

A STUDY ON THE LOGISTICS PERFORMANCE AND GROWTH IN CHENNAI SECTOR

Dr. J. Rengamani

(Associate Professor, AMET Business School, AMET University)

Abstract: Globalization, consolidation, technology advancements and outsourcing have only led to growth in the logistics services market and this industry will continue to evolve in the coming years. Firms can enhance their market competitiveness by reducing their logistics costs, thus lowering the total costs of goods and services. Any impetus to improve the competitiveness of the firms at the national platform would enable the nation to register a dynamic economic performance in a global environment. India has got a huge opportunity of reducing its national logistics cost by studying and benefiting from other success stories. This would include upgrading the macro logistics infrastructure to world class standards and by providing a facilitative role to the SME players in the logistics sector to improve their service level competitiveness. The effect of the referred improvement would substantially provide a ripple effect in the larger canvas of the country's logistics development thereby acting as a catalyst in reducing the national logistics cost. It is being increasingly felt that unless we take some fundamental steps to diversify India's export basket, most fiscal incentives may only benefit the profitability of the few exporters in the short term and not give a big thrust to the overall export performance of the country.

Keywords: Logistics, SME, Logistics Service Providers, Logistics Performance, Cargo, Port, Sea Freight, 3PL, Small and medium-sized enterprises (SME).

I. INTRODUCTION

Logistics has always been a central and essential feature of all economic activity. Despite this importance, there is a long history of organizations paying little attention to their logistics. They traditionally concentrated their efforts into manufacturing products and considered the movement and storage of materials as an uninteresting errand that formed part of the Overheads of doing business. However, over the years, the status of logistics has continued to improve, primarily due to recognition by the organizations of the following critical factors:

- Appreciation of high logistics cost and opportunities for major savings
- Increasing competition for both users and providers of logistics, who have to continually
- improve operations to remain competitive
- New types of operations, which can force changes to logistics such as just-in-time, total quality management, flexible operations, time compression etc.
- Need for improved technology for identifying, locating and tracking materials Recession in many markets, combined with new sources of competition, has raised the consciousness of customers towards value of service delivered to them by their service providers.

Accordingly, the logistics industry has consciously strived to be at the focal point of strategy formulation and operational excellence to continue in its endeavour for providing maximum contribution in value creation.

Customers are demanding a "single point of contact" for all logistics services and are looking for "one-stop logistics shopping" unable to cope with complexities across their supply chains. The models in logistics industry have accordingly evolved over time to address the changing needs of the market and vary based on scope of service offerings, degree of collaboration, levels of asset intensity and IT capabilities across the supply chain.

In one of the global logistics study conducted, a set of attributes was developed to identify high opportunity industries with diverse but complementary product flows for the logistics outsourcing industry. The attributes were formulated based on the requirements of the various aspects of supply chain planning and implementation including design, implementation and management of logistics services. The set of attributes derived were to focus attention on those industries that offer greatest opportunity for logistics service providers.

Indian Logistics Sector

The logistics sector in India has evolved over the past two decades from being a pure transportation / warehousing functional service to provision of more value-added offerings like customs clearance, domestic / international freight forwarding, cross-docking, reverse logistics, freight consolidation, warehousing of modern standards etc.

While there has been a growing recognition in India of logistics as a strategic tool for enterprise cost reduction and improvement of organizational efficiency on the flip side however, the logistics sector is characterized by dominance of a disorganized market. Transporters with fleets smaller than five trucks account for over two-thirds of the total trucks owned and operated in India and make up 80% of revenues. The freight forwarding segment is also represented by thousands of small customs brokers and clearing & forwarding agents, who cater to local cargo requirements. In order to reduce logistics costs and focus on core competencies, Indian companies across verticals are now increasingly seeking and using the services of third-party logistics service providers. Traditionally LSPs (Logistics Service Providers) concentrated mainly on transportation and logistics as they form a major share in logistics. However, in order to keep up with rising demands and customer expectations, companies now also concentrate on value added services like packaging, custom clearance, inventory management and labelling.

Logistics Growth Drivers

The evolving business landscape and increasing competition across industries, is creating the need for more efficient and reliable logistics services than what exists today. For example, rapid growth of organized retail and the need to reach out to the large untapped rural markets in India are necessitating development of strong back end and front-end supply networks. While the end user industries like auto, consumer durables, organized retail, etc, are direct triggers for the growth of the logistics sector in India, some of the other drivers are described below:

Rise of 3PL services - The logistics cost is a direct function of quality of the national transportation infrastructure and professionalism of the logistics services offered. In addition, the level of maturity of the logistics industry of a nation is co-related to the share of 3PL service provider's vis-a-vis the share of first and second party logistics service providers.

The logistics growth drivers

- Investments in Transportation Infrastructure
- Infusion of Qualified Work Force
- Globalisation of Manufacturing Systems
- Recognition of Logistics Management as a Strategic Tool
- Increased Demand for Third Party Logistics Services
- Streamlining of Indirect Tax Structure

II. LITERATURE REVIEW

At the logistical level, the importance of analysing performance was first shown in the work of Bowersox and Closs (1996), who reported that measurement of logistics performance consisted of a methodology for analysing resources of the logistic function, and its main objectives were monitoring and control of the logistics operations.

After this initial step, analysis of logistics performance has become an important issue in the area of management science research, but despite this attention from researchers, there is little convergence both in terms of methods and in terms of results for its validity. As Robb et al. (2008) mention, since logistics deal with physical, informational and cash flow management, it is generally recognized as a major determinant of business performance, but practices particularly in terms of performance analysis, are still at the stage of being studied by professionals and academics.

In the literature, it is possible to identify a significant amount of work on the relationship between logistic performance and organizational performance, such as the work of Larson et al. (2007) who demonstrated that the performance of logistics activities can have an impact on organizational performance. Those authors, in a study conducted among business leaders on the impact of the perception of logistics performance on business results, found that a significant number of managers said that the perceived impact of logistics performance consisted of better performance in customer service, better inventory levels and optimization costs.

As logistics are increasingly expected to contribute to organizational performance, several studies have examined the influence of logistics performance operations and logistics management practices on overall company performance. Some authors, such as Zhou and Benton (2007) investigated the link between logistics management practices and distribution performance regarding reliability of service, and concluded that practices related to the distribution and sharing of information have a direct impact on performance.

Also, Green et al. (2008), addressing the relationship between logistics practices and organizational performance in a large number of companies in the United States, concluded that logistic practices have a positive impact on business performance, namely in speed of delivery, the responsiveness and flexibility of delivery, and also influence marketing performance, which has a leverage effect on the average sales growth and business profitability.

Roth et al. (2008) investigated the antecedents and performance results of a set of leading global companies, concluding that information technology and logistics management contribute to increased sales and profitability. More precisely, information and communication technology increased sales and logistics management increased organizational profitability.

Chow et al. (1994), who focus on analyzing the relationship between objectives, practices, skills and management performance in the supply chain, concluded that logistics practices influence logistics capabilities positively in terms of quality and service, operation distribution and efficiency.

According to Bhagwat and Sharma (2009), analysis of logistics performance is among the main challenges faced by today's companies. Other challenges include, for example, customer service, strategic partnerships, inventory management and logistics flow management, reducing cycle times and geographical coverage along with flexibility (Li et al., 2006). These challenges arise mostly from the decentralization of production systems, leading companies to move towards the development of basic skills and the need to implement efficient and effective management of logistic activities.

As referred to by Schramm-Klein and Morschett (2006), analysis of logistics performance is a strong current trend, which involves monitoring and planning in order to establish connections between the results of indicators and the firm, determining how well companies achieve strategic objectives as part of their definition and competitive orientation (Gunasekaran and Kobu, 2007). However, despite this importance, one of the gaps identified in the literature on this subject is that most publications on Logistics or Supply Chain Management are outlined for, or targeted at large enterprises, with few publications discussing logistics in the SME context (Spillan et al., 2010).

Some authors mention that the way logistics have been implemented in SMEs consists of application of smaller versions of successful practices in large organizations, hoping the results will be the same in SMEs despite their more limited resources and less willingness to invest in equipment and infrastructure (Norek et al., 2007). Apart from this last point, another gap identified is the virtual absence of studies that specifically address logistics performance in SMEs, as it appears there is still no well-defined research agenda in this area of research. Despite this, the work of Halley and Guilhon (1997), Bagchi and Virum (2000), Koh et al. (2007) and Töyli et al. (2008) deserves special mention.

III. RESEARCH OBJECTIVES

The objectives of the study are given below:

- To study the role and functions of logistics operation in Chennai Sector
- To study the importance of the factors of logistics performance in Chennai

Research Hypotheses

In order to achieve the objectives, this article is organized around the following working hypotheses:

- H₁: There is a significant difference in the logistics performance in Chennai.

Research Methodology

The target population of the current study happens to be the clients and logistics service providers in Chennai who are the middlemen between the carrier and the exporter/importer. The information from the clients and logistics service providers has been collected with the help of a structured questionnaire. Here Samples are collected based on stratified sampling with the sample size of 80.

Research Tool

The logistics performance and growth were measured on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). The questionnaire designed for the evaluation of subjective perception of the clients and logistics service providers in Chennai sector. The Cronbach's alpha values were calculated to check the consistency and reliability of data collected through the survey. The researcher has collected information from 80 clients and logistics service providers in Chennai. The hypothesis has been tested by using Student's t-test at 5% level of significance.

IV. ANALYSIS AND INTERPRETATIONS

Descriptive Data Analysis

The descriptive data analysis of the clients and logistics service providers to identify logistics performance and growth are discussed below.

Table-1: Descriptive Data Analysis

Descriptive Factors	Frequency	Percentage
<u>Length of Service in the Logistics</u>		
<2 years	5	6.25
2-5 years	9	11.25
5-10 years	28	35.00

Descriptive Factors	Frequency	Percentage
10-15 years	21	26.25
>15 years	17	21.25
<u>Shipping Line used for Exports & Imports</u>		
APL	9	11.25
CMA-CGM	10	12.5
HANJIN	4	5
HL	5	6.25
HMM	2	2.5
KLINE	4	5
MAERSK	17	21.25
NYK	8	10
PIL	4	5
PONL	12	15
RCL	3	3.75
SCI	2	2.5
<u>Frequency of Sales Personnel Visit</u>		
Weekly	18	22.5
Fortnightly	16	20
Monthly	5	6.25
On request	41	51.25
<u>Time Taken to Provide the Logistics Assistance</u>		
Instantly	18	22.5
Few hours	2	2.5
One day	5	6.25
More time	17	21.25
Depends	38	47.5
<u>Satisfaction of Transit Time Provision</u>		
Very much satisfied	10	12.5
Satisfied	46	57.5
OK	22	27.5
Dissatisfied	2	2.5

From Table-1, it can be inferred that out of 80 respondents, 35% of the respondents are doing the logistics business for 5-10 years. 21% of the respondents are utilizing the services offered by MAERSK line and this is followed by PONL, CMA, APL and NYK with 15%, 13%, 11% & 10% respectively. 51% of the respondents have specified that the frequency of Sales personnel visit to their company is based "on request". 48% of the respondents have specified that the time taken by the shipping line to provide the Freight Rates "Depends" on various factors that are normally considered. 58% of the respondents are satisfied with the Transit Time provided by their shipping lines.

Cronbach's Alpha & Student's t-test

The clients and logistics service providers were studied through the 5-point Likert Scale. In order to test the consistency and reliability of the scale, Cronbach's Alpha values were calculated. All the Cronbach's Alpha values were above 0.92 and hence it can be inferred that the scales are consistent and reliable.

The result of the Questionnaire survey regarding the opinion by the clients and logistics service providers shows that the p-values of all the factors are less than 0.05 (Table-2). This clearly indicates that the clients and the logistics service providers clearly expect the factors of logistics performance such as Solving cargo transportation dispute, Making efforts to help in emergencies, Giving pre-alert notices of shipment, Giving pre-alert notices of delivery problems, Providing emergency services, Responding to customer requests in a flexible manner, Handling customer complaints patiently, Meet unforeseen customer needs, Handling changes, Recommending alternative actions problems arise, Helping to claim for insurance compensation, Advising customers of potential problems, Helping customers in value analysis, Helping customers in cost reductions, Helping customers in problem solving, Providing performance reports periodically

Table-2: t-test values for testing the core competencies of shipping lines

Competency factors	t	p
Solving cargo transportation dispute	3.18	0.012
Making efforts to help in emergencies	3.25	0.013
Giving pre-alert notices of shipment	3.12	0.005
Giving pre-alert notices of delivery problems	3.24	0.016
Providing emergency services	3.47	0.017

Responding to customer requests in a flexible manner	3.62	0.006
Handling customer complaints patiently	2.15	0.011
Meet unforeseen customer needs	2.32	0.012
Handling changes	2.51	0.013
Recommending alternative actions problems arise	3.15	0.002
Helping to claim for insurance compensation	3.32	0.003
Advising customers of potential problems	3.74	0.012
Helping customers in value analysis	3.97	0.012
Helping customers in cost reductions	3.32	0.014
Helping customers in problem solving	3.17	0.016
Providing performance reports periodically	3.12	0.013

Contrary to the much talked about theory of 'decoupling hypothesis' which held that emerging economies will remain relatively unaffected by the downturn due to their substantial foreign exchange reserves, improved policy framework, etc, emerging economies too have been hit by the crisis and India is no exception. However, the Indian economy has fared much better than most of its Asian peers in the face of the global economic recession.

The reduction in the logistics cost can be brought about by improving the national logistics infrastructure to facilitate smooth transfer of materials and information. Simultaneously, at the micro level, the logistics service providers need to infuse better management practices, employ technology that facilitates its logistics process to reduce its service cost.

The logistics attributes were formulated based on the requirements of the various aspects of logistics planning and implementation including design, implementation and management of logistics services. Some of the attributes of industries researched that would offer the highest opportunity/best fit for logistics service provider include - Large logistics spend, Relatively high value products, Manage across multiple modes, Manage complex, time sensitive supply chains, Diverse supply chain footprints including their own operations, suppliers and customers, Maturity in outsourcing cycle (currently managing 3PLs), Decentralized management of logistics, Complementary to current base of 4PL business, High cube and high weight products.

V. CONCLUSION

The survey conducted among the logistics players with a aim to specify the logistics performance and the developments in the Indian logistics space particularly to the Chennai Sector and more importantly to the broad level challenges that the industry is currently facing, from the perspective of a Logistics Service Provider (LSP). The survey covered players across a wide spectrum of logistics segments such as freight forwarding, shipping, customs booking, container freight stations, warehousing, and multi-modal transportation & thus aimed at offering them a platform to share their varied concerns. The analysis of industry's internal factors suggests that moving to higher value-added services is perceived as the biggest growth opportunity by the Indian LSPs. Besides, in a situation like today's, optimizing operations is viewed as the best means of surviving in business and competing effectively. While a likely boom in construction and pharmaceuticals spell opportunities for the logistics sector in terms of increased potential of multi-modal movement of raw material & manufactured products, progressive reforms such as introduction of a singular Goods and Service Tax (GST) and the Government's push to infrastructure expansion are equally encouraging. On the other hand, major threat is posed by competition from large foreign players and price sensitive nature of Indian markets. On the external front, infrastructure and regulatory bottlenecks are the prime cause of transportation delays and cost overruns, which consequently hamper the quality of logistics services.

VI. REFERENCES

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