



## INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE AND MANAGEMENT

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# Understanding the factors Affecting Selection of a Transport Service Provider – An Empirical Analysis

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## **Abstract**

*Transportation is one of the most important aspects of the supply chain management of a company as it acts as a physical link between customers and suppliers, enabling the flow of materials and resource. Globalization of business urges the need to have effective and efficient transportation of products from point of origin to point of destination. Most of the times, Manufacturers & traders heavily relies upon third party transport service providers in order to ensure on-time delivery of products. This study is an attempt to understand various dimensions of transport service providers that clients considers while selecting a particular service provider. This study is based on primary data collected from 124 clients based at Kolkata across the industry. The study also presents a framework to help transport service providers to design their service in such a way that ensure long term profitable relationship with clients by offering high quality transportation service.*

## Keywords

Logistics, Transportation, Supply Chain Management, Transport Service Providers, Factor Analysis.

## Introduction

Transportation has a direct effect on most of the companies' supply chains. Fueled from globalization & liberalization across the industry, transport service providers are experiencing bright days as requirement for transport service is increasing day by day. Transportation is the core sector and function of logistic. The annual logistics cost of the world is about 3.5 trillion USD, logistic contribute around 13 percent of Indian GDP, which includes all mode of movement along with other warehousing and logistic activities. Now a day's a new concept of third party logistic comes into picture which means outsourcing logistic activities including transportation and warehousing to outside firms, which are not consignee or a consignor. Indian logistic is rising at 20 percent in relation to average world logistics industry growth of 10 percent. However, the road transportation alone contributes around Rs 2, 00,000 corers and is supposed to increase by 16 percent per annum. That means there is a huge opportunity for Indian Logistic companies which are now in budding stage. Now scope for Indian companies has to attract their clients for this they have to identify on what parameters they select their transport service provider and client's perception towards their service provider. The rating evaluates how long the freight takes to get to the clients without any problems. Some time clients uses the same transport service over a long period of time by establish long – term relationship with carriers. The present trend is that clients prefer those transporters where there is increased emphasis on security, resiliency and cost reduction. This study aims to identify various factors affecting the decision of clients at the time of selecting a transport service provider. At the same time, efforts have been made to appreciate the importance of these factors in establishing long term relationship with clients to deliver improved value to them.

## Research Objectives

Transport is a key aspect of the supply chain of a company as it acts as a physical link between customers and suppliers, enabling the flow of materials and resource. The demand of transport service providers are increasing day by day as manufacturers and suppliers always prefer third party transport service providers to ensure on-time transportation of products from point of origin to point of destination. At this backdrop, the study is intended to understand the factors influencing the selection of transport service provider by clients (manufacturers and traders). At the same time, this study is also aimed to appreciate the importance attached to various criteria clients consider while selecting a particular transport service provider. The study tries to answer following questions;

- What criteria do clients use to select a transport service provider?
- Which selection criterion is most and least important to clients?
- What is the client's perception towards transport service providers?

## Review of Literature

During selecting a transport service provider, clients consider many attributes; the clients arrive at an attitude toward the various service brands through an attribute evaluation procedure and most buyers consider several attributes in their purchase decision (Kotler et al 2006). During selecting a transport service provider clients consider various attributes like freight rates, timely delivery, damage of goods and other value added services. Some researcher find out value added services as the main criteria rather freight rates then also freight rates play a major role. Work done by McGinnis (1990) revealed that the service is usually more important than freight price when selecting carriers, priorities differ among service variables, and freight rates are more important than service in some user segments. He fulfilled that during selection of transporter this six variables found to affect freight transportation were (1) freight rates, (2) reliability, (3) transit time, (4) loss, damage, claims processing, and tracing, (5) shipper market

considerations, and (6) carrier considerations. He also reveals that Freight rates are an important variable in some cases that should not be ignored.

According to Menon (1998) during selecting third party logistic, first step should be documenting performance requirements. Performance includes on-time delivery, exceed promises, and the availability of top management when necessary. Capability low error rates, the ability to meet or requirements will emphasize management creativity and financial stability of the provider. Second step will be the price selection.

According to Voss et al (2006) price is not the only vital aspect when shippers pick transport providers. They concluded after their research considering two methods, first one is traditional method and second one is TRA method. Variables range from operational to strategic, and transporter selection is influenced by the ultimate decision maker and his or her supervisor alike. It is very difficult to understand which criteria are most significant to each party and the associated influence on the ultimate carrier choice decision.

Study of Leahy et al (1995) stated that out of twenty-five potential determinants of successful third-party relationships, buyer orientation and dependability emerged with the greater importance ratings; sharing human resources and exit provisions were assigned the lowest importance ratings.

Work of Zsidisin et al (2007) revealed that on-time delivery is the most important criteria while selecting a transport service provider because it is a direct assess of customer service. If trustworthy of on-time delivery is of great importance to most shippers, then carriers have to build an ability to deliver goods on time into their day-to-day operations.

Carr and Green (1998) conducted a survey to elucidate how Ashland Chemicals select their carriers to transport goods in U.S and Canada. According to study shippers evaluate current carrier which will provide long term service. Relation between both the parties will maintain a healthy relation when service provider provides on-time delivery, reliability, efficiency and consistency.

Bowersox and Daugherty (1995) argued that time plays a critical role for a logistic company in the era of information technology. In future more forceful changes will be seen by the logistic organizations to gain and maintain aggressive advantage. Four specific trends which will guide for future service demand and maximize organizational flexibility are development of more transparent logistics organization structure, more strategic alliances, increased and focused emphasis on performance measurement and greater reliance on time-based strategies.

According to Lambert et al (1993) cost is the fourth most important attribute. Respondents placed greater importance to quality of dispatch personnel honesty, on-time pick up, on-time delivery and competitive rates out of 166 attributes. Most of the least important attributes are related to promotion components of marketing mix which includes direct mail, carrier sponsored entertainment, promotional gifts and advertising in trade journals.

Evers et al (1996) came up with six selection factors: timeliness, availability, firm contact, suitability, restitution and cost. Shippers overall perceptions are more greatly affected by timeliness and availability. Cost is the last criteria for selecting a transport service provider.

## Research Methodology

This study is completely based on the primary data collected from traders, manufacturer and C & F agents at Kolkata. For this exploratory study, 124 respondents were randomly selected using simple

random sampling method. The questionnaire was developed and administered to the selected respondents across the industries to gather first hand information to understand their perception towards transport service providers. The questionnaire included questions to understand importance of various search criteria (viz. price, regularity of service, timely delivery, convenient booking, trust etc.) clients consider at the time of selecting a particular transport service provider. The data was analyzed using exploratory factor analysis to extract the underlying construct that guide clients' decision regarding selection of a particular transport service provider.

### Data Analysis

#### Factor Analysis

The Kaiser-Meyer-Olkin (KMO) value of 0.883 and significant Bartlett's Test of Sphericity strongly supported the use of factor analysis in order to extract independent variables guiding clients while selecting a particular transport service provider. (Refer Table 1)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.883
Bartlett's Test of Sphericity	Approx. Chi-Square	1889.308
	Df	153
	Sig.	.000

An exploratory principle component factor analysis was done using SPSS 15.0. Varimax rotation was used and factor loading 0.5 or above on the items was taken into consideration. All 18 items related to

various dimension of transport service providers were used for the factor analysis, which yielded four factors (with Eigen value more than 1) explaining 75.424 percent of variance as shown in Table 2.

<b>Factors</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>Variance Explained</b>
Core Value	Material handling	.849	35.246%
	Network	.827	
	Price	.858	
	Regularity of service	.853	
	Safety	.905	
	Speed	.896	
	Timely service	.937	
	Track trace	.715	
Value Added Services	Credit facility	.624	22.283%
	Flexible timing	.590	
	Flow of communication	.826	
	IT implementation	.849	
	Marketing	.811	
Brand Image	Company history	.610	10.061%
	Ease of use	.604	
	Fancy terminology	.686	
Assurance	Twenty four hour service	.599	7.834%
	Association companies	.888	
Total Variance Explained (Percentage)			75.424%



The four major independent sets of factors associated with selecting a transport service provider are extracted from the factor analysis and explained in brief:

**Core Values:** The items loaded on this factor revealed that core values/ basic benefits act as the life blood for a transport service provider. This factor emerged as the most important factor that guide clients' decision at the time of selecting a particular transport service provider. It includes material handling, network, price, regularity of service, safety, speed, and trace track. This factor accounted for 35.25 percent of variance.

**Value Added Services:** This factor emerged as second most important factors and contributes 22.28 percent of variance. The variables like credit facility, fancy terminology, IT implementation and marketing are showing significant loading on this factor. This factor is named as 'Value added services', as it revealed that clients also consider value added services offered by transport service provider at the time of selecting a particular transport service provider. Factor analysis exposed the importance of offering value added services to the clients apart from core service.

**Brand Image:** The importance of branding is inevitable these days as clients prefer to associate themselves with premium brands. Three items (viz. company history, ease of use & fancy terminology) attempted to differentiate one's offering from competitors are loaded on this component. This analysis supported the investment of firms on brand building activities and this factor accounts for 10.06 percent of variance.

**Assurance:** Two items related with assurance i.e. twenty four hour service & association significantly loaded on this component and accounts for 7.38 percent of variance. In order to ensure quality service to

the clients, transport service providers should have accreditation from organization like ISO and Six Sigma.

## **Limitations and Future Research**

Although this exploratory research is based on the primary data collected from clients of different categories viz. traders, manufacturer and C&F agents; the findings cannot be generalized, as this research is confined to the study of Kolkata based clients. This study successfully identified various factors and its importance at the time of selecting a transport service provider; future research can be undertaken to examine the impact of these factors on clients' satisfaction. This can be done with the help of a multiple regression model considering customer satisfaction as a dependent variable as various factors viz. Core values, Value added services, Brand Image and Assurance as independent variables. At the same time, in order to make this study more generalized and exhaustive, data can be collected from clients from various industries located as different part of the country.

## **Conclusion**

This study has clearly revealed that clients select transport service after evaluating various dimensions viz. core values, value added services, brand image and Assurance that differentiate a particular transport service provider from its competitors. Study also revealed that there is significant impact of freight price, regularity of service, IT implementation and marketing activities on the clients' attitude towards a particular transport service provider. At this backdrop, a transport service provider should design all those attributes vary carefully on which clients select their transport service provider. Reorganization of these attributes is very important for a transport service provider to develop more effective strategies to better serve clients.

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