

Using 3PL in Selection of Service Providers for Warehouse Management

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Abstract

Global business models are rapidly changing. Shorter life cycles of products and new business need exert pressure on Supply Chain managers to keep pace with the new scenarios. They are often faced with the target to reduce logistical costs and establish new supply networks. It has now become a common practice to outsource all logistical activities to third party vendors both in procurement side of logistics as well as finished goods, spare parts and reverse logistics areas too. Today the 3PL service providers market is filled with players of all sizes and competencies, from single owner driven local service provider to multinational companies. Most of the companies have traditionally been transporters or freight forwarders and over the years have acquired warehousing and contract management capabilities keeping in line with the growing needs.

Keywords: 3PL in Selection, Service Providers, Warehouse Management

1.0 INTRODUCTION

While Freight Forwarding is an important function of 3PL Service providers to facilitate the Supply Chain, another equally important function managed by 3PL Logistics Companies is Contract Logistics. Under the broad umbrella of Contract Logistics, 3PL providers provide services of setting up consolidation centers, distribution centers, warehouses and inventory management services. European network of transportation and warehouses stand apart from the rest of the world and are highly evolved regarding supply chain capabilities. America too has similar capabilities developed in recent years. Normally warehousing facilities are built and rented out as real estates. Warehousing Parks or Distribution Facilities are designed with complete layout and infrastructure for truck parking, yard management, and security systems, etc. Warehousing buildings of sizes ranging from 1000 sq. mtrs to several hundred sq. mtrs come equipped with all-weather docks, dock levelers, and dock platforms to facilitate continuous loading and unloading activities and quick turnaround of vehicles. These facilities include office facilities and other utilities too as a complete stand-alone facility.

3PL companies rent out such facilities or in some cases invest in building their facilities in strategic locations in the transportation network or near major markets or in some cases in specific locations close to customer facilities. 3PL Warehousing is used for managing inventories of both raw materials and finished goods including spare parts, consumables, and promotional materials as the case may be. Depending upon the need and size of operations, a 3PL may set up completely dedicated facility for a client specific requirement or provide dedicated storage space and services in shared facility or provide pallet wise storage on rental basis. All these modes are used depending upon the particular need of the logistics plan.

Normally the warehouses consist of vertical racks with levels anywhere from five levels up to ten and above with a carrying capacity of one ton per pallet position. Depending upon the storage need, racking design will vary from pallet racking to block stack, deck racking, shelving, bins, etc. Material Handling equipment used include Hand Pallet Jacks, Trolleys, Battery Operated Fork Lifts and various types of Reach Trucks used in racks. The entire warehousing operations include Receiving Process involving unloading, de-skidding, inspection, in warding and put away. Delivery or shipment includes receipt of shipping order from the customer along with invoice or sales documentation, picking materials, consolidation, packing, marking, preparing outbound documentation and shipping out by loading into containers. Besides these functions, the other main functions in the warehouse include inventory management that involves location management, managing storage capacities and bulk and loose inventory, carrying out inventory counts to ensure accuracy of inventory and stock takes.

The entire warehousing operations are dependent upon documentation and systems that manage operations and inventory. Warehouses use WMS - Warehouse Management System as the backbone. The

system manages inbound transactions, location management and generates and controls warehousing operations for both inbound and outbound transactions coupled with maintaining inventory in detailed level and managing inventories. For any principle employer, the support of a good 3PL is necessary because its entire inventory amounting to a huge amount regarding value is in the custody of a third party. Inventory management operations are core to any operations. Hence it is necessary for every SCM Expert to understand nuances of 3PL Contract Logistics operations before taking decisions to outsource these functions.

2.0 SELECTING 3PL SERVICE PARTNER

When an Organization chooses to outsource its inventory management services, the project success hinges on choosing the right partner because the stakes in a warehouse management projects are very high. Besides the impact on the other functions like manufacturing or markets, the third party service provider is the custodian of your inventory which meaning your money is in someone else's hands. So the question one needs to ask for is - What are we looking for in a 3PL Partner? The answer to this question will take you through few of the important factors that are to be considered.

2.1 Choice between Multi National 3PL Service Provider or Local Service Provider

This is often a dilemma faced by SCM managers while choosing the partners. Dealing with Multi-National Companies has its advantages. Normally the MNC service providers provide integrated logistics services that give you value addition besides seamless service coupled with lower costs. Strategically it makes sense to go with Multi-National companies who can leverage on their competence available across the network and provide standardized processes across various locations. However, on the flip side, these companies may not have the same management focus and competence in all countries and all locations. Besides many companies have been traditionally transportation providers who have acquired warehousing competence and skill sets and are not warehouse centric or focused players. Domestic Service providers, on the other hand, would know the laws of the land better and know how things work. They will have the local expertise and capability to manage operations and resources better. By virtue of them being local and small players, one can expect better focus and attention.

The choice is a difficult one to make. At the end it depends on the size of the project, the number of locations and the company's policies besides any local specific situations to decide on the above. Global companies prefer to tie up with Multi National Players to be able to leverage on their network as well as operate with a global agreement. With a lot of business in transportation and warehousing being given to an MNC, the buyer can have a better bargaining power with the 3PL provider. Contractual obligations, third party obligation, and local statutory compliances can be easily owned and managed by MNC 3PL providers.

2.2 Service Provider Capability Evaluation

Evaluation of a 3PL service provider involves understanding of their capabilities both regarding technical competence, operational capabilities and Management Culture. The evaluation normally consists of Detailed Response document to RFQ from the 3PL service provider, followed by a presentation by the 3PL and subsequent site visits to the proposed location, site visits to other locations /operations of 3PL, coupled with customer references. Detailing these processes becomes important especially in the case of a bigger project depending upon the criticality of the project.

2.3 Management Focus / Involvement and commitment at corporate and local level

Often the face to the markets from the 3PL side is the marketing and BD teams. As contract logistics is capital intensive and operations intensive, it is important to understand the company management's focus and commitment towards this part of the business, especially in cases where 3PL is an Integrated Service Provider with other logistics businesses. A management interested and focused on CL business is likely to invest in building a long term relationship and enhance its competence and deliver the better value proposition to the buyer. Company profile and meetings with management will enable one to assess this criterion. The other important and relevant areas to be evaluated are the IT Backbone and capabilities of the 3PL and its experience and expertise in deploying and managing WMS systems.

Expertise in Operations and inventory management as core functions coupled with project management capability, local expertise availability and quality programs, etc. can be judged from the response document and subsequent personal discussions and site visits.

3.0 INTERNAL PLANNING FOR EFFECTIVE OPERATIONS IN WAREHOUSING PROJECTS

Globally outsourcing 3PL Market is growing fast. In the US, the industry is expected to reach over \$150 billion as compared to a global estimate standing at \$450 billion as per industry experts estimates. Companies aiming for aggressive growth in global scenario recognize the need to partner with 3PL logistics providers to be able to establish supply chain networks across countries. Outsourcing is the only vehicle with which they can operate and cannot afford to manage functions in-house. Warehousing activities whether in Finished Goods logistics or Plant logistics, are very critical to the entire supply chain.

Take the example of an automobile manufacturer who depends upon a 3PL to manage complete inbound activities including vehicle unloading, inventory management, and JIT supplies to the plant. The manufacturing facility completely is dependent upon the 3PL service provider. Both the buyer and 3PL co-exist together at the same location, over a period the systems and operations get enmeshed and integrated into the process of localization and finding practical solutions. In such cases, any non-performance on the part of 3PL due to any reason will affect the plant output. It is not possible to make a sudden switch to another 3PL overnight. Hence, the marriage has to be lived through and managed.

Therefore, choosing a 3PL partner for your warehouse operations needs thoughtful considerations and evaluation. Of course, any project of this nature is dependent upon the relationship between the buyer and 3PL. Collaborative and partnership approaches have yielded very good results than a buyer and seller relationship. Where ever buyers have invested time and interest in engaging directly with 3PL operations, with helping in training and periodic assessments coupled with motivational exercises, have helped 3PL operations remain focused on the deliverables and maintain efficiencies. Before you start looking for a 3PL partner, internal alignment with management, clarity of the project and criteria for selecting 3PL Partner is to be worked out in detail. Following factors are to be considered internally to plan the exercise:

Internal Decisions: Outsourcing project should be clearly defined as to Scope of Activity, Business Risks Identified. Decision to outsource with definite timelines in-line with business function should be approved by Management. Budgetary approvals should be in place for the project implementation as well as the monthly logistical service outflow from concerned business functions and Management. Without clarity, many times RFP & RFQs are floated and discarded resulting in wastage of time and effort of all parties concerned.

Defining Project Scope and Responsibilities: Plant Supply Warehouses, Regional Distribution Centers, VMI, etc. projects are often very huge in size of operations as compared to a flow through finished goods warehouse in a supply chain network. Such big projects are characterized by huge capital outlay, multiple process designs, and infrastructure-intensive and involve complex IT system design and interfaces. RFP / RFQ would need to define each element very clearly and describe the scope of activity and responsibility on the part of the buyer as well as the 3PL. The document should define clearly the capabilities and competencies required for the project, the timelines, and deliverables. Detailed understanding of the project scope will ensure that only the 3PL who has the required capability and strength will bid for the project.

An outsourcing project should have clear internal guidelines about the ownership of the project, individual program owners, business unit who will own the project after implementation coupled with operation management and escalation process. This information can be shared with the 3PL in the RFQ, and one should expect similar structure from the 3PL in its response document.

Defining Length of the Contract with possible scope for extension and period of extension is essential to help 3PL work out financials. It helps to define the methodology of costing template along with the RFQ to ensure common platform.

Finally determining process for evaluation of vendor is very essential. What are the capabilities that you look for in a 3PL, what is the selection criteria, who are the internal team members to be involved in selection process and decision making should be clearly enumerated? A well thought out internal proposal and RFQ document will help you find the best fit and smooth project implementation.

4.0 THIRD PARTY LOGISTICS OPERATION

Third-party logistics (abbreviated as 3PL, or TPL) in logistics and supply chain management is an organization's use of third-party businesses to outsource elements of its distribution, warehousing, and fulfillment services. Third-party logistics providers typically specialize in integrated operations of warehousing and transportation services that can be scaled and customized to customers' needs, based on market conditions, to meet the demands and delivery service requirements for their products. Services often extend beyond logistics to include value-added services related to the production or procurement of goods, such as services that integrate parts of the supply chain. A provider of such integrated services is referenced as a third-party supply chain management provider (3PSCM), or as a supply chain management service provider (SCMSP). 3PL targets particular functions within supply management, such as warehousing, transportation, or raw material provision. The global 3PL market reached \$75 billion in 2014, and grew to \$157 billion in the US; demand growth for 3PL services in the US (7.4% YoY) outpaced the growth of the US economy in 2014. As of 2014, 80 percent of all Fortune 500 companies and 96 percent of Fortune 100 used some form of 3PL services.

4.1 Types of 3PL

Third-party logistics providers include freight forwarders, courier companies, and other companies integrating & offering subcontracted logistics and transportation services. Hertz and Alfredsson (2003) describe four categories of 3PL providers:

Standard 3PL Provider: this is the most basic form of a 3PL provider. They would perform activities such as, pick and pack, warehousing, and distribution (business) – the most basic functions of logistics. For a majority of these firms, the 3PL function is not quite their main activity.

Service Developer: this type of 3PL provider will offer their customers advanced value-added services such as: tracking and tracing, cross-docking, specific packaging, or providing a unique security system. A solid IT foundation and a focus on economies of scale and scope will enable this type of 3PL provider to perform these types of tasks.

The Customer Adapter: this type of 3PL provider comes in at the request of the customer and essentially takes over complete control of the company's logistics activities. The 3PL provider improves the logistics dramatically, but does not develop a new service. The customer base for this type of 3PL provider is typically quite small.

The Customer Developer: this is the highest level that a 3PL provider can attain with respect to its processes and activities. This occurs when the 3PL provider integrates itself with the customer and takes over their entire logistics function. These providers will have few customers, but will perform extensive and detailed tasks for them. Outsourcing may involve a subset of an operation's logistics, leaving some products or operating steps untouched because the in-house logistics is able to do the work better or cheaper than an external provider. Another important point is the customer orientation of the 3PL provider. The provider has to fit to the structures and the requirements of the company. This fit is more important than the pure cost savings, like a survey of 3PL providers shows clearly: The customer orientation in form of adaptability to changing customer needs, reliability and the flexibility of third-party logistics provider were mentioned as much more important than pure cost savings.

4.2 Lead Logistics Providers

3PL providers without their own assets are called lead logistics providers. Lead logistics providers have the advantage that they have specialized industry expertise combined with low overhead costs, but lower negotiating power and fewer resources than a third-party provider has based on a normally big company size, a good customer base and established network systems. 3PL providers may sacrifice efficiency by preferring their own assets in order to maximize their own efficiency. Lead logistics providers may also be less bureaucratic with shorter decision-making cycles due to the smaller size of the company.

4.3 Layers

First party logistics providers (1PL) are single service providers in a specific geographic area that specialize in certain goods or shipping methods. Examples are: carrying companies, port operators, depot companies. The logistics department of a producing firm can also be a first party logistics provider if they have own transport assets and warehouses. Second-party logistics providers (2PL) are service providers which provide their specialized logistics services in a larger (national) geographical area than the 1PL do. Often there are frame contracts between the 2PL and the customer, which regulate the conditions for the transport duties that are mostly placed short term. 2PLs provide own and external logistics resources like trucks, forklifts, warehouses etc. for transport, handling of cargo or warehouse management activities.

Second-party logistics arose in the course of the globalization and the uprising trend of lean management when the companies began to outsource their logistics activities to focus on their own core companies. Examples are courier, express and parcel services; ocean carriers, freight forwarders and transshipment providers. The most significant difference between a second party logistics provider and a third-party logistics provider is the fact that a 3PL provider is always integrated into the customer's system. The 2PL is not integrated; in contrast to the 3PL, it is only an outsourced logistics provider with no system integration. A 2PL works often on call (e.g. express parcel services) whereas a 3PL is almost every time informed about the workload of the near future. As technology progresses, the methodology for notifying a 3PL of inbound workload usually falls on API integrations that connect, for example, an E-commerce store with a fulfilment center. Another point that differs 2 and 3PL is the specification and customizing of services.

A 2PL normally only provides standardized services, whereas 3PLs often provide services that are customized and specialized to the needs of their customer. This is possible due to long term contracts that are usual in the third-party logistics market. Cost-effectiveness of a third-party logistics provider is only given over long periods of time with stable contract and profits. In contrast to that second party logistics services can't be customized, concerning to the fluctuating market with hard competition and a price battle on a low level. And there we have another distinguishing point between 2PL and 3PL: Durability of contracts. 3PL contracts are long term contracts, whereas 2PL contracts are of low durability so that the customer is flexible in responding to market and price changes.

With companies operating globally, the need to increase supply chain visibility and reduce risk, improve velocity and reduce costs – all at the same time – requires a common technological solution.[10] Non-asset based providers perform functions such as consultation on packaging and transportation, freight quoting, financial settlement, auditing, tracking, customer service and issue resolution.[11] However, they do not employ any truck drivers or warehouse personnel, and they don't own any physical freight distribution assets of their own – no trucks, no storage trailers, no pallets, and no warehousing. A non-assets based provider consists of a team of domain experts with accumulated freight industry expertise and information technology assets. They fill a role similar to freight agents or brokers but maintain a significantly greater degree of "hands-on" involvement in the transportation of products. These providers are 4PL and 5PL services.

A fourth party logistics provider has no owned transport assets or warehouse capacity. They have an allocative and integration function within a supply chain with the aim of increasing the efficiency of it. The idea of a fourth-party logistics provider was born in the seventies by the consulting company Accenture. Firms are outsourcing their selection of third-party logistics provider and the optimization process of the integration of these to a PL as an intermediary. That reduces costs and the 4PL have to have an overview of the whole logistics market to choose the ideal 3PL for all operative logistic activities. For being able to provide such an ideal solution fourth-party logistics providers need a good knowledge of the logistics branch and a good IT infrastructure. A fourth party logistics provider selects the 3PL providers from the market which are most suitable for the logistical issues of their customer. Unlike the allocative function of a 4PL in the supply chain, the core competence of a 3PL provider is the operative logistics.

Fifth party logistics providers (5PL) provide supply chain management and offer system-oriented consulting and supply chain management services to their customers. Advancements in technology and the associated increases in supply chain visibility and inter-company communications have given rise to a relatively new model for third-party logistics operations – the "non-asset based logistics provider." [13]

4.4 On-Demand Transportation

On-demand transportation is a relatively new term coined by 3PL providers to describe their brokerage, ad-hoc, and "flyer" service offerings. On-demand transportation has become a mandatory capability for today's successful 3PL providers in offering client specific solutions to supply chain needs. These shipments do not usually move under the "lowest rate wins" scenario and can be very profitable to the 3PL that wins the business. The cost quoted to customers for on-demand services are based on specific circumstances and availability and can differ greatly from normal "published" rates. On-demand transportation is a niche that continues to grow and evolve within the 3PL industry. Specific modes of transport that may be subject to the on-demand model include (but are not limited to) the following:

- FTL, or Full Truck Load
- LTL, or Less-than Truckload
- Hotshot (direct, exclusive courier)

4.5 International Expedited

New brokers tend to use what has become known as "smile and dial" brokering that essentially work as telemarketing call centers. Brokers have no obligation to successfully ship all loads (as opposed to contract logistics providers) and almost all sales representatives are heavily (and 100%) commissioned, and much of the workers' day is spent cold-calling sales leads. Smile-and-dial brokerages typically require a 15% gross profit margin (the difference between what the shipper pays the brokerage and what the brokerage pays the carrier), and the commission compensation scheme means that the turnover of personnel in the call centers approaches 100% per year.

For the occasional shipper, smile-and-dial brokerages can provide a convenient way to have goods shipped. But the lack of deep expertise due to constant turnover, combined with the 15% pricing margins, mean that a reasonably capable traffic professional can obtain transportation services much more economically and reliably, while a shipper needing delivery as soon as possible, from air freight, air charter, ground expedited, flatbed services, refrigerated, LTL or full truckload, liftgate, van or vehicle. With JIT delivery the price will be secondary to on-demand as soon as possible delivery.

4.6 Horizontal alliances

Raue & Wieland (2015) describe the example of horizontal alliances between logistics service providers, i.e., the cooperation between two or more logistics companies that are potentially competing. Logistics companies can benefit twofold from such an alliance. On the one hand, they can "access tangible resources which are directly exploitable". This includes extending common transportation networks, their warehouse infrastructure and the ability to provide more complex service packages by combining resources. On the other hand, LSPs can "access intangible resources, which are not directly exploitable". This includes know-how and information and, in turn, innovation.

4.7 Advantages

Cost and time savings: Logistics is the core competence of third-party logistics providers. Providers may have better related knowledge and greater expertise than the producing or selling company, and may also have more global networks enabling greater time and cost efficiencies. The equipment and the IT systems of 3PL providers are constantly updated and adapted to match the requirements of their customers and their customer's suppliers. Producing or selling companies often do not have the time, resources, or expertise to adapt their equipment and systems as quickly.

Low capital commitment: If most or all operative functions are outsourced to a 3PL provider, there is usually no need for the client to own its own warehouse or transport facilities, lowering the amount of capital required for the client's business. This is particularly beneficial if a company's warehouse has high variations in capacity utilization, leading to overpurchasing of warehouse capacity and reducing profitability.

Focus: Logistics outsourcing allows companies with limited logistics expertise to focus on their core business. Increasing complexity in business suggests that companies benefit from not devoting resources to areas in which they are not skilled.

Flexibility: Third-party logistics providers can provide higher flexibility for geographic distribution and may offer a larger variety of services than clients could provide for themselves. Postal services and private couriers typically factor in distance when they calculate the cost of shipping; many 3PL providers market the benefit of what is known as zone skipping to potential clients, because it shortens the distance between products to be shipped and customers, resulting in lower shipping costs. [21] This also allows businesses to more predictably manage their resources including workforce size, and turn fixed costs into variable costs.

4.8 Disadvantages

Loss of control: One disadvantage is the loss of control a client has by using third-party logistics. With outbound logistics, the 3PL provider usually assumes communication and interactions with a firm's customer or supplier. To mitigate this, some 3PL's attempt to brand themselves as their clients, such as applying clients' logos on their assets and dressing their employees like their clients' employees.

IT: The IT systems of the provider and the client must be interoperable. Technology helps increase visibility for the client by way of continuous status updates via Dispatch Management Software and Electronic Data Interchange (EDI) which does involve a cost, but it can help avoid penalties for delays and subsequent financial losses such as from not unloading freight in time.

Reverse logistics: Numerous studies have shown that selling products online, rather than in a brick and retail environment, adds extra costs when it comes to handling returns (i.e, reverse logistics). The reliance upon third-party logistics providers to handle aspects of the E-commerce supply chain such as warehousing and pick-and-pack also means these companies must be relied on to handle reverse logistics. Artificially induced demand events such as Black Friday in the United States or Singles' Day in China come with an influx of returned products, which can slow down warehouse operations and in turn delay the issuing of refunds or other methods for mitigating dissatisfied customers. The additional layer of a third party to handle sensitive customer-facing issues such as returns is thus a heavily-debated topic within the realm of E-commerce.

5.0 CONCLUSION

Selecting a 3PL service provider to provide warehousing services needs careful considerations on the part of the SCM manager responsible for the decision. The right partner selection is important because you are handing over the company's assets to someone else's custody and secondly any performance hindrance can seriously affect the sales and revenues of the company in case of FG Supply chain or effect the plant production in case of Raw Material supplies.

Size of company, Structure & Responsiveness: The business volumes and size of the project will determine the selection of the Service Provider. Most of the Multi-National Companies can offer integrated logistics services to manage the entire supply chain including freight, transportation and warehousing; you will also find companies at regional or local levels that offer warehousing as a core competency area. The size of the company is important as a key parameter as one would not want to deal with a small company that does not have the capability to invest or a fly by night operator. The Management structure of the company holds a clue to their focus on the various businesses and customers. This will enable you to find out the kind of management focus that the service provider has in warehousing or CL as a product. A multinational company being able to invest into your business does not necessarily make the best choice. They can more often turn out to be expensive. Besides the availability of CL expertise in another location or country does not necessarily ensure competence locally. However, Multi nationals are preferred as partners most of the times due to many other advantages like integrated services, global standards, ability to invest, etc. Responsiveness measures the quality and speed with which the service provider company responds to your bid request and engages with you to offer a solution. The nature of response and interaction hold key to the company's culture and enables us to evaluate options of investing into a relationship or partnership possibility.

Technical & Operational competency of Vendor: A vendor should be able to demonstrate the competency regarding its experience in managing functions for other customers and products. Besides the competency can be demonstrated and seen in the solution building process or document prepared and presented by the vendor. A company with experience in managing distribution center operations

would have the team comprising of people with sufficient experience in the operations at management level, supervisory and staff levels. The company needs have to have a strong IT management and functional operational competence and capability in managing the IT system at site as well as being able to support the site with IT administration at management level.

Service provider's interest and attitude towards your business proposal: The capability, interest and attitude of the vendor would help you to choose the vendor who is interested in your business with long term prospect and is willing to invest time, money and effort and not somebody who is chasing business as a sales target and doesn't have the required interest, organizational and operational capability to service your business.

Lastly the cost drivers play a major role in vendor selection for the project. An RFQ document should seek information on above criteria from the vendor, and the process of selection should be based on evaluation, demonstration coupled with site visits to vendor's site to assess overall suitability.

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