses grow bigger and the inventory costs incur to both the manufacturers

and the retailers grow exponentially (bull-whip effect). This is a typical logistics models which the logistics and distributions industry experts refer to as “manufacture-to-supply”, inventory-based logistics, or “push” logistics.

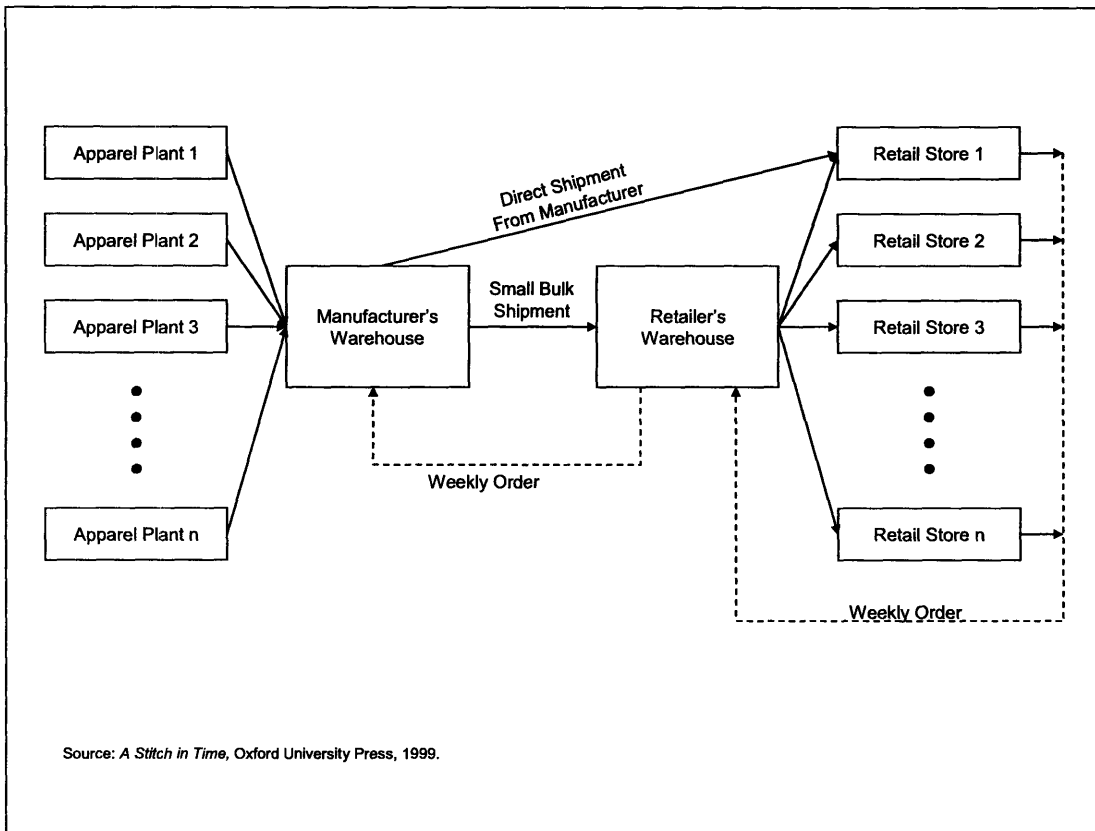


Figure 3-6 Lean Manufacturing Model

In the “lean retailing” concept as shown in the Figure 3-6, retailers avoid the risk of carrying inventory of increasingly unpredictable items by ordering smaller quantities of each product at a shorter timeframe. The objective is to shift from maintaining inventories aimed at approximately satisfying the demand, to a system where supply

matches demand. In the logistics industry, this system that facilitate “manufacture-to-order” or replenishment-based logistics is called “pull” logistics.

However, having the visibility over the chain only solves part of the equations. To the retailers, the biggest challenge is to manage the vast network of suppliers, the flow of the goods, the replenishment of the inventory and the returns. Traditionally, third party logistics providers (3PLs) offer these as value-add services to their customers because with relatively low investment, the 3PLs can use simple IT technology to connect with their customers to execute the “just-in-time” replenishment activity. In most situations, this methodology meets the retailers’ requirement because they can realize some savings through the optimization of the processes or the outsourcing of the tasks to 3PLs. Moreover, this mode of operations fits well with the scope of “lean retailing” of early days that focus primarily on optimizing the internal activities.

As competitions among the retailers become intense and the retailers demand better efficiencies from the supply chain to yield higher profit margins, the optimization process has to expand to cover the upstream activities. In most situations, the traditional 3PLs do not have any operations mechanism in-placed to control the fragmented manufacturers and suppliers communities. While some e-commerce solutions are able to facilitate the information flow among the manufacturers, customers and 3PLs, they are not sufficient to connect the fragmented suppliers’ network in less developed countries where many of them do not have any IT infrastructure to begin with.

As a traditional trading firm, Li & Fung possesses extensive experiences in managing these fragmented networks of manufacturers and suppliers. In fact, as the networks become more fragmented the more advantages Li & Fung gains because it can exploit the price differences among the suppliers and earn higher profit margins through

price arbitration, and transferring some costs savings to the customers. Moreover, as technology becomes more readily available, the competitive advantages of the traditional 3PLs diminish as conventional trading firms like Li & Fung can now deploy the similar technology to compete with the traditional 3PLs more effectively. All of the above qualities position Li & Fung well to assume the role of system integrator in the supply network.

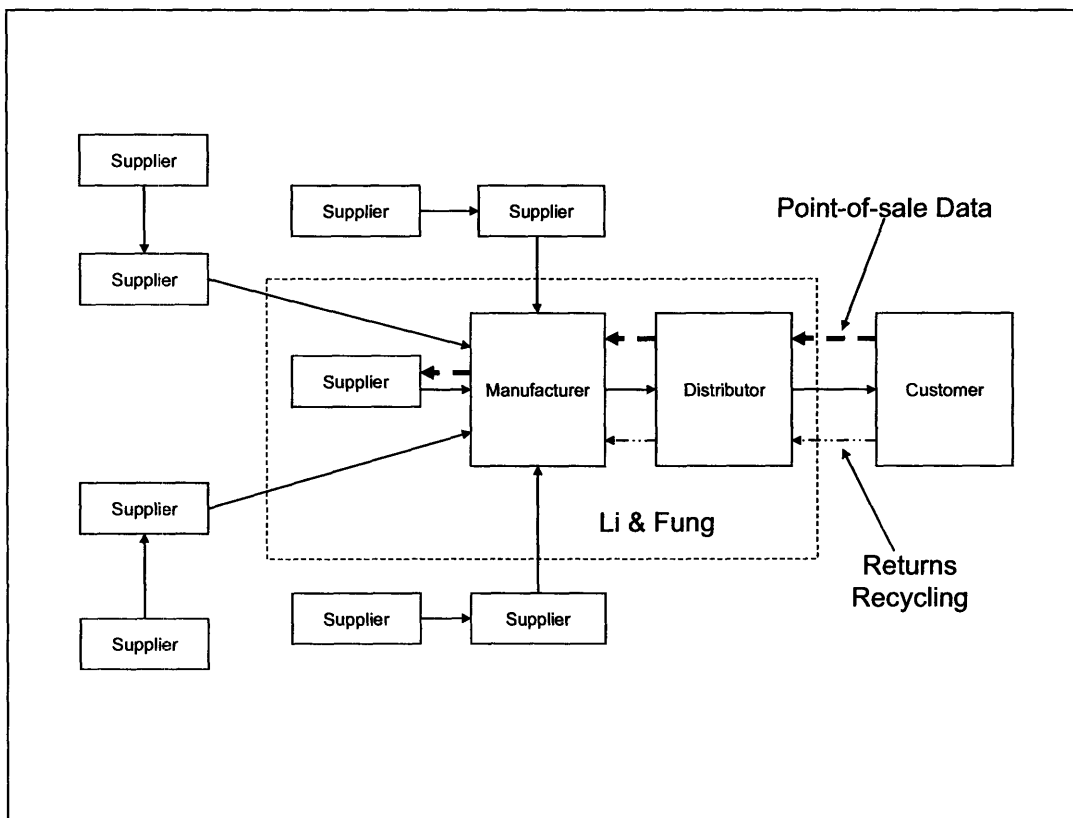


Figure 3-7 Push-Pull Combination Model by Li & Fung

A push-pull logistics operating model of Li & Fung is shown in the Figure 3-7. By using technology extensively at the front end, Li & Fung is able to track near “real-time”

information from its customers' sales and returns activities. The information is fed back to the back end operations to facilitate the replenishment of goods at the warehouses. Based on the feedback information, Li & Fung manufacturing team will adjust the forecasting quantities for the subsequent manufacturing cycle. For the fast moving and non-seasonal items such as underwears and socks, the goods are replenished mainly based on the conventional "push" logistics model. While Li & Fung uses technology extensively at the front end, Li & Fung combines the usage of technology and "foot soldiers" methods to coordinate the activities of its vast suppliers' network in the backend or upstream business. This combined model allows Li & Fung to offer an effective end-to-end supply chain solution to its customers while restricts the traditional 3PLs to perform only the low profit margin goods moving activity. In this business model, Li & Fung has created new market conditions that bolster its position as the mini-maestro within its supply network in the apparel industry while locking out all other competitors in the process.

3.5 Observations

The emergence of Li & Fung as the mini-maestro in the apparel and textile industry in Asia is not planned; its transformation is very much driven by the market economy and the migration of manufacturing jobs in the global apparel and textile industry. At each stage of the transformation, Li & Fung has managed to retain its key assets (the suppliers' network) and harness the strengths of the collective network to fortify its position along the supply chain.

Li & Fung will continue to strengthen its position as the mini-maestro within the network and expands its influences both at the upstream and downstream along the

supply chain. However, Li & Fung cannot always engage the acquisition strategy to buy itself new supplier networks or new customers. Li & Fung needs to find new streams of revenue to fuel its growth engine. In his interview with Forbes Asia magazine, Dr. Victor Fung elaborates that Li & Fung has remade the exporters' business. Moving forward, Li & Fung would like to remake the importers' business²⁶.

By going into the importers' business, Li & Fung is expanding into designs, produces and delivers the products under license and sell them directly to big-box retailers like Wal-Mart, Target, Kohl's and other hypermarkets. As a mini-maestro, Li & Fung has secured itself a reliable pool of suppliers and collected the rents at each stage of the chains. By capitalizing on its position within the supply network, Li & Fung is stretching its way from managing customers' inventory to managing their shelves-space. As of January 2006, Li & Fung has licensed Levi Strauss Signature, Levi's Red Tab, Cannon, Royal Velvet, Disney plush toy, and Tommy Hilfiger²⁷. The threat of Li & Fung to the existing logistics providers (LPs) is not whether Li & Fung will compete with them in the goods moving arena; the real threat is will Li & Fung make the traditional LPs "irrelevant" in the logistics governance matters.

²⁶ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 38, January 2006.

²⁷ R. Meredith, *Commercial Crossroad*, Forbes Asia Magazine, page 38, January 2006.

Chapter 4 Interview case – IDS

4.1 Introduction

Chapter 4 presents another case study to validate the emergence of mini-maestro in retail/distribution industry. Unlike the apparel and textile industry, regulatory issue plays a less prominent role in influencing the business models in this industry. In fact, the majority of the transformations happen in this industry are driven by the rise of consumerism in the East Asia market, as well as the growing trends of contract manufacturing or outsourcing in this region.

The research subject of this chapter is Integrated Distribution Services (IDS), a retail/distribution company. IDS was founded in 1998 after Li & Fung (Distribution) Ltd., LFD, acquired Inchcape plc and Inchcape Marketing Services Ltd. in Asia. Shortly after the acquisition, the management of LFD restructured IDS Group into three core business units – marketing, manufacturing, and logistics. In February 2004, the IDS brand was introduced to clients, business associates, and external parties²⁸.

4.2 The Business

IDS Group is an integrated-distribution services provider and it focuses on representing brand owners of consumer and healthcare products marketing in Asia. The three different business units operate independently and each has its own missions and business objectives. IDS Marketing represents brand owners in distributing their products to retail, institutional food service outlets and healthcare channels. In most

²⁸ IDS Global Offering Prospectus, 2004, page 51.

cases, IDS Marketing will assume the titles to these products and sell the products to appropriate outlets. IDS Manufacturing provides contract manufacturing services to manufacture food and beverages, pharmaceuticals, personal care and household products. IDS Manufacturing does not formulate or own any brands but instead, IDS Manufacturing offers 1st party and 3rd party manufacturing, product registration, mixing and filling, packing and logistics support to their clients²⁹. In most cases, the logistics support is done by IDS Logistics unit, which operates in seven countries in Asia and manages 42 distribution centres in the region as per the figure below:

²⁹ IDS Group Website, <http://www.idsgroup.com/>

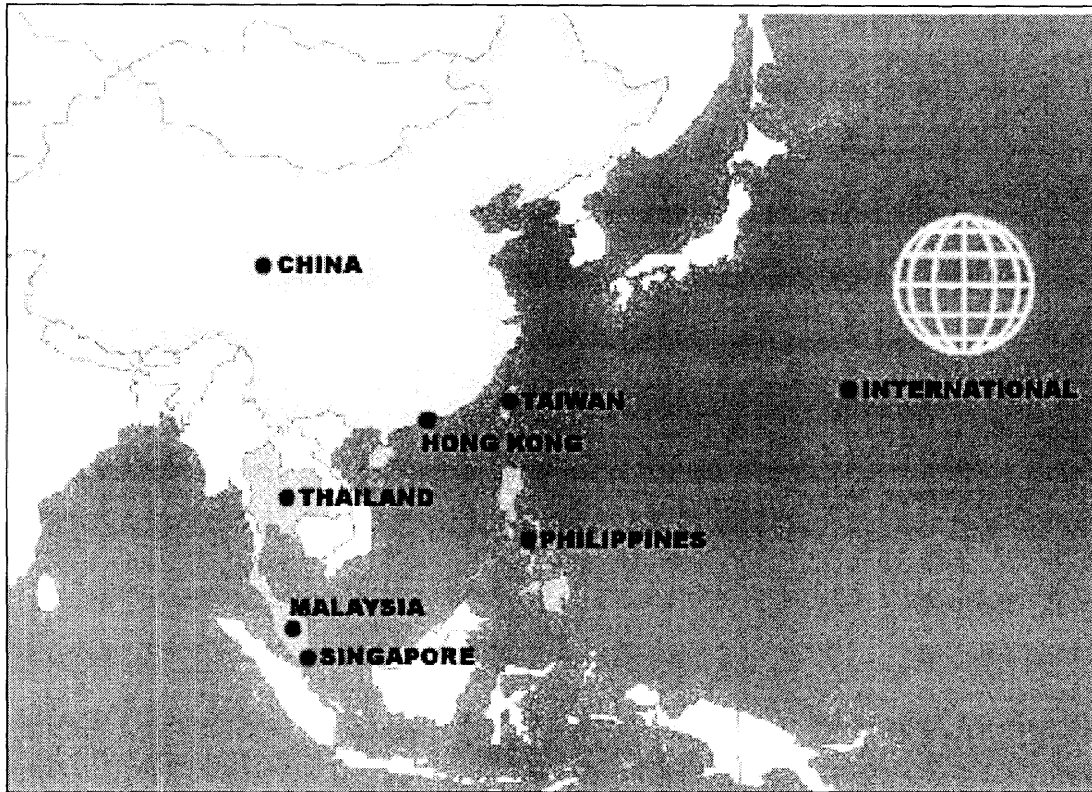


Figure 4-1 IDS Offices in Asia Pacific³⁰

4.3 Retail/Distribution Industry

The operating models of IDS are influenced heavily by the transformation that takes place in the retail/distribution industry. In the 50's, most of the consumer markets in Asia were still developing and financially most brand owners could not justify to set up offices in Asia to serve the local markets. As a result, many brand owners relied heavily on the distributors to promote, distribute and sell their products in this region. For some distributors, they also assumed the role of manufacturers in manufacturing the products

³⁰ IDS Group Website, <http://www.idsgroup.com/>

on behalf of the brand owners; while for others, they focused on the sales and marketing activities³¹.

The economic boom and the increase in consumerism in the '80s, followed by the potential accesses to the attractive Chinese and Indian markets in the '90s, have attracted many leading brand owners to establish their sales or representative offices in Asia, notably in Hong Kong, Taiwan, Singapore and Korea. Traditionally, distributors manage the whole chain of marketing, distributing and selling the products on behalf of the brand owners³². In the traditional business model, distributors do not only control the price points at each level of the distribution chain, they also control the retail network within the local markets in which they operate. Hence, the presence of brand owners has disrupted the traditional retail/distribution business models in several ways.

Firstly, in order to gain market share, brand owners appoint more channel partners to broaden the market coverage. As a result, some distributors lost their exclusive distributorships and they are being forced to compete for market share with other players. Secondly, most brand owners resume control of the marketing activities and dictate the pricing structures in the market place. That caused many distributors to compete for new orders by giving additional discounts to the retailers or consumers. The presence of brand owners in the region has not only changed the operating models of distributors, it has also disintegrated the distribution chain of the retail/distribution industry by segmenting the once-connected activities into individual competence. Most importantly, distributors are losing control of their businesses and their margins are

³¹ S. Kwok, *Interview with IDS*, 5 January 2006.

³² Wikipedia Website, http://en.wikipedia.org/wiki/Distribution_%28business%29

shrinking. As a result, distributors have to find new avenues to survive and compete effectively in the market³³.

4.4 IDS Operating Model

In chapter 3, we discussed the lead firm model employed by Li & Fung to control the network by dictating where, when and how the goods are being made and how much profit margins are accrued at each stage. IDS engages a very similar approach to position itself along the fragmented distribution chain. However, instead of depending on the wide pools of suppliers, IDS creates innovative service offerings to fill the gaps between each key activity along the chain, and uses IT extensively to connect the activities and exert its control over the network.

4.4.1 Business Transformation

Prior to the acquisition by LFD, logistics operations were not part of Inchcape's core businesses. While Inchcape has strong sales and marketing teams in the retail/distribution business, Inchcape subcontracted almost all of the logistics activities, including planning, to 3rd party logistics providers (3PLs)³⁴. Upon the acquisition, the new management team strengthens the logistics competence and develops the logistics operations into a dedicated business unit which becomes IDS Logistics³⁵. According to the CEO of IDS Group, such a transformation was timely. When IDS studies the distribution process from an integrated approach, IDS sees logistics as the link

³³ B. Chang, *Reinventing Distribution Through Value-Chain Logistics*, Mediazone, 2006.

³⁴ S. Kwok, *Interview with IDS*, 5 January 2006.

³⁵ IDS Global Offering Prospectus, page 51, 2004.

connecting manufacturing and marketing into a complete value-chain covering the entire process from procurement of raw materials to delivery of finished goods to end customers³⁶. Without a strong logistics operations unit, IDS can only compete on specific activities at specific entry points in the chain. By transforming the back-end support function into a front-end business, IDS is able to provide a one-stop shop solution to the customers and complete the whole value-chain for retail industry as shown below.

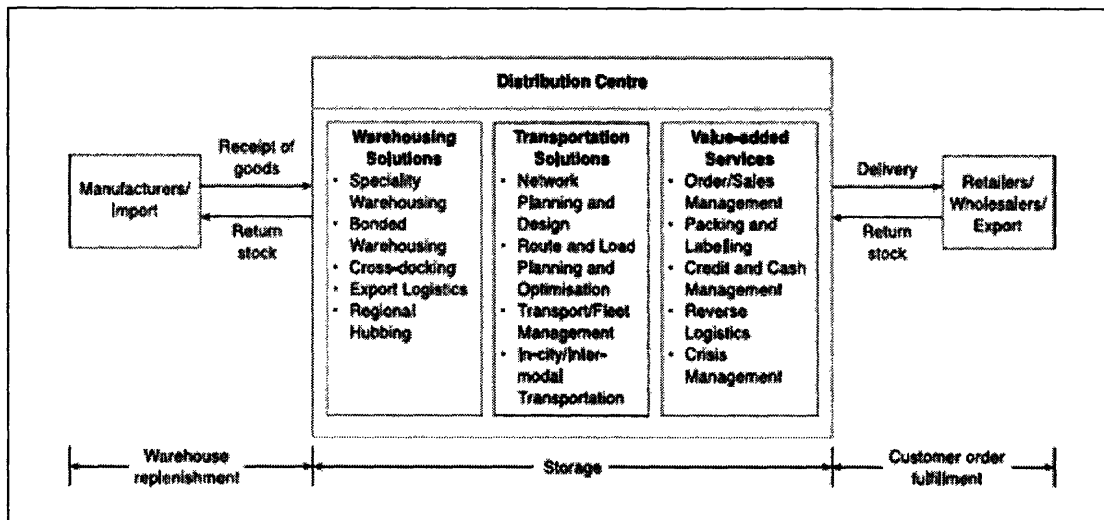


Figure 4-2 IDS Logistics Solutions Offerings³⁷

Apart from its in-country logistics and distribution systems, IDS has also set up global supply chain management services through IDS Logistics International. IDS Logistics International acts as a 3PL or 4PL to help its customers select and manage the service providers across the global chain in 90 countries. By using its proprietary

³⁶ IDS Global Offering Prospectus, page 55, 2004.

³⁷ IDS Global Offering Prospectus, page 63, 2004.

analytical methodology, IDS Logistics International is able to assess and analyze complex supply chain, and seek intervention points to improve efficiencies throughout the chain. This mode of operations is best illustrated by referring to the service rendered to Sara Lee, a customer of IDS Logistics International³⁸.

Sara Lee is an international corporation which owns many leading brands such as Hanes, Bali, Champion, Barely There, Playtex, Wonderbra, just to name a few³⁹. For many years, Sara Lee has difficulties coordinating the logistics activities efficiently because all these products are manufactured at different locations by different suppliers. Subsequently, Sara Lee has engaged IDS International to coordinate the logistics operations on its behalf. By using IDS' Optimized Shipping and Integrated Flow services system, IDS Logistics International helps Sara Lee consolidate different freight orders to form larger aggregated orders to secure better transportation rates from shipping companies. The system also helps Sara Lee streamline the shipping schedule and recommend the most optimum shipping routes for Sara Lee's shipments. As the goods are in transit, Sara Lee is able to track the flow of goods to ensure a point-to-point delivery using IDS' ViTAL system. As a result, Sara Lee has attained higher efficiencies in its logistics operations and registered larger cost savings⁴⁰.

4.4.2 Expanding the Scopes

Besides the logistics operations, IDS also strengthens its capabilities at the upstream of the distribution chain where products are being manufactured. Traditionally,

³⁸ IDS Group Website, <http://www.idsgroup.com/>

³⁹ Sara Lee Website, <http://www.saralee.com/>

⁴⁰ IDS Global Offering Prospectus, page 70, 2004.

brand owners manufactured their products in the home countries and sold the products through the distributors. In the 70's and 80's, low labour costs, coupled with increased consumers demand, have attracted some brand owners to set up plants in ASEAN countries to produce their products. During that period, differences in trade tariff and import duties among these countries made cross-border imports extremely difficult⁴¹. As a result, brand owners have to maintain manufacturing plants at multiple locations in order to produce goods to serve the local market. Even though some brand owners have outsourced the manufacturing process to local producers, most of them do not have sufficient volume to achieve the economics of scales to attain significant economic rents.

The implementation of ASEAN Free Trade Agreement (AFTA) in the '90s has phased out the import duties for some personal healthcare and food products across the ASEAN countries. IDS identifies opportunities to help brand owners attain higher cost savings through pooling their manufacturing facilities under "one roof". The concept of "pooling" is not new but until then, trade barriers and rivalry among the brand owners made the implementation of such concept not feasible. However, under the new regulatory conditions, IDS, as a non-contesting 3rd party manufacturer, emerges as a natural party to perform this service to the brand owners and help them save some manufacturing costs.

As of June of 2004, IDS Manufacturing has operated 118 production lines with most of the production lines dedicated to particular clients⁴². Operation wise, IDS Manufacturing in Malaysia specializes in food and beverages, Thailand in pharmaceutical and personal care, and finally, Indonesia in personal care and household

⁴¹ R. Carruthers, *Trade & Logistics: An Evolution of a Product Line*, May 2003.

⁴² IDS Global Offering Prospectus, page 81, 2004.

products. Most of the product lines belong to the clients and IDS offers the service to manage and operate the production lines on behalf of the clients. The finished goods are then being shipped to the distribution centres that are located across the region by IDS logistics team or 3PLs.

Apart from contract manufacturing, IDS is also fortifying its position in the distribution chain by creating new offerings to penetrate the distribution chain from various entry points. A sample of its offerings is shown in Figure 4-3. By using the logistics operations and technology as the underlying delivery “vehicle” for these services, IDS aims to expand its influence and control throughout the distribution network. This business strategy is consistent with the characteristics of mini-maestro described in Chapter 2.

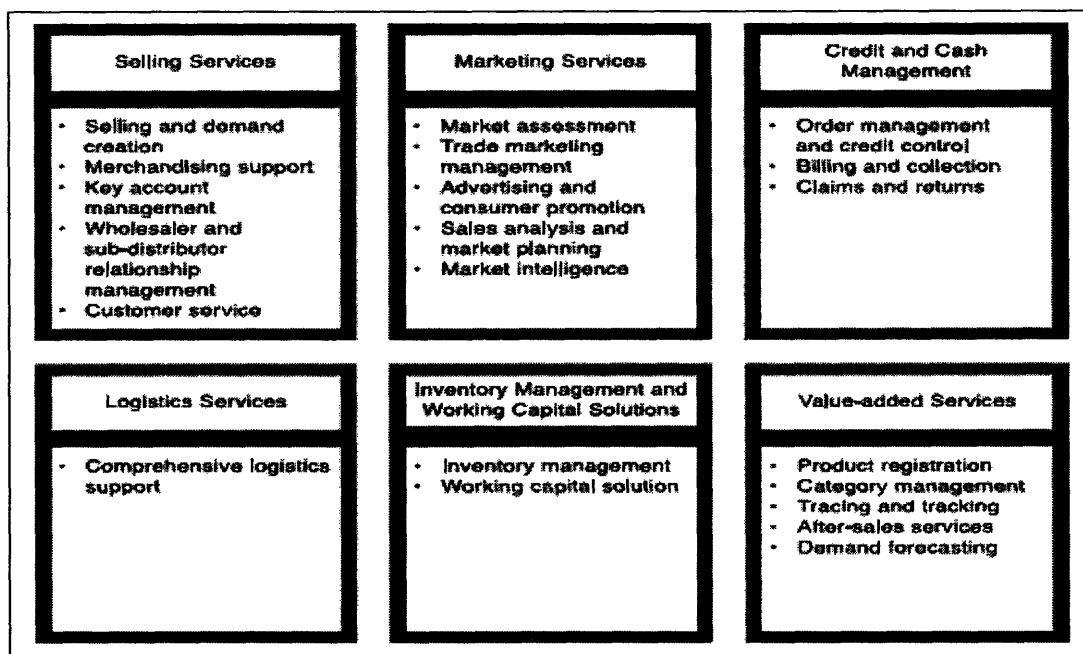


Figure 4-3 Sample Services Offering of IDS

4.4.3 Listen/Check/Deliver System

This section explores the role of technology and how the effective use of technology has helped to strengthen IDS' position as a mini-maestro in the network. In their paper, Bitran et al. introduce the concept of Listen/Check/Delivery in new supply or distribution networks as shown in Figure 4-4. In the Listen/Check/Delivery system, 3PLs are more than receiving the orders and delivering the goods. 3PLs have full knowledge of the order right from its initiation, to coordinating with suppliers to manufacture or acquire the designated products, and deliver the finished goods to the customer. In a nutshell, the 3PLs involve in the full cycle of order fulfilment, production planning and delivery of the goods in the supply chain.

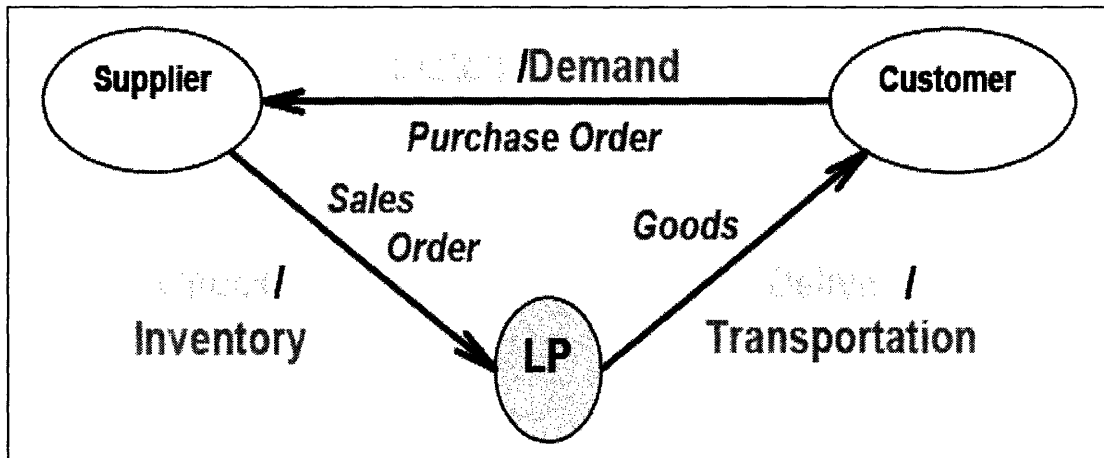


Figure 4-4 Listen/Check/Delivery⁴³

⁴³ G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Role of Systems Integrator and Trading Firms*, page 14, 2006.

Information and communications technology (ICT) plays an important role as an enabler in the listen/check/deliver system to facilitate the information flow among the LPs, customers and suppliers. At present, there are off-the-shelf technologies and products which can provide the needed features to set up a partial system but an end-to-end solution to satisfy the requirement of the full distribution chain will require massive customizations which are costly and difficult. Moreover, a successful implementation of such a system goes beyond the richness of functions and capabilities of technology; it requires the full support of both customers and suppliers to integrate their extensive Enterprise Resource Planning (ERP) and Material Resource Planning (MRP) systems to the LPs' logistics system.

In this aspect, IDS has the advantage over its competitors in implementing the Listen/Check/Delivery system because IDS controls the upstream and intermediate business, namely the manufacturing facilities and the distribution centres, in the chain. Traditionally, it is easier to drive an internal business process re-engineering (BPR) initiative compare to driving similar initiative that involve external parties. Upon the acquisition of Inchcape by LFD, the new management team has standardized and integrated all the IT system across IDS Manufacturing, IDS Marketing and IDS Logistics under one single IT infrastructure as seen in Figure 4-5.

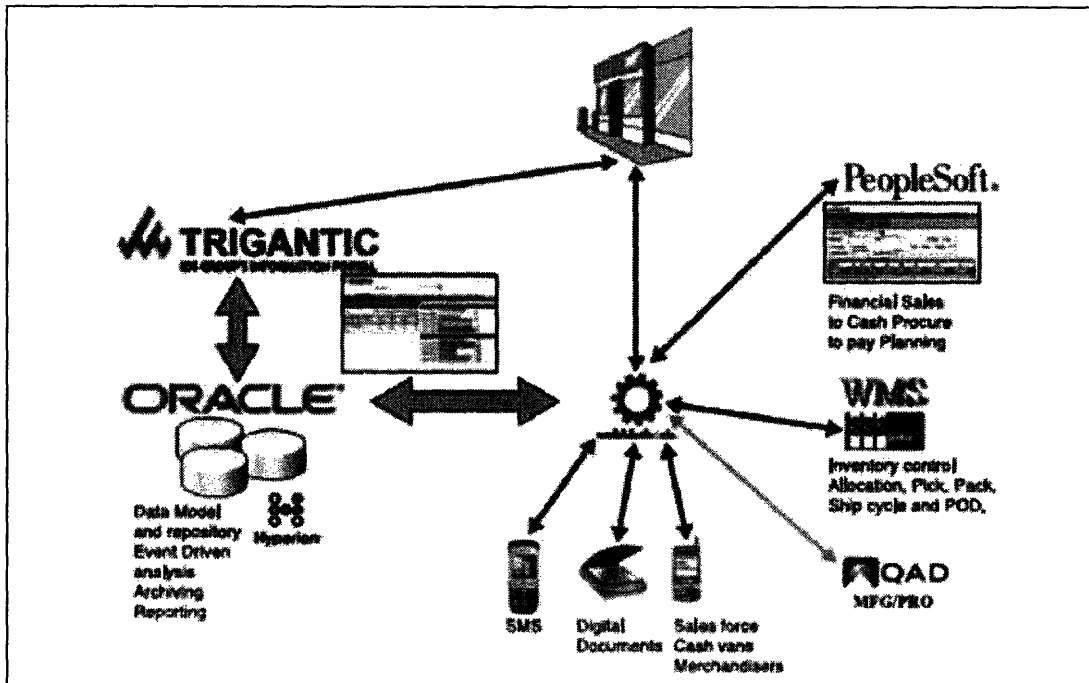


Figure 4-5 IDS IT Infrastructure⁴⁴

IDS uses WebMethods software as its Enterprise Application Integration (EAI) tool across the whole enterprise. By using the adapters from WebMethods, IDS integrates the following system together under a single integration infrastructure⁴⁵:

- PeopleSoft EnterpriseOne application as the distribution and financial management tool;
- SSA WMS Exceed 4000 application as the warehouse management system;
- QAD MFG/PRO system as the standard application to support the MRP module and the manufacturing processes with the distributions and inventories;

⁴⁴ IDS Global Offering Prospectus, page 94, 2004.

⁴⁵ IDS Global Offering Prospectus, page 94, 2004.

- Trigantic application as the online reporting system that mines and translates operational data into valuable information, such as Key Performance Indexes (KPIs);
- Road-Warrior system as the online solution for sales representatives to place and transmit orders electronically from handheld devices to offices;
- Various ERP systems use by IDS' customers.

The tightly integrated system offers both IDS and its' customers tremendous clarity over the activities that span across the distribution chain. On the upstream, IDS Manufacturing manufacture products based on customers' two months firm orders and three months forecast data. The near real-time sales and inventory information allow IDS Manufacturing to adjust the manufacturing volumes, facilitate the efficient allocation of product lines, and finally, control the shipment and inventory. As a result, IDS has been able to implement near "Just-in-Time" manufacturing methodology in all its plants. On the downstream, the seamless information flow allows IDS and its customers to minimize the out-of-stock issues, and reduce substantial wastage due to excessive inventory write-offs and retail mark-downs.

According to IDS, the seamless integration between IDS and its customers also allows IDS to respond faster to customers requests. This feature can be illustrated by referring to a fulfilment process for an IDS customer in Hong Kong's healthcare industry⁴⁶.

⁴⁶ S. Kwok, *Interview with IDS*, 5 January 2006.

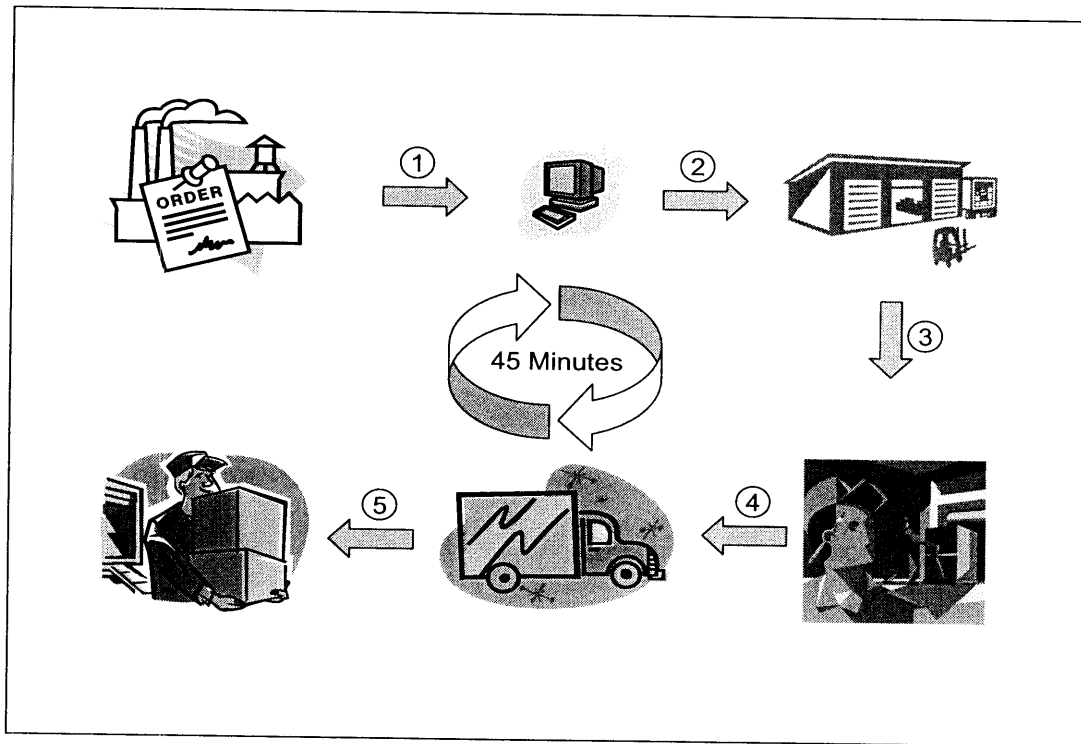


Figure 4-6 IDS Order Fulfilment Flow for A Healthcare Customer in Hong Kong

Typically, hospitals and clinics do not stock a lot of medicine and medical products in their premises. The medicines and medical devices are replenished as and when the stocks deplete. During an emergency, the demand of certain medicine or medical devices may cause the stocks to run-out quickly. As the hospital places order to the sales representative, the sales rep is able to track the availability of the goods in the warehouse through his company's native ERP system or IDS' Trigantic system. When the sales rep places the order in his native ERP system, notice is sent to the distribution centre to pack and prepare the goods; in parallel, another notice is sent to the LPs (IDS Logistics or 3PLs) to pick up the goods and deliver them to the customer. As the customer receives the goods, a SMS message will be sent via mobile phone to IDS office

to confirm delivery and prepare for billing. In Hong Kong and some locations, the whole process can be fulfilled in as little as 45 minutes⁴⁷.

From a high level view, the IT applications deployed by IDS are entirely off-the-shelf products which can be acquired easily by any company. However, the interview data and analysis reveal that almost all IDS IT applications are highly customized to fit specific business purposes. For example, when IDS acquired the warehouse management system from SSA, IDS did not only acquire the license to use, but IDS also secured the source code of the application. Having the source code gives IDS IT team the liberty to customize the application to meet its business needs as the business model changes. Moreover, IDS has also secured the Enterprise License Agreement (ELA) for most of the software applications it deployed. The ELA gives IDS the flexibility to extend the usage of their applications beyond IDS enterprise. For some customers who lack proper IT infrastructure, IDS is providing the IT access to these customers with a charge. As a result, IDS can continue to leverage the IT system to optimize its operations throughout the chain⁴⁸.

On the downstream, IDS has invested heavily to provide support and perform IT integration works for its customers. In order to encourage their customers to integrate their ERP system with IDS infrastructure, IDS funds all the integration work and provide on-going support to the system through its internal IT teams which are located in Singapore and Hong Kong. As mentioned above, for customers who only have basic IT infrastructure in-place, IDS provides access to these customers through the Trigantic portal with a charge so that the customers can take advantage of IDS extensive IT

⁴⁷ S. Kwok, *Interview with IDS*, 5 January 2006.

⁴⁸ S. Kwok, *Interview with IDS*, 5 January 2006.

infrastructure to enhance their competitive advantages and to achieve operational excellence.

4.5 Observations

In the retail/distribution industry, the emergence of mini-maestros is driven primarily by the disintegration in the distribution chain. Unlike the apparel industry though, the disintegration of the chain is not caused by massive outsourcing of productions, but by the business strategy of brand owners to regain controls of their brands and Go-To-Market strategy. As a result, the traditional distribution model becomes obsolete; as IDS' CEO puts it, "...in the past the distributor sets a single margin for an all-in bundled service...Now we see a trend that more and more customers require a more flexible approach. Sometimes, they don't want to relinquish the control of selling and marketing... We need to unbundle our offerings to seek more entry points into the chain."⁴⁹

The needs to survive and increase profitability have led IDS to change its traditional one-price-fit-all service model to a more agile, modularize services offering. With the new offerings, IDS is able to fill the gaps along the fragmented distribution chain to regain control of the distribution network. Also, by using technology extensively as an enabler to its business strategy, IDS manages to differentiate itself from competitors and drive efficiencies along the distribution chain.

By positioning its three business units at various entry points of the distribution chain (as shown in Figure 4-7), IDS has managed to maximise its profit margins along the chain. IDS also capitalize on its extensive IT capabilities to lock-in their customers

⁴⁹ B. Chang, *Reinventing Distribution Through Value-Chain Logistics*, Mediazone, 2006.

and lock-out the competitors. Its ability to pull all the players, including the competing brand owners, to operate within its network further validate its role as being a trusted 3rd party company, which is the key characteristic of mini-maestro.

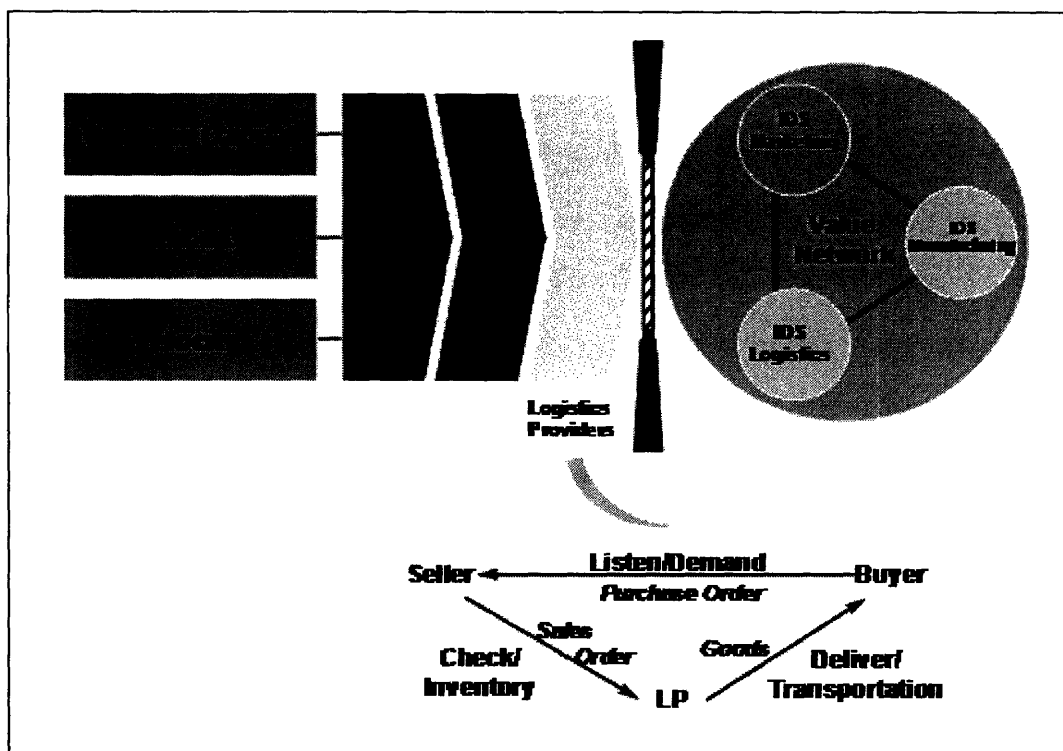


Figure 4-7 IDS Business Units on Adaptive Supply Chain Diagram

Like Li & Fung, the emergence of IDS as the mini-maestro within its distribution network is not a planned one; indeed, it begins with the instinct to survive which later transforms into the needs to regain control over the network⁵⁰.

⁵⁰ G. Bitran, S. Gurumurthi, S.L. Sam, *Emerging Trends in Supply Chain Governance: The Role of Systems Integrator and Trading Firms*, page 14, 2006.

Chapter 5 Impacts to Traditional Logistics Industry

5.1 Introduction

In Chapter 4 and 5, we have seen the formation of mini-maestros in Asia for the apparel and retail/distribution industries. In fact, as manufacturing jobs dispersed to locations where companies can take advantage of their comparative advantages, some forms of system integrator will emerge in those economies to coordinate the supply networks and collect rents through price arbitration. Their emergences do not only alter the socio-economics conditions of the locations they operate in, but their modes of operations also change the business landscape of supporting industries around them. In this chapter, we will explore the impacts of these mini-maestros to the traditional logistics providers such as UPS, DHL, FedEx and the like.

5.2 Definition

Traditionally, the term logistics involves a wide set of activities dedicated to the transformation and distribution of goods, from raw material sourcing to final market distribution as well as the related information flow. Today, it is referred to sets of operations required for goods to be made available to specific destinations⁵¹. Thus, logistics are multi-dimensional *value-added activities* that include production, location, time and control of the supply chain; also, logistics comprise activities such as materials

⁵¹ M. Hesse and J.P. Rodrigue, *The Geography of Transport System*, Department of Economics & Geography, Hofstra University, 1999.

management and physical distribution. An efficient logistics contribute to the *value added activities* in these inter-related ways:

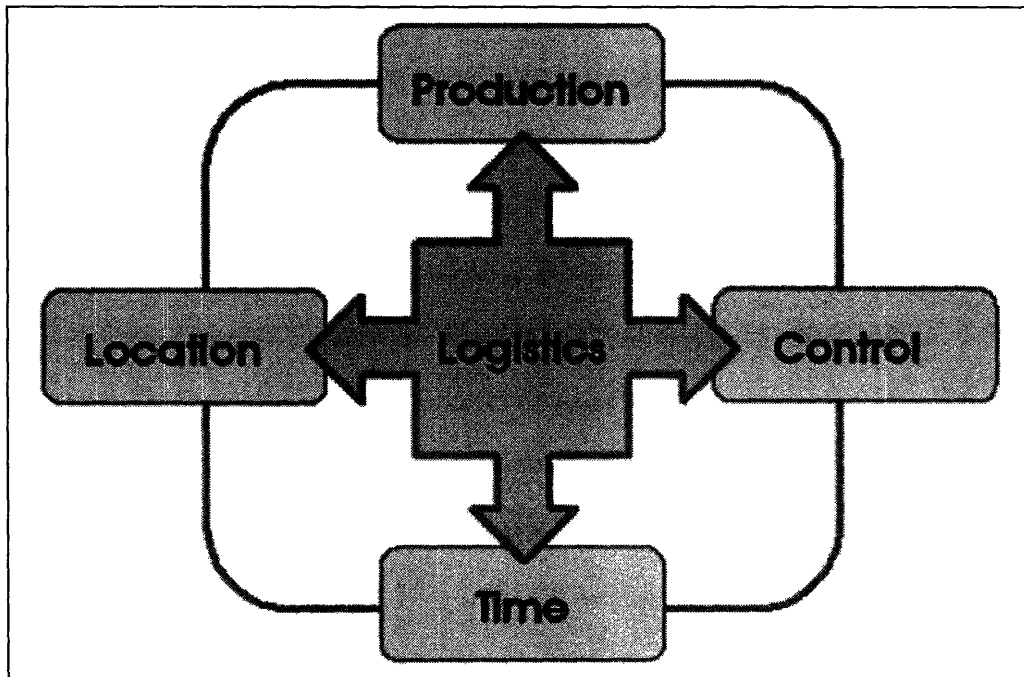


Figure 5-1 Value Added Functions of Logistics⁵²

- **Productions** – Reduce the production costs by improving the efficiency of manufacturing with the right shipment size, packaging and reducing the inventory level.
- **Location** – Lower the distribution costs by taking advantages of better locations to expand the market.

⁵² M. Hesse and J.P. Rodrigue, *The Geography of Transport System*, Department of Economics & Geography, Hofstra University, 1999.

- **Time** – Enhance availability of goods and services by reducing the delivery time through better management of transportation and inventory.
- **Control** –Improve the management of the supply chain by anticipating flows and allocating distribution resources within the network effectively.

In a nutshell, the purpose of logistics is aimed at insuring that a demand is satisfied by optimizing the purchase orders processing, stock management and transportation operations as shown in Figure 5-2⁵³.

⁵³ M. Hesse and J.P. Rodrigue, *The Geography of Transport System*, Department of Economics & Geography, Hofstra University, 1999.

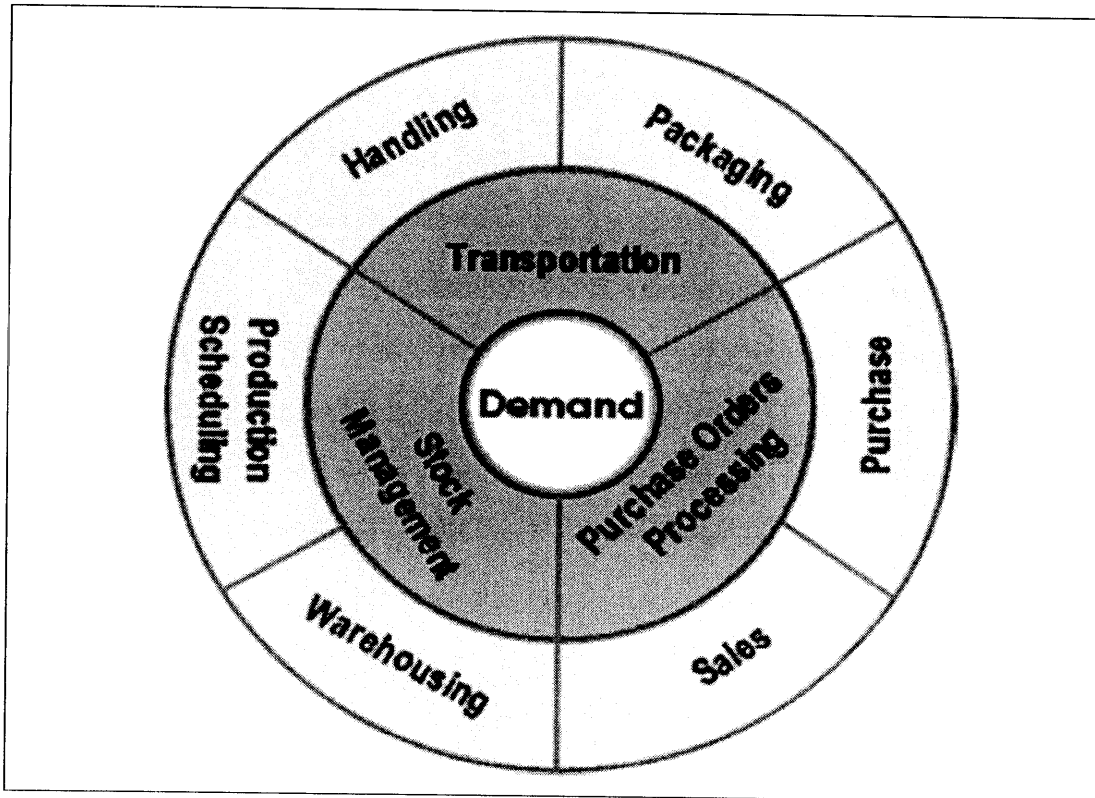


Figure 5-2 Logistics Operations⁵⁴

5.3 Challenges of Traditional Logistics Providers

The emergence of mini-maestros does not change the purpose or mission of logistics; however, the emergence clearly changes the rule of the industry and restricts the scopes of the traditional logistics providers (LPs). Some of the value added activities, such as production and control, which are being perceived as “givens” by the LPs

⁵⁴ M. Hesse and J.P. Rodrigue, *The Geography of Transport System*, Department of Economics & Geography, Hofstra University, 1999.

previously, are now being contested by the mini-maestros; while the control of the two core processes – stock management and purchase order processing are shifted, slowly but steadily, to the hands of mini-maestros. These phenomena can be exemplified by both the cases we mentioned in Chapter 3 and 4.

5.3.1 Apparel and Textile Industry

In the apparel and textile industry, Li & Fung moves upstream to dominate the production activities such as securing the raw materials, arranging the manufacturing schedules and locations, and finally, dictating the transportation mode and carriers. While there are logistical opportunities that still exist in between each activities, the opportunities size are so small that they become extremely difficult for large LPs to win enough deal to achieve the economies of scales to serve these customers profitably. In certain segments, Li & Fung does allow the suppliers to select the LPs; but that does not present much opportunity to LPs as well. According to one supplier of Li & Fung in Thailand, the profit margin they gain is so low that they have to achieve cost efficiency at each stage of the manufacturing processes, including in the movement of goods, like the “lead firm” model Li & Fung deploys in its network. Consequently, their primary objective is to select the cheapest LPs to save cost at the individual node level, instead of paying higher price to engage LPs that can help them to optimize the whole supply chain⁵⁵. The “typical” winners for these deals are normally local or domestic LPs who are just “good enough” to help them move the goods from one point to another point cheaply.

At present, the impacts of mini-maestro to the traditional LPs on the downstream of the chain are less known. This is especially true if the mini-maestros are operating in

⁵⁵ Mr. Osothsilp, General Manager of an apparel factory in Thailand, January 2006.

foreign countries while the customers are located at the traditional LPs' home turf. One of the reasons is customers are more focused on the overall efficiency of logistics operations towards the whole company, instead of the efficiency of any individual parts, when they are operating at their home ground. Under this circumstance, companies are more likely to outsource the logistics operations to the LPs who can move the goods to their point-of-sales in the most costs and times efficient manner. Hence, the critical selection criteria are based on the networks of the LPs serve and their deficiencies in delivering the goods. As a result, LPs who have long history operating in those particular locations tend to have the advantage and enjoy the competitive advantages over other regional or international LPs.

However, mini-maestro like Li & Fung is trying to overcome the above difficulties by creating new business models that enable it to gain more controls over the networks. In 2004, Li & Fung moves into brand licensing business where it is now stretching from managing the inventories and warehouses to managing the shelves for its customers. From the customers' standpoint, such model makes sense financially because not only can they reduce the inventory risks further, but they have also shifted the risks of carrying out-of-date goods or returns to Li & Fung. Moreover, they can see some improvements in productivities due to a tighter & more integrated supply chain service from Li & Fung. As more store owners and brands owners adopt this business model, Li & Fung will gain more power within the network. Over times, the needs for store owners to outsource the logistics operations to 3PLs diminish since most logistics operations can now be handled directly by the suppliers.

Presently, it is not clear if the traditional logistics providers will lose their strategic advantages in future. In the short term, they are facing the threat of being

excluded from shaping the future of logistics and operations models in the apparel and textile business. As the fragmented chain reintegrates, are the traditional LPs in the position to capture the lucrative high value business? Or they are being restricted to compete in the low profit margins goods moving segment?

5.3.2 Distribution Industry

In the retail/distribution industry, the emergence of mini-maestro in supply networks poses greater threats to the traditional logistics providers than the threats pose by the mini-maestros in the apparel and textile industry. Traditionally, most of the firms in this industry were once trading firms or distributors for selected brand owners and they derive their competitiveness through two critical elements – the breadth of the products or brands they carry, and the speed they can move their products to the shelves and replenish them before the goods sold out. As a result, logistics operation is not only essential to the success of the firms but it is a strategic tool that contributes to the profitability of the firms. Hence, most of these firms have developed unique competence to optimize the logistics operations to enhance their competitiveness in the market place.

IDS has taken a step further by making logistics as part of its core business units. Besides boosting its logistics capabilities to deliver the traditional logistics operations activities (refer to Figure 5-2), and IDS also positions itself to capture the upstream and downstream opportunities of the distribution chain that feed the operations of traditional logistics providers. Consequently, IDS has changed the traditional business models of logistics industry; IDS transforms the activities, which are being perceived as value-added previously, into key competitive differentiators. Instead of competing with the traditional logistics providers in the terms of cost of shipment, volume of goods, or

the speed of delivery, IDS competes by securing the activities that feed the logistics operations at all key entry points along the distribution chain.

Having control over the activities along the chain also allows IDS to invest heavily into the chain to continuously improve the operations efficiencies and cost effectiveness along the chain. In fact, it is a positive feedback effect whereby as customers realize more costs and time savings through operational excellence, they are more willing to outsource additional jobs to IDS. In return, IDS will capitalize on the success and trusts it builds with the customers to embark on more projects that will enhance the performance within the network. The implementation of listen/check/delivery system is a good example of this phenomenon. The system has become a “dominance exchange” between IDS and its customers within the network. As describe in Hax et al’s⁵⁶ book, *The Delta Project*, one key characteristics of dominance exchange is it locks out all other competitors from implementing similar system within the network and the incumbent can continue to gain economic rents from the system.

In the short term, the biggest threat face by the traditional logistics providers is their ability to raise the operating profits while being confined to compete at the goods moving segment. In locations where the traditional LPs have set up the logistics infrastructure, they will see their profit margins diminished as competition becomes intense. In the areas where the traditional LPs are about to or have not set up their operations, the situation will complicate their investment decisions. In the long run, the traditional LPs may lose their influences over their customers’ logistics governance issues.

⁵⁶ Hax and Wilde, *The Delta Project: Discovering New Sources of Profitability*, Palgrave, 2001.

5.4 Observations

The threats of mini-maestros to the traditional logistics providers are real but subtle. As mini-maestros continue to refine their business models, they rely heavily on the existing 3rd party logistics providers to support their logistics needs. To the current 3PLs, the mini-maestros do not pose immediate threat and it is business-as-usual (BAU) for many of them. The key question is when mini-maestros strengthen their position within the network, can traditional logistics providers transform their business models to compete in the new space, or they may lose their relevance in influencing their customers' logistical governance issues, and be confined to perform only the low margin goods moving job.

From the research, there are indications that the mini-maestros model is not yet matured and there are possible new opportunities that 3PLs can explore. The concept of mini-maestro is universal but its implementation is very industry specific. While the underlying objectives of Li & Fung and IDS are to strengthen their positions within the chains through value-add activities, the methodologies they deployed to achieve the objectives are very different. Hence, there are very little chances for Li & Fung and IDS to replicate their models to other industries. To the traditional LPs which operate across many different industries, the finding implies that there are multiple opportunities for traditional LPs to define their value-add activities and impose control on those networks.

The research also finds that disintegration and re-integration of supply networks do not occur only within the chain, but at both ends of the supply chain that go beyond the control of mini-maestros. In fact, as re-integration occurs, there will be "super-suppliers" which supply goods not to one but multiple mini-maestros in different networks. This phenomena presents the traditional LPs an opportunity to influence and

control the logistics of these super-suppliers before they enter the mini-maestros' network.

At the global level, the emergence of mini-maestros requires new collaborations platforms to streamline the logistics activities across different networks. With their extensive global logistics networks, the traditional LPs have the potential to provide such platforms and coordinate the activities. The question is whether traditional LPs can move fast enough to define the standards for such collaboration platform and assume control of it before the mini-maestros form an alliance to do so.

Chapter 6 Summary and Conclusions

6.1 Introduction

The purpose of this thesis is to validate the emergence of mini-maestro in the supply network and explore their impacts on the logistics industry. This chapter summarizes the findings of my research and major conclusions of the preceding chapters. Section 6.2 presents an overview of the research findings. Finally, Section 6.3 summarizes the conclusions and recommends the directions for further research.

6.2 Research Findings

6.2.1 Literatures Reviewed

Many literatures discussed the evolution of the supply chain industry and most authors have observed that as these transformations take place, the traditional supply chain networks disintegrate. However, most of the authors stopped short of predicting the next phase of the models or activities that would take place as the consequences of this disintegration. In his article, Poirer et al.⁵⁷, brought out the concept of Channel Master or Maestro but did not elaborate on the formation and characteristics of these maestros. The detailed concept and characteristics of Maestro are brought up by Bitran

⁵⁷ C. Poirer, F. Quinn, *A Survey of Supply Chain Progress*, Supply Chain Management Review, 2003.

et al.⁵⁸ in the article, *The Emerging Trends in Supply Chain Governance*. In their article, the authors explain that the disintegration stage of supply network is unstable and eventually, re-integration will take place within the network and a Maestro will emerge to control the network. They further argue that the notion of having a Maestro to control the network is unrealistic since most established companies do not see any incentives from buying into the coordination made by such maestro. As such, they conjecture that a neutral third party will take charge of part of the network, and perform the role of mini-maestro within the network.

6.2.2 Cases Reviewed

Li & Fung and IDS are used as the subjects of research to validate the emergence of mini-maestros within their supply networks. Interview data reveals that their transformation to be the mini-maestros are not driven by plan, but by the macro-economics conditions of the industries and to a certain extent, the rules and regulations that govern the industries they operate in.

However, once they (Li & Fung and IDS) recognize the shift in the business and their operating environments, both have transformed their business models aggressively to gain control of their networks. Li & Fung acquired other trading firms to expand the suppliers and customers networks, while IDS invested heavily in technology to build the listen/check/deliver infrastructure. These outcomes have serious implications on the traditional logistics providers (LPs).

⁵⁸ G. Bitran, S. Gurumurthi, S. L. Sam, *Emerging Trends in Supply Chain Governance: The Role of System Integrator and Trading Firms*, page 15, 2005.

On the downside, traditional LPs are forced to compete in the low profit goods moving segment as Li & Fung and IDS have stretched beyond manufacturing and inventory management, to essentially influence the logistical decisions of customers through innovative business models and advanced technology. On the upside, the strategy and business models of Li & Fung and IDS are industries (vertically) driven. Hence, that presented opportunities for traditional LPs to re-define their strategies to regain control over the logistics governance issues and possibly, the inter-networks activities.

6.3 Conclusion

This research achieves its intended objectives of validating the emergence of mini-maestro in the apparel and textile industry and retail/distribution industry. This thesis also outlines the underlying forces that Li & Fung and IDS have harnessed to be the mini-maestro within their network. In both cases, the researches have shown that the primary focus of the mini-maestros is not to dominate the logistics business but to adapt to the evolving business environment quickly and effectively. As they derive new strategies to fill the gaps in the fragmented networks, they have capitalized on the logistics operations as an enabler in delivering their value-added activities along the chain. Hence, their overall supply chain governance model encompasses the control of the whole supply and distribution chain, besides the normal supply and demand networks.

From the research, it is also seemed that the short term impact on the traditional logistics providers caused by the mini-maestros is limited. At present, Li & Fung and IDS still rely on the network of traditional LPs to deliver the raw materials to the suppliers,

and finish goods to the customers. However, the long business impacts of the mini-maestro to the traditional LPs are tremendous. As the mini-maestro continues to exert their influences on the governance issues, it is highly likely that the influences of traditional LPs will diminish. This is especially true for industries where mini-maestro can stretch their reaches to the point-of-sales. With their abilities to optimize and streamline the business processes more efficiently than the traditional LPs, the traditional LPs will risk losing their competitiveness and attractiveness in the logistics arena.

Moving forward, the next phase of the research can focus on the proliferation of this phenomenon (mini-maestro) and the causes of their emergence in other industries. The data will help to derive more in-depth understandings and insights about their business strategies and business models. And the commonalities drawn from these data may serve as the basic functions and features to develop the inter-network platform.

Second, an in-depth study can also be conducted on the current mini-maestros, namely Li & Fung and IDS, especially on the evolution of their business models in future. Recently, Li & Fung has moved into the importing business; this move is drastically different from the previous strategies where it expanded both its suppliers and customers networks through acquisitions. While it is common for company to change its business strategy to suit the needs of business environment, the study can yield a deeper understanding on whether the switch is due to the emergence of new business requirements or the limitation of its existing business model. The data will help to define the strengths and limitations of mini-maestros model, and provide clues to understand if the existing mini-maestro models can be expanded into other cultural and geographical areas.

Third, a research on the future role of the traditional logistics providers can help to uncover the strengths and the weaknesses, as well as the gaps, of the existing LPs. The research should also cover the issues of new competences that the traditional logistics providers should acquire in order to fulfil the customers' immediate and future business needs. The output of this research can be a framework to define the new business strategies and business models for the traditional LPs to transform their businesses.

Finally, a study can be conducted to analyze the underlying requirement and technology involved in setting up the listen/check/deliver system. At present, long term business relationships and trusts play critical roles in enlisting customers to participate in this system. The research can explore if advanced technology can deliver similar visibility across the whole chain without having to intrude on the customers' system too deeply. The study can also discuss the possibility of establishing standards and protocols across different networks to enhance the efficiencies of goods delivery and tracking.

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Appendix A – Interview Guide (IDS Version)

Executive Brief

The supply chains (SCs) structure has been changing in several industry sectors related to the outsourcing and offshore activities of large manufacturers. In the traditional vertical chains, the core manufacturing firm was in charge of the establishment of objectives, management decisions and coordination of the integrants. But SCs are going through a disintegration process advanced by the availability of information technologies facilitating coordination of geographically dispersed suppliers, trade barriers relaxation, differentials in labour costs, enhanced produced capabilities of suppliers in other regions and the transfer of power from manufacturing firms to large retailers and end consumers. This disintegration phenomenon has implications in the supply chain governance and opens the opportunity for the development of a new generation of supply chain services, those of the coordinator or “mini-maestro”. The “mini-maestro” is the orchestrator or coordinator of all downstream activity for a given product marketed by a brand owner company.

In our works, we have identified IDS Group as one of the companies assuming this coordination role in Asia for recognized world brand retailers and manufacturers (Note: our research also identified Li & Fung, parent company of IDS Group, is a “mini-maestro” itself). We conjectured that the activities of “mini-maestro” will pose challenges to the existing logistics business models and the established logistics firms. Hence, we would like to conduct an interview with IDS Group to understand the underlying forces that IDS Group has exploited to become the leader in this field, and explore the degree of maturity of the logistics unit of IDS Group, namely IDS Logistics.

Interview Guide:

1. What are the core competencies of IDS Group as a whole, and IDS Logistics in particular?
2. According to IDS Global Offerings prospectus, IDS owns local transport fleets in several ASEAN countries. Then, who are your trans-national, regional and international logistics partners?
3. How do you coordinate the logistic activities among your suppliers, clients, and logistics partners? What are the instruments you used for such coordination?
4. How does the order fulfilment process work?
5. In the Annual Report and IDS Global Offerings prospectus, you mentioned that IT is a key enabler and IDS Group uses IT extensively to improve the efficiency of your operations. Do you extend the IT functions to your partners? How extensive do you proliferate the system to your partners? How do you support them (the IT system) that are located in your partners' sites?
6. Do IDS Logistics, IDS Marketing and IDS Manufacturing divisions share the same IT infrastructure?
7. Considering that IDS have closer relationships with most of your partners, does that save you in working with these partners by basing on trust, instead of investing in tools to collect large amount of data about them?
8. One of the service offerings IDS provides is credit and cash management for logistics partners/clients. How does this system work? Do you extend this offering to SME partners and clients? How do you assess their credit worthiness and how do you manage the risks?
9. What is the strategy of IDS in serving the SME marketplace?
10. Our research indicates that most of the smaller suppliers would like the logistics providers to help them match their supplies to the demand, or sell their excess supply to the market. Does IDS Logistics offer such service? And how does IDS access to the suppliers?

11. IDS Logistics is a member of Global alliance. What are the implications to IDS Group and what are the synergies that IDS is looking for?
12. How do your competencies compliment Li & Fung Group?
13. Is IDS Logistics the “by default” logistics provider for Li & Fung Group, as well as its suppliers?
14. How much of your logistics capacities are allocated to Li & Fung Group and its suppliers?

Appendix B – US Garment Import (Figure 3-3)

U.S. APPAREL IMPORTS BY REGION AND COUNTRY, 1983-2001

Region/Country/Source	1983		1986		1990		1994		1998		2001	
	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%
Northeast Asia												
China	759	8%	1,661	10%	3,439	13%	6,338	17%	7,180	13%	8,853	14%
Hong Kong	2,249		3,392		3,977		4,393		4,494		4,282	
South Korea	1,685		2,381		3,342		2,245		2,047		2,355	
Taiwan	1,860		2,621		2,489		2,269		2,224		1,907	
Misc.	132		229		417		605		1,019		1,126	
Total	6,625	68%	10,483	60%	13,663	54%	15,850	43%	16,963	31%	18,523	29%
Southeast Asia												
Indonesia	75		269		645		1,182		1,857		2,344	
Thailand	125		213		483		1,006		1,733		2,151	
Philippines	319		473		1,083		1,457		1,797		1,919	
Malaysia	93		257		604		1,051		1,360		1,256	
Singapore	193		386		621		472		307		299	
Total	806	8%	1,598	9%	3,436	13%	5,168	14%	7,034	13%	7,968	12%
South Asia												
Bangladesh	7		154		422		885		1,628		2,101	
India	220		344		636		1,209		1,636		1,927	
Sri Lanka	126		257		426		871		1,342		1,534	
Pakistan	32		92		232		508		771		1,017	
Total	385	4%	847	5%	1,716	7%	3,573	10%	5,377	10%	6,580	10%
Central America and the Caribbean												
Honduras	20		32		113		650		1,905		2,438	
Dominican Republic	139		287		723		1,600		2,358		2,286	
El Salvador	7		11		54		398		1,170		1,634	
Guatemala	4		20		192		600		1,130		1,634	
Costa Rica	64		142		384		686		827		774	
Jamaica	13		99		235		454		422		188	
Other CRI	142		207		284		151		516		648	
Total	389	4%	797	5%	1,985	8%	4,538	12%	8,349	15%	9,602	15%
Mexico	199	2%	331	2%	709	3%	1,889	5%	6,812	13%	8,128	13%
All other countries	1,328	14%	3,283	19%	4,609	16%	5,859	16%	9,318	17%	12,989	20%
TOTAL APPAREL	9,731	100%	17,341	100%	25,518	100%	36,878	100%	53,874	100%	63,789	100%

Source: Compiled from official statistics of the U.S. Department of Commerce, U.S. imports for consumption, customs value.