Organizational Logistics Processes: A Literature Review and an Exploratory Investigation of International Multimodal Transport in Vietnam

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Abstract

In this paper, we review the extant literature pertaining to logistics processes within organizations. Determinants of the characteristics of logistics processes are identified and logistics processes of international multimodal transport companies in Vietnam are specifically explored. The paper offers unique insights into the logistics processes in service-based firms and explores the nuances of logistics in the setting of a developing country. In addition to providing a useful typology for practitioners and scholars to consider logistics functions, the paper draws upon case analysis to operationalize the typology.

Keywords: Logistics process, product logistics, service logistics, service response logistics

1. Introduction

The efficient application of logistics has long been viewed as a significant enabler for firms seeking to achieve competitive superiority (Stank and Lackey, 1997). For example, Langley and Holcomb (1992) assume that logistics is capable of creating customer value by enhancing efficiency, effectiveness and differentiation. Novack et al. (1992) argue that logistics contributes to the creation of four types of value: form, time, place and possession utilities. The broader underlying concept of integrated logistics management has also been portrayed in a positive light with its promise to bring higher customer service levels simultaneously with decreasing distribution costs (Manrodt and Davis, 1993).

However, the application of logistics by service industries remains relatively limited due to the bias in the literature towards logistics processes of manufacturing industries. This paper attempts to breach this gap by comprehensively reviewing factors that shape logistics processes of firms in general, which allows the modeling of logistics processes of any firm, either in manufacturing or service industries. In this way, the paper offers a unique typology by which to consider a wide array of logistics applications. The second objective is to provide an illustrative exploration of the attributes of logistics which are specific to a service industry - international multimodal transport (IMT). The setting for the second part of the paper is Vietnam.

The justification for focusing on IMT in Vietnam is two-fold. Firstly, although transport related studies account for the largest proportion of research in logistics and logistics-relate area (Stock, 2001), most analyses either consider transport issues independently (that is, with

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no connection to logistics principles) or treat transport as an element of manufacturing firms’ logistics systems. Applications of logistics principles by a transport company as a service provider have been largely neglected and this study endeavors to fill this gap. Secondly, the vast majority of studies into logistics have been found to concentrate on Western and developed countries (Luo et al., (2001) cited in Shang and Sun (2004)). Thus, focusing on Vietnam, an Asian developing country, affords an opportunity to add new insights to the literature.

The paper itself is divided into four additional sections. The second section briefly describes IMT before offering a synoptic overview of the literature on logistics processes within organizations. This section employs both a theoretical and empirical perspective. Some of the unique research problems and background to the case studies that underpin the work is presented in Section 3. An effort is made to consolidate preliminary case findings within this section. Section 4 is used to consider the managerial implications, limitations of the work and identify future research directions. Some brief concluding remarks are then presented in Section 5.

2. IMT and logistics processes – a review

Like any other types of transport, the principal aim of multimodal transport is to move goods to their destinations on time, in good condition and at as low a cost as possible (The UNCTAD Secretariat, 1995). However, what makes IMT different from other types of transport is its main features: the carriage of goods by two or more modes of transport, under one contract, one document and one responsible party for the entire carriage (The UNCTAD Secretariat, 2001).

The most important and overriding feature of IMT, as argued by the UNCTAD Secretariat (1995), is that there is one responsible party for the entire carriage - a multimodal transport operator (MTO). A single operator continuously supervises, and is responsible for, all phases of the transport process, although he/she might subcontract the performance of some, or all modes, or the carriage to other carriers (The UNCTAD Secretariat, 2001). The principal fulfils contracts covering several modes of transport even though others may provide the transportation services per se (The UNCTAD Secretariat, 1995).

According to Marx (1978), the productive process of the transportation industry is the transportation process itself. “Goods travel together with the means of transportation and their traveling constitutes the process of production effected by these means of transport” (Marx, 1978, p. 35). However, limiting the transportation process to periods when goods are actually being transported is too narrow a view, especially when transportation services are increasingly outsourced. The transportation process in effect starts when and where carriers take goods in charge and finishes when and where goods are delivered to consignees. In the case of IMT, the transportation process includes the following specific activities:

a) Receiving goods from consignors;
b) Issuing the IMT document;
c) Warehousing or storing goods while waiting for transportation (if necessary);
d) Loading of goods onto the means of transport;
e) Transporting goods to destinations;
f) Transferring goods between means of transport;
g) Unloading goods;
h) Warehousing or storing goods while waiting for delivery (if necessary);
i) Delivering goods to the consignee upon presentation of an eligible IMT document.
This process is depicted in Figure 1.

![Diagram](image)

(1) Consignor delivers goods to MTO
(2) MTO issues a set of IMT documents, in more than one original and a specific number of copies
(3) Consignor sends all originals to consignee and MTO transports goods to destinations.
(4) When goods arrive at destination, consignee presents one original document to MTO
(5) MTO delivers goods to consignee and keeps an original as a proof of true delivery to consignee

**Figure 1. The IMT process**

The structure of IMT (i.e. one contract, one document and one responsible party for the entire carriage which uses more than one mode of transport) arguably benefits both transport users and providers (The UNCTAD Secretariat, 1995). As for transport users, they can expect economic and financial benefits, mainly from the greater care taken by an MTO of the goods in custody. This can take several forms. First, the time taken to transport items can be reduced along with enhancements in cargo security and punctuality. Second, there may be a reduction in transport and other associated costs. The UNCTAD Secretariat (1995) also believes that these two benefits will give rise to improved quality and more competitively priced door-to-door transport services. Service providers and transport operators, on the other hand, are encouraged to adapt to transport-related technology (e.g. containerization and EDI) and reconsider their marketing strategies, this has a positive effect on their operations (The UNCTAD Secretariat, 1995).

Whereas operations of IMT are somehow different from other types of transport, the benefit provided by IMT is the very one provided by the transport industry in general, that is the change of the location of goods, and is accordingly a service (Marx, 1978). Moreover, Marx (1978) claims that the change of location of goods and its productive process, i.e. the transportation process, occur simultaneously. The change of location benefit cannot be consumed outside its process of production and thus cannot be inventoried like physical products for future use (Marx, 1978). “If it is consumed individually, its value disappears during its consumption. Otherwise, its value is transferred as an additional value to the commodity itself” (Marx, 1978, p. 35). In sum, the IMT provides a transport service – “change of location” of cargoes by two or more modes of transport, under one contract, one document and one responsible party.

By definition, the logistics process pertains to the flow of goods, services and information related to movements of goods and services, so-called logistics information. Nevertheless, logistics activities differ markedly within organizations. Goods create physical flows within and among organizations. There exists spatial and temporal distance between production and
consumption of a product (Marx 1978). Goods can be stored, inventoried and transported from place of supply to place of demand. As a result, managing the flows that circumscribe a product involves activities such as order processing, transportation, inventory, warehousing, materials handling and packaging (Blomberg et al., 2002). A diagrammatic representation of these concepts is offered in Figure 2.

![Figure 2. Logistics activities for a physical product](image)

Unlike “products” per se, a service constitutes an intangible benefit. More specifically, in this instance, production and consumption of services happen simultaneously. As soon as production starts, the process of consumption begins. A service is totally consumed whenever production finishes (Marx, 1978). There is no time and space distance between production and consumption for services. As a result no inventory of services is required as would be the case in manufacturing industries. A contrasting conceptualization of service provision is offered in Figure 3.

![Figure 3. Logistics activities for a service](image)

Clearly, in the context of Figures 2 and 3, management of “flow and storage of services” comprises activities which are quite different from managing physical flows that pertain to goods. No transportation, inventory, warehousing, materials handling or packaging are required when it comes to service logistics. To deliver service benefit to customers, a service provider has to manage their capacity to provide services (Bloomberg et al., 2002) and coordinate service delivery (Davis and Manrodt, 1992).

In addition to capacity management, the coordination of service delivery forms one of the core activities for logistics management in service industries. The service delivery encompasses dynamic scheduling, dispatching and feedback. The overarching aim is to ensure that each unit within the organization synchronizes its activities to ensure effective delivery (Davis and Manrodt, 1992).
The scope of the logistics process – “between the point of origin and the point of consumption” – is thus conceptualized as covering a firm’s suppliers and its customers (Council of Supply Chain Management Professionals, 2006; Mentzer, 2004). Specifically, the logistics activities involved from suppliers towards customers is called “forward logistics” while logistics flows in the opposite direction constitute the notion of “reverse logistics”. Such a broad span of logistics is associated with the fact that logistics is responsible for meeting requirements and desires not only of the firm’s customers (external customers) but also of other functional departments within the firm (internal customers) (Morash et al., 1997). For example, while the management of good/service flows from the end of production process out to customers (outbound logistics/service delivery management) is to meet the requirements of external customers and marketing, the management of supplies, materials and services into (inbound logistics) and within (materials/supplies/work-in-progress management) the production process aims to satisfy the demands of purchasing and operations departments.

The logistics process over its entire span in a manufacturing organization is typically described as involving physical logistics flows, including materials, work-in-progress and finished products. It is represented in Figure 4.

![Logistics processes in manufacturing industries](image-url)

Figure 4. Logistics processes in manufacturing industries

Logistics processes of service providers, however, may comprise both service and product logistics activities. While no physical materials are required to produce a service as found in manufacturing industries, provision of a service may require certain physical supplies, for example, medicines for health care, or spare parts for auto repair services – here the product of interest is merely a means to an end for serving the customer (Manrodt and Davis, 1993). The mixed logistics processes in service industries are illustrated in Figure 5.

In addition to logistical flows, an organization’s business models/strategies may partially determine the characteristics of logistics processes. In an anticipatory-based model (Bowersox et al., 2002) or full speculation strategy (Pagh and Cooper, 1998), organizations make all decisions about their products/services in advance, based on market forecasts. Then components and materials are purchased, products produced and/or service offerings scheduled.
Inventories are built up in decentralized warehouses and services are scheduled for specific geography locations. The user has the option to decide to buy or not buy a pre-produced product, or a pre-planned service (Bowersox et al., 2002). Market forecasting in this case is based on the anticipation of the aggregate of customer needs, not individual customer needs (Davis and Manrodt, 1992). This explains why production/service offerings of this model are also called mass production/offerings. Illustrated in Figure 6 is the production model of organizations which employ the anticipatory-based (mass production/offering) business model.

There are both advantages and disadvantages to the “anticipatory-based” approach. On the one hand, this model lends itself to scale economies, whilst it is also attended by lower levels of responsiveness and greater risks in inventory or scheduling deployment (Bowersox et al., 2002). In the case of predetermined production, requirements are identified well in advance and hopefully with accuracy, regarding quantity, time and location. Moreover, inventories are built up in anticipation of demand and function as buffer stock. Logistics activities, as a result, are reactive in nature.

By way of contrast the response-based business model (Bowersox et al., 2002), or full logistics postponement (Pagh and Cooper, 1998), begins with a specific customer request (Davis and Manrodt, 1992). The fundamental difference from the anticipatory-based model is the sequence of events that drives business practice (Bowersox et al., 2002). This contrasting business model is illustrated in Figure 7.
The fact that production and delivery of goods and/or services starts only after receipt of an order means no available buffer of inventory or scheduled service offerings exist. This places the onus on logistics managers to meet the firms’ outlined order cycle (in manufacturing industries) and its equivalent concept in the service industries - waiting time (Little and The Pennsylvania State University, 1991). No delays and errors are allowed in any stages of logistics processes (i.e. inbound logistics, materials management, outbound logistics and service delivery). Otherwise, serious delays in meeting customers’ demands will occur. Logistics activities in this case must be responsive in nature.

Moreover, responsiveness to the individual customer’s demand has complicated order processing – a major logistics activity. In addition to traditional activities such as order preparation, order entry, or order filling (Min and Keebler, 2001), responsive organizations must achieve effective interaction between front line contact people and customers. This includes diagnosing the individual’s needs, developing solutions, and coordinating delivery of that service (Davis and Manrodt, 1992).

Implied in this customer model are three management measures to be recommended to responsive organizations. Firstly, the front line contact people should be enabled, which requires knowledge and information processing tools. While the former allows understanding of customers’ needs and organizational capabilities, the latter helps in diagnosing needs and developing solutions from the available capacity. Expert systems assist in diagnosing, scheduling, dispatching, and monitoring delivery. For example, “booking or reservation systems allow the dynamic tracking of organizational commitments so that the customer contact person always knows the availability of uncommitted resources for current requests” (Davis and Manrodt, 1992, p. 212). Secondly, the front line personnel must be empowered to commit the organization to the promised delivery. “Unless employees are confident of their role in committing the organization, they will be reluctant to give any more than the “safe” traditional response to the customer” (Davis and Manrodt, 1992, p. 212). It is employee confidence in their empowerment that makes service delivery effective. Thirdly, monitoring in this environment is complicated by the fact that activities are being continually redefined with each interaction between front-line personnel and customers. Real time monitoring allows the front-line contact people to offer better customer solutions, and managers can use this data for measuring performance (Davis and Manrodt, 1992).

Along the firm’s responsiveness continuum to customers’ demand, there are postponement strategies. Examples in the manufacturing setting are manufacturing/form postponement and geographic/logistics postponement (Pagh and Cooper, 1998; Bowersox et al., 2002). In the manufacturing/form postponement strategy, “final manufacturing operations (light manufacturing, final assembly, packaging and/or labeling) are carried out after the order from

Figure 7. Response-based business model (Bowersox et al., 2002)
the customer and after the product has been to some degree logistically differentiated. The early stages of the manufacturing are centralized, and final manufacturing is performed in a decentralized distribution structure in cases where it is vital to have inventories close to the customer” (Bask, 2001, p. 471). Organizations that apply this strategy will expect an increase in the costs and complexity of the customer order process (Bask, 2001). In the logistics postponement strategy, “manufacturing is based on speculation (i.e. economies of scale) and the logistics of postponement. Finalized products are distributed from centralized inventory directly to customers” (Bask, 2001, p.472). While centralization results in reduced inventories for the amount of stock required to offer high in-stock availability, shipment costs may increase because of the smaller sizes of shipments and faster modes of transportation (Bask, 2001). Figure 8 illustrates different strategies along the responsive continuum in manufacturing industries.

![Figure 8: Logistics strategies in manufacturing industries](image)

In service industries, organizations which utilize the mass production approach provide services as scheduled such as liners, bus, train, tram and the like. At the other extreme are organizations which respond to market segments of one, like taxis services (Davis and Manrodt, 1994). Examples of organizations that lie between these extremes are airlines, where flights are scheduled in advance but seats are proportioned, based on bookings of customers on each flight (Davis and Manrodt, 1992). Logistics strategies along the responsiveness continuum are illustrated in Figure 9.

![Figure 9. Logistics strategies in service industries](image)
Some efforts have been made to clearly distinguish logistics processes within organizations. Little and the Pennsylvania State University (1991) call logistics management of physical and service flows “supply chain logistics” and “service response logistics” correspondingly. Manrodt and Davis (1993), while naming management of physical flow either “supply chain logistics” (in manufacturing settings) or “service logistics” (in service settings), group logistics processes of all responsive organizations under the term “service response logistics”. To avoid confusion and to adequately distinguish the various forms of logistics that might apply in IMT, we offer the following typology: (a) the movement of a physical product - “product logistics”; (b) the movement of a service - “service logistics”; (c) the anticipatory-based model - “traditional logistics” and (d) the responsive-based model - “service response logistics”. When product logistics and service logistics are both employed, they become a system referred to as “combined/mixed logistics”. Logistics processes of organizations existing somewhere along the responsiveness continuum are called “semi-responsive logistics”.

3. The logistics process of IMT companies: A preliminary investigation in Vietnam

In order to operationalize this typology, we offer some tentative empirical insights into IMT in Vietnam drawing on a small number of cases. This necessitated an investigation of two main factors: logistics flows and responsiveness. The cases sought specific information along the following lines:

(a) Logistics flows
   What supplies do firms need in providing IMT service?
   How are firms managing movement of supplies?
   How are firms managing IMT service capacity and coordinating service delivery?

(b) Responsiveness
   Does the firm respond to individual or aggregate customer demand?

This research is exploratory in nature and examined contemporary events, for which the case study approach is often regarded as an appropriate research strategy (Yin, 2003). The qualitative data collected for this exercise emanated from semi-structured, in-depth interviews with staff members in different areas including managers, sales executives and customer service. The cases comprise eight interviewees from eight different firms providing IMT services in Hanoi, Vietnam. Participants were chosen for their extensive experience, ability to articulate logistics activities of their firms, and willingness to take part in the study.

Respondents covered small, medium, and large firms, ranging from a handful of employees to hundreds of employees. Because the MTO might subcontract the performance of the MT contract (The UNCTAD Secretariat, 2001), both means of transport-based (04) and non-means of transport-based companies (04) were included. In addition, a range of ownership types were included and covered: state-owned (03), private (02) and foreign (03).

The interviews lasted from 45 to 60 minutes. Further exchanges by email were used when necessary. A summary of the interview was provided to the participant and where disagreements were reported (rarely) they were corrected.

The analytical procedure included the following steps. First, write-ups were prepared for individual cases. Then the content of write-ups was displayed in a cross-case matrix which included the following categories: types of services, combinations of transport, types of demands, and capacity management. Subsequently, patterns found in the cross-case display (e.g. physical supplies, services and responsiveness) were checked against all individual cases to see
whether the pattern was repeated. The content of IMT documentation collected during interviews was incorporated for a stronger understanding of the cases.

Methods used during the analytical process included noting patterns and themes, counting, making contrasts/comparisons, cross-case synthesis, pattern matching and content analysis (Miles and Huberman, 1994).

3.1 Some preliminary insights from case analysis

Consignments accepted for transport under an IMT contract include “full container load” (FCL) and “less than a container load” (LCL). When FCL consignments are accepted, places of receipt and delivery include the firms’ container yards (CY), inland clearance depots (ICD) or customers’ warehouses. When transportation involves LCL consignments, firms accept and deliver goods at their container freight station (CFS), warehouses or customers’ premises. In the case of LCL consignments, these are loaded as multiple LCL consignments into containers and sent as FCL consignments. The act of loading multiple LCL consignments was consistently referred to by interviewees as ‘consolidation’. Upon arriving at destinations, LCL consignments have to be unloaded. The act of unloading goods from containers was termed “deconsolidation”. Deconsolidation typically occurs at the latest joint destinations of all LCL consignments. LCL consignments are then dispatched to specific final destinations by separate routes. For air transportation, consolidation and deconsolidation of goods are usually performed by airlines. This practice is due to strict security regulations as well as the particular characteristics of containers used for air transport. Combination of FCL and LCL consignments results in four main operations: FCL/FCL (goods received from consignors in FCL condition and delivered to consignees in FCL condition); FCL/LCL (goods received from consignors in FCL condition and delivered to consignees in LCL condition); LCL/FCL (goods received from consignors in LCL condition delivered to consignees in FCL condition) and finally LCL/LCL (goods received from consignors and delivered to consignees in LCL condition).

In the IMT operations of interviewed firms, containers are the first type of supply necessary for the IMT process. The extensive use of containers by interviewed firms is demonstrated further when an examination of multimodal transport documents within this study showed that dedicated fields for container information are present on the formwork including: serial number, seal number, condition and quantity of containers received.

Activities regarding containers are varied, depending on whether the companies own their container fleet or not. As for non-container based companies, the main tasks include leasing containers from owners, receiving empty containers from owners, transporting them to the customers or their warehouses, and returning empty containers from warehouses to owners after deconsolidation. In addition to the container-related activities mentioned above, container-based firms involve management of a container fleet. This includes leasing to customers, ensuring adequate supply of containers to customers, effectively allocating containers among various uses as well as stacking and transporting containers within their CY/ICD.

While the use of containers represents one characteristic of IMT operations, consolidation and deconsolidation are integral activities of container transport. Interview notes from firms involved in consolidation (i.e., firms that accept LCL consignments at places of departure) show uses of dunnage materials for securing goods inside containers. Deconsolidation on the other hand includes disposal of dunnage materials. Managing dunnage materials was reported as having no special difficulties. Dunnage materials can be easily outsourced in the local market on a case-by-case basis at competitive rates. Consequently, there is no need to maintain an inventory of dunnage. Disposal of dunnage materials after deconsolidation does not pose much
concern for firms. According to interviewees, materials in use are generally non-toxic and firms do not need to follow any special procedures during disposal.

All employees who were interviewed reported using paper transport documents. Common concerns regarding transport documents were revealed in the supply of document forms, and the issuance and storage of documents as proof of delivery. The scarcity of forms or errors in issuing documents can cause serious shipment delays. Any mistakes in handling original documents during the delivery process could lead to the inability to justify its delivery, which can result in complaints from customers. Some firms have documents printed by a printing company and store them in branch offices. Issuance of documents is undertaken by sales or customer service staff, after receipt of goods from customers. Firms in the study indicated that they carefully keep files of transport documents of goods to Vietnam, however deliveries of goods in other countries are entirely managed by their agents overseas. Confirmation upon delivery is only done when required by customers. One company that differentiates itself in managing transport documents is a joint venture between a Vietnamese and a foreign company. Issuance of transport documents in this company is centrally managed by one documentation centre in Malaysia. Once goods are received from the customers, customer service staff members upload information onto the company system. The documentation centre prepares electronic documents and faxes them directly to customers who then verify information. Customer service staff members are responsible for printing electronic documents on paper forms after correcting errors. Information on deliveries is also uploaded on the company system. Obviously, management of transport document flows in this case is specially supported by an advanced information system.

Transport-based companies are also responsible for providing supplies for their own transport equipment. Supplies include fuel, water and food for personnel.

While confirming they provide IMT services to/from almost everywhere in the world, firms interviewed did not own all the means of transport and facilities necessary for their operations. To be able to meet various customers’ demands, firms reported outsourcing services that they do not provide themselves. The number of outsourced services increases from facility-based to nonfacility-based companies which outsource almost all services. In a practical sense, these firms are acting as organizers of the IMT processes.

When asked whether heavy dependence on outsourced services is acting as a hindrance, all interviewees confirmed that they have never met any serious problems in outsourcing. Each organization is reported to be a member of professional associations, such as Vietnam Freight Forwarders Association (VIFFAS), The Baltic and International Maritime Conference (BIMCO), International Federation of Freight Forwarders Associations (FIATA), International Air Transport Association (IATA), Vietnam Ship Agents and Brokers Association (VISABA), or Vietnam Chamber of Commerce and Industries (VCCI). The stated benefits of joining such organizations include the rights to use the services of other members. This is a reciprocal arrangement that enable participating companies to offer a wide range of services around the world.

To better hedge against emergencies, a series of annual framework contracts with third party service providers are also commonly utilized. Upon demand, customer service personnel inform the providers about the particulars of consignments and services are automatically provided. Cooperation programs with third parties are also employed, such as provision of training courses to third party providers on the services to be outsourced.

Management of relationships with customers as well as companies inside and outside professional networks plays a critical role in interviewed firms’ capacity management.
Interactions (e.g., meetings, visits or social interactions) and promotional incentives are widely employed. In fact, operations of companies in this industry are intertwined, which leads to a very interesting situation: these organizations on the one hand aggressively compete for customers, while they closely cooperate with each other in their operations. The firms’ extensive use of outsourced services has created a situation where it is mutually beneficial to nurture strong relationships between firms to ensure enough capacity to provide services.

During the peak season, from May to December, two companies with sea shipping operations apply the peak season surcharge (PSS) at rates of USD100/200 per 20’/40’ containers correspondingly. Companies without a means of transport will also increase their service prices if their third party providers have done so. Such price adjustments serve to manage customers’ high demands (Schmenner, 1995).

Interviews have revealed that firms’ operations are extensively based on the demands of individual customers. In fact, almost all individual customers’ demands are attended by IMT firms. Solutions to implement an IMT contract are specifically developed only after receiving customers’ requirements. The tendency towards responsiveness evidenced by interviewed firms is further reinforced by the fact that no limitations on possible combinations of transport or ways of implementing IMT contracts are imposed except for one special case, where consignments are only accepted if utilization of that firm’s regular ocean shipping services is possible. In effect, IMT operations of that particular firm are limited to combinations of its own regular sea routes (pre-scheduled services) and trucking services that are arranged on a case-by-case basis (responsive-based services). This is similar to the “manufacturing postponement” strategy, discussed earlier, where products are partially pre-produced. Clearly, the range of IMT services offered by this firm is somewhat more limited than the others because it is tied to regular shipping routes which are reported to be stable throughout the year. This downside, however, is offset by the advantages that attend its world-wide network of sea shipping services.

Customer service processes of the interviewed firms were commonly responsive and flexible. The specification of transport routes is only decided after interaction with customers. Only when the customer’s confirmation has been received is the coordination of activities to deliver services engineered. Personnel in charge of this process are divided into two groups: salespersons and customer service staff, the former deal with contract signing while the latter are responsible for the detailed service delivery schedule and coordination of service delivery. Salespersons and customer service staff are fully entitled to make decisions on contract conditions and performance. Some firms make no distinction between sales and customer service positions, that is, staff of these departments deal with customers from signing to conclusion of contracts. These positions are alternatively referred to as sales, sales executive, or customer service.

IMT services were found to constitute a relatively minor component of the business operations of those firms that were sampled. All firms, in addition to IMT, reported providing various logistics activities for goods flows including: warehousing, goods handling, custom clearance, documentation and consultation. For one of the studied firms, IMT service is just an extension of its major business – sea transportation. While IMT’s modest role can be explained by its relative infancy in Vietnam (Meyrick and Associates, Transport Development & Strategy Institute, and Transport Development & Strategy Institute and Carl Bro as, 2006), substantial investments in regular IMT services may not be justified because of the small scale. As a result, provision of the IMT service on a case-by-case basis is employed.

Individuals representing these companies reported very different levels of information technology. As an integral component of logistics and a determinant of the successful
implementation of the responsive-based business model, these technologies ranged, from very simple and disjointed, to very advanced. Two domestic private companies have no management software in use, although websites were under construction. One joint venture and a state-owned enterprise, on the other hand, operate integrated information systems among branches and subsidiaries. The other five lie between these extremes. Communication between these firms, customers and partners is mostly through telephone, fax and the Internet.

3.2 Findings

The analysis of logistics flows has revealed that there exists both service and product flows in these firms. Specifically, provision of IMT services requires several physical supplies (i.e. containers, dunnage materials, supplies for sea trip and transport documents) and additional consolidation and deconsolidation services. Activities with containers range from inventory management, transportation, container handling, receiving and the delivery of empty containers. Consolidation/deconsolidation services involve purchasing, transporting and disposing of dunnage materials after use. Transport documents must be printed, issued and kept in files.

Interviewed firms have also been found to manage two activities that are associated with flows of service: capacity management and service delivery coordination. The capacity to provide IMT service is secured by supply management (e.g. outsourcing, relationship management) and demand management (i.e. price adjustments during peak seasons). Importantly, the supply management relies heavily on the use of outsourced services, for example, transport, containers, consolidation and deconsolidation services and other facilities such as CY, CFS and ICD. Relationships management, consequently, plays a key role in this activity. Service delivery coordination, on the other hand, mainly involves order negotiation, contract signing, coordinating related parties in the implementation of contracts, transport document issuance and customer service.

Consequently, applying the typology of logistics processes discussed earlier to this situation reveals both physical and service flows and supports the view that the logistics processes of IMT firms are of mixed or combined type. In brief, the model of logistics processes of these firms can be illustrated in Figure 10.

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Figure 10. Logistics process of IMT providers
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Overall, IMT providers identified in these cases tend to be responsive in their operations. The sequence of events that drives their business practice seems to follow the responsive-based model. Firms overwhelmingly respond to individual customers on a case-by-case basis. Their IMT operations are developed and implemented only after receipt of an order and front line staff members are highly empowered to deal with customer demands, as defined by Davis and Manrodt (1992). Based on the previously proposed typologies of logistics processes, IMT firms’ logistics processes can be classified as service response logistics.

In sum, analysis of the determinants of logistics processes has identified two defining characteristics of those processes that apply to IMT firms in Vietnam, namely, mixed and responsive. By implication, this combination of characteristics points to significant resource demands and challenges, as identified in the earlier typological analysis.

4. Implications, limitations and future research

Whilst logistics management promises to improve a given firms’ competitive advantage, the literature reviewed in this paper can guide us in understanding the application of logistics principles to an array of industries. More specifically, by unbundling the components of logistics it is then possible to identify the factors that characterize a given logistics operation. Understanding logistics flows and the relative responsiveness of business strategies is critical in this context. The theoretical modeling of logistics processes can then be extended to a specific industry – in this instance, we have deployed the framework to analyze the logistics activities associated with IMT in Vietnam. In so doing, we argue that we have not only illustrated the usefulness of the modeling framework, but also indicated specific nuances to the IMT industry in Vietnam. The latter is of significance insomuch as it can help guide future investments in this sector, which is largely in its infancy in developing countries, like Vietnam.

The findings of the case analysis in this paper may prove particularly beneficial to IMT firms. Moreover, firms that have hitherto only intended to apply logistics principles to their operations can employ the broader framework to explore how logistics systems apply to their setting. In addition, the findings from this analysis might ignite a new perspective on managing the firms’ operations to achieve greater competitive advantage. This contribution becomes even more important in light of the fact that IMT firms, while operating in the logistics sector, have had only limited opportunities to reflect upon and apply logistics principles to their own operations.

Notwithstanding the observations brought by this study, there are numerous limitations and areas which require greater scrutiny. Firstly, as we have already observed and according to research by the Ministry of Transport and the World Bank in 2006, the IMT industry in Vietnam, is in its infancy. Therefore, its operations are expected to suffer from many difficulties, for example, imperfect legal systems, lack of professional knowledge, and/or insufficient infrastructure. Thus, whilst we have argued that the analysis may assist in further developing this sector, by definition the data that attends this study might be regarded as representing only those economies in transition. In this regard, a valuable extension of this work would trace the development of processes and logistics systems over time. Secondly, the observed responsiveness of logistics systems revealed by this research was mainly based on the behaviors of the service delivery system. The extent to which this behavior is strategically or naturally derived has not been considered but deserves further study.
In addition, other questions relating to logistics and the extent to which it is integrated into a firm’s activities has not been seriously reviewed here. For instance, the a priori expectation that there will always be a negative relationship between organizational integration (including logistics) and the firms’ transaction costs have not been considered here. Moreover, empirical analysis of the intricacies between transaction costs, logistics and firm integration offers considerable promise for future research.

5. Concluding remarks

The bias of the logistics literature to the analysis of processes in the contexts of manufacturing industries has resulted in a significant gap in the literature. More specifically, there is an extant need for a more comprehensive approach to this matter. This study has attempted to draw upon the existing literature and develop a more generalized typology which can encompass the logistics operations of firms engaged in the provision of services. To illustrate the usefulness of this approach, some case findings from the logistics activities of IMT firms in Vietnam have been presented. The general conclusion from this analysis is that the logistics processes of IMT firms in this setting were “mixed” and “responsive”.

Logistics managers in general and those engaged with IMT firms in particular, can utilize the typology offered here and the findings from the exploratory case analysis as a basis for reflecting upon their own operations. Nevertheless, further research is necessary to both validate the models offered within the typology and to verify other important relationships with additional empirical work.

References


