



ISSN 2278 – 0211 (Online)

Role of Advanced IT Enabled Third Party Logistic Service Providers in Customer Satisfaction

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Abstract:

Third Party Logistics (TPL or 3PL) is a business dynamic of growing significance all over the world. But it is at a growing stage in the world where some domestic and multinational companies are continuously trying to establish themselves in this sector. The prime area of diversity in organizational plan of action is the broader use of TPL service providers who are using advanced information technology (I.T) platforms and integration of supply chain to embellish customer satisfaction with their services. With the outsourcing the logistics operations, organizations can focus on their core competencies and other important areas of organization which cannot be outsourced with other alternatives. This paper is an attempt to provide TPL role in customer satisfaction and how its advancement in I.T helps to win the customer's trust. The analysis of this paper is conducted by discussing different concepts of supply chain integration, advanced information technology, customer satisfaction, and third party logistics providers, and their aftermath on customer satisfaction with theoretical framework. The paper also reveals that most TPL users are satisfied with the current level of services provided by TPL service providers as it has led to a positive outcome on business. As a result, the usage of third party logistics services is likely to increase substantially in the future and points out opportunities for future research.

Methodology and approach used – This study is focused primarily on the advance information technology usage in the third party logistics service providers to enhance and strengthen the customer satisfaction level. The theoretical framework is analyzed with the different concepts of supply chain, TPL and advanced information technology in TPL. The proposed 3PL research classification framework is based on a comprehensive literature review which concentrates on peer reviewed journal papers published within the period 1990-2010. A series of online surveys are also made which includes importance of TPL in business, level of service provided by TPL, main reasons for outsourcing, and overall satisfaction with their services etc.

Key words: Logistics, 3 PL, TPL, Supply Chain Management, Third Party Logistics, Outsourcing, third party logistics role, customer satisfaction, Customers and Third Party Logistics, e-commerce, Information Technology

1. Introduction

Due to the swift changing in the business environment and functionality the instability and complexity has increased to a great extent. Therefore, many organizations have made quick changes in their organizational hierarchies and business processes to remain in the competition. In last few decades there has been considerable interest in the growth of third party logistics providers all over the world. Organizations are rapidly focusing on one-stop global logistics services for their existing as well as new customers. The TPL's can improve the logistics processes by allowing the companies to focus on their core competencies that ultimately reduce the business operating costs and increase the customer satisfaction to a great extent. Typically these firms (TPLs) provide some services like warehousing activities, freight payments and auditing, mode of transport selection and rate negotiation. Furthermore, TPL service providers may develop the information system, manage the inventory and also provide customer order fulfillment services.

This study and research paper is based on concepts associated to the third party logistics providers and use of information technology in the supply chain integration to improve logistics process that is intensely concerned with the increased customer satisfaction. Information technology is crucial to support logistics processes and Information Technology has automated most of the regular logistics activities that helps managers to focus on strategic issues and core competencies of the business. These activities such as packaging, warehousing, and distribution are enabled and supported by the use of Information Technology. Moreover, according to some studies the Information Technology could improve service quality features, cost effectiveness, flexibility and efficiency. By using advanced information technology such as Internet, Electronic data interchange (EDI), Point of sale (POS) etc, the parties

involved in the supply chain could not only get requirements of customers timely and effectively and respond to the information to meet the customer's expectations but also reduce the lead time of order to improve service level of enterprises.

For TPL service provider, the role of Information Technology is a critical aspect because the logistics provider must incorporate systems with its customers to increase satisfaction and performance of the business processes and operations. The lack of consideration of Information Technology as a main component of logistics providing solutions is a major deficiency of the third party logistics literature. In future logistics systems, Information Technology is considered a key factor but due to risk of organizational damage and lack of verified effectiveness and high technology cost, many managers still prevent the use of Information Technology. This is why the rate of usage for more advanced information technology by current logistics user has a low acceptance.

The following two research questions are fundamental to this study:

- How TPL providers with advanced IT are integrating the entire supply chain?
- What is the impact of TPL with advanced IT to increase customer satisfaction level?

The motive of this paper is to understand the role of TPL providers in context of advanced Information Technology and the impact of IT on integration of logistics and customer satisfaction.

2. Literature Review

The three processes - outsourcing, third party logistics services (TPL) and logistics on contract generally mean the same thing. It includes the use of external companies to perform logistics functions such as warehousing, packing and forwarding, which have traditionally been performed within a business or company. The functions performed by TPL service providers can encompass the entire logistics process or select activities within that process effectively.

A key principle for outsourcing of logistics functions is the intensified globalization of businesses. For the last two decades, business globalization has emerged as a major force of shaping business strategies where leading firms are developing products designed for a global market and to source components and services globally. This has led to more complex supply chains demanding larger involvement of managers in logistics operations. Lack of specific knowledge of customs and tax regulations and infrastructure of destination countries has forced firms to acquire expertise of TPL service providers. Therefore, firms are concentrating their energies on core activities and leaving the rest to specialist firms.

Another equally important development that is impacting the logistics industry is the increased emphasis on supply chain management as a source of competitive advantage. During the last two decades, the search for time based competence led initially to a rapid adoption of new manufacturing methods like just-in-time (JIT), flexible manufacturing systems and computer aided manufacturing etc. by organizations. Such methods have brought about significant improvements in supply chain performance through their focus on compressed manufacturing lead times and improved quality in terms of service. However, further enhancements in supply chain performance will necessitate speeding the flow of information on orders to upstream supply chain partners, and facilitating logistics activities like warehousing and delivery of products through the entire supply chain. A recent research done on supply chain management practices highlights that the opening of globalization of businesses has been a key factor for the global industries to align supply chain strategy with business strategy, unify processes for supply chain integration and form partnerships for minimizing inventories. Therefore, organizations are increasingly deploying supply chain strategies for logistics improvements to increase sales revenue, improve profits, decrease order to delivery cycle time and minimize warehouse inventories.

Logistics is therefore emerging as a key frontier of competition in the future among organizations. Superior logistics performance requires a tradeoff between the need to reduce the inventory and cycle lead times, while at the same time capturing economies of scale and improving customer service for enhanced business efficiency. Flexibility of TPL service providers enables them to maintain this trade-off by converting fixed costs into variable costs for companies using their services. The use of TPL service providers has gained importance in this context.

3. The Origin of Third Party Logistics

Before 1978 the America's "for hire" transportation industry was subject to significant economic regulation. Market entry, and exit, Rates charged and service levels were monitored carefully by the Interstate Commerce Commission for trucking and rail and by the Civil Aeronautics Board for air freight. After deregulation, TPL companies have emerged as providers of a wide variety of logistics and supply chain management functions.

Some TPLs grew out of the shipper's agents and freight brokerages that existed under this regulation. The concept of freight broker applied to ICC licensed truck brokers that handled general commodity freight. Such brokers acted primarily as marketing agents and load matchers for smaller trucking companies while shipper agents were intermediaries who bought large volumes of intermodal services from railroads and then sold these to shippers. Formerly, TPL companies originated from parent transportation companies or warehousing organization, many were operating as subsidiaries to their parent company. Depending on the ownership of transportation equipment or warehouse facilities, TPL providers were historically divided into two main categories, one is asset based and other is non asset based. Now the vast majority of TPLs appears to be non asset based, but still working closely with asset based carriers or warehouse managers. These seem to be either management or knowledge based consulting companies. Instead of handling the physical distribution themselves, these firms appear to focus on activities on strategic or tactical level. For the past five or six years, the rapid development of information technology and e-commerce, new kinds of third parties are emerging continuously. These provide web based services and sometimes act as mere information intermediaries.

4. Theoretical Framework

For logistics service providers the advanced Information Technology is one of the productive tools that embellish competence while decreasing the cost continuously. The legitimate use of Information Technology in supply chain integration can improve provision of services to supply chain partners that have ultimately effect on the customer satisfaction and business performance and it also to increase operational competitiveness, flexibility and business productivity. Hence, theory is extracted on the basis of research questions and to support the purpose of this paper.

4.1. Third Party Logistics Service Providers

TPL has many interpretations, apprehensions and definitions, Activities consisting of at least execution of transportation and management and warehousing on behalf of the shipper are carried out by TPL's, define TPL as the external company to carry out the logistics functions that have conventionally been executed within an organization. TPL is becoming more and more common in Europe and USA and now TPL is accepted as business practice. Outsourcing of the logistics services enables companies to control its resources, share its risks and aim on issues that are very much crucial to its existence and future growth.

4.2. Quality Service Provided by Third Party Logistic Providers

Typically following are the services provided by TPL providers; Transportation and Distribution sector in which they are providing general trucking services, inter model transportation services such as rail, ocean, cargo, specialized services such as bulk, tank, hazardous material, refrigerated goods etc., several time constrained services such as JIT, over night, same day etc., and last but not least - shipment tracking and tracing.

Also TPL is looking towards the Warehousing & Distribution sector as Public or Contract or

Regional warehouse, advanced Operation Technology such as bar coding, radio frequency, VMI etc., various Value-added services (VAS) such as cross-docking, freight consolidation, home pick & pack etc., and Order processing and fulfillment. TPL is also providing several Custom Services like Custom Brokerage, Custom Duty Drawback. Nevertheless the IT Support which includes EDI capability, Logistics information system & other software and Web-based solutions. TPL is providing reverse Logistics and VAS (package, label, test and assembly etc) in Product Support Services. TPL also offers Logistics Management and Consulting including Fleet operation, distribution network design, Carrier selection, Facility location analysis, and selection, design and Inventory management.

5. Extravagant Information Technology and Third Party Logistics

Information technology is defined as a wide range of increasingly convergent and linked technologies that process the information as well as the data that business generates and use in their daily routine. IT systems are ever more required to perform activities more gracefully.

Employing and using information technology in an organization has changed from being simply a tool for handling transactions to a weapon that can influence an organization's competitive stature.

The application and function of information technology is gradually growing in most areas of the companies especially to the logistics process such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) etc. Information Technology is a vital element for TPL performance because the integration of logistics provider systems with its clients is essential. Moreover, Information Technology links members of a supply chain, such as transportation companies, distributors, manufacturers, and retailers as it automates some elements of the logistics workload such as order status inquires, consignment tracking, inventory management and order processing. However, transactions costs can be decreased and supply chain participants can also manage the increased complications if considerable Information Technology improvements are made.

Now logistics user firms are more and more relying on TPL's to utilize their advanced Information Technology systems. Therefore, Information Technology in TPL firms plays vital role to synchronize complex supply chain activities across logistics users and their customers and works as a bridge of connecting customers in supply chain and logistics users.

6. Customer Satisfaction as a result of Advanced Information Technology

P. Kotler stated that the satisfaction means one individual's sense of disappointment or sense of happiness by comparing his perceptive effect to the service or product with his expectation. Currently, any business management strategy customer satisfaction is accepted as one of the most important component. In an economically challenging environment, understanding customers and providing outstanding value and satisfaction is essential because survival is increasingly difficult across a whole range of businesses. Why customer satisfaction should lead to better performance? There are many reasons. Extreme customer satisfaction should indicate insulation of current customers from competitive efforts, reduced costs of attracting new customers, decreased costs of future transactions, higher loyalty from the customers, enhanced philanthropy for the firm and minimum failure costs.

The satiation of markets, globalization of rivalries, and advancement of information technology has not only increased customer awareness but also created such circumstances where long term success is no longer achieved through qualities and optimized product prices. Rather, companies build their achievement on a long-term customer relationship. Newer information technology innovations refers to advanced information technology like supply chain management and customer relationship management etc. Therefore, adoption of advanced information technology will lead to increased customer satisfaction if an organization has customer focused strategy. Employees are responsive to customer requirements and are encouraged to be innovative in the organizations having

customer focused strategy. Advanced information system is vital to ensure that the managers have the timely information necessary to cope with growing changes in the processes and product design to fulfill the customer requirements and manages these tasks effectively. Moreover, the special benefit of advanced information technology is to make real time data extensively available through such tools as Enterprise Resource Planning (ERP), customer relationship management (CRM), and Electronic Data interchange (EDI) and the ability to link one activity with another. Such tools not only improve the business processes but also build infrastructure for automated information exchange between suppliers and customers that is linked with increased customer profitability and satisfaction. Customer satisfaction is done by knowing the customer expectations for the service or product. What the customer need? It should be completed with all aspects and full in quantity and should reach at customer place timely.

Customer satisfaction can also be done by efficient customer services by TPL service providers on behalf of the company by providing reverse logistic services. Furnishing after sales services at door step of customer within no time on customer's single phone or single email should be sufficient enough to respond back to customer immediately TPL's can also have online feedback and complaint system for their customers. But, this is to identify that how much TPL can satisfy the customer? It can be measured with the help of two factors one is the service level and another is the service ability of the organization. If TPL service provider has good service level and ability to serve the customer by giving good customer services actually to its customers. If they are performing well giving on time and full delivery in one shot, good customer services after sales, superior IT system, after sales support, accurate feedback system, and efficient goods tracking system, highly efficient logistics with all aspects, then they can really satisfy the customers and they can enhance the customer satisfaction. Thus, TPL's with advanced information technology can increase the customer satisfaction to a great extent.

7. Integrating Supply Chain and Third Party Logistics Providers using Advanced

7.1. Information Technology

The extent to which manufacturers collaboratively manages intra and inter organization processes and strategically works together with its supply chain partners is termed as supply chain integration. Primarily, the goal is to provide maximum value to the customer at high speed and low cost and to achieve effective and efficient flow of information, products and services, money and decision. Supply chain integration in particular implies that business processes should be interconnected both within and outside the company boundaries and streamlined and is strictly related to coordination mechanisms. The degree of integration between supply chain partners is also impacted by the usage of advanced information technology services. The advanced technologies used in supply chain integration have impact on coordination of logistics activities and information sharing within the organization structure. As stated in some studies it is noted that higher level of integration have generally achieved by TPL service providers. Moreover, TPL providers seek longer term relationships and higher level of integration with partners through adaptation of advanced information technologies in order to improve the integration between supply chain partners. TPL providers are offering advanced information technology and broader global coverage. Therefore, companies need a state of art third party logistics provider with a wealth of information technology deployment experience to achieve optimal information flow to efficiently integrate the supply chain.

8. Conclusion

The study concludes that third party logistics providers really have important position in any organization. Third party logistics providers are really helpful to enhance the customer satisfaction and to integrate the different processes of supply chain by using advanced tools of information technology. However, logistics operations can be outsourced to reduce the capital investments and to concentrate towards other important issues of the organization. TPL has played significant role in supply chain integration and has greater impact on customer satisfaction with the help of advanced information technology tools. Moreover, this study reflects that customer satisfaction level can be increased by using TPL with advanced information technology.

Furthermore, the study found that TPL service providers are really helping in improving the company's logistics efficiency to enhance the customer satisfaction to integrate supply chain. This means putting together different processes of supply chain to make it much more efficient and effective with the help of advanced information technology. TPL service providers also helping companies in their transportation and distribution, customer support services, warehousing and distribution, IT support, effective route planning, reduction in operational cost and providing value added services to enhance customer satisfaction level.

This study may help organizations and TPL's to enhance the customer satisfaction level with the help of advanced information technology to maintain their competitive position in the market and business. This study also motives researchers to work more on logistics outsourcing. TPL industry has entered a period of rapid expansion and transformation, therefore, the number of market entrants is enormous, specifically among on-line service providers. Although it is generally believed that this market will continue to grow, I anticipate that stability will support market for several years at least. Various companies will quickly be out of business and new entrants will continue to stream in. Nevertheless, in the not too distant future a few market leaders will turn up. This transition provides very interesting opportunities for researchers in many fields.

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