

The Survey on Use of 3PL In Indian Companies From The Users Perspective

Mr. Salim Khan, Dr. Ekta

Assistant Professor & HOD Department of Management St. Xavier's college Jaipur
Assistant Professor Department Of Commerce St. Xaviers College, jaipur

Abstract: *Third-party logistics (3PL) refers to outsourcing transportation, warehousing, and other logistics related activities to a 3PL service provider that were originally performed in-house.*

Logistics services for Retail Industry or Retail Logistics as popularly referred to is the integrated management of the range of activities required to keep retail outlets adequately replenished with supplies. A 3PL company is a private firm that provides logistics services under a contract to a primary manufacturer, vendor, or user of a product or service. It is called third-party because the logistics provider does not own the products but participates in the supply chain at points between the manufacturer and the user of a given product. The 3PL can perform logistics functions of their customer either completely or only in part initially, the 3PL were carriers, storage companies or forwarding agents. Currently, they diversified by offering various services and by ensuring various activities. The principal 3PL has their own warehouses, transport fleets and their credits are often deployed throughout the world. Most 3PL have specialized their services through differentiation, with the scope of services encompassing a variety of options ranging from limited services to broad activities covering the supply chain.

I. Introduction

The well-being of any economy largely depends on its infrastructure, and its capability to transfer finished and semi-finished goods both within & beyond its borders. A well-developed & integrated logistics business is necessary for a nation sustaining economic growth. Logistics & supply chain management (SCM) are also assuming increasing significance in modern economies due to the advent of globalization, as large multinational firms outsource their manufacturing & distribution functions to more cost effective areas, and also ramp up their operations on a global scale.

3PL

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A 3PL company is a private firm that provides logistics services under a contract to a primary manufacturer, vendor, or user of a product or service. It is called third-party because the logistics provider does not own the products but participates in the supply chain at points between the manufacturer and the user of a given product. The 3PL can perform logistics functions of their customer either completely or only in part initially, the 3PL were carriers, storage companies or forwarding agents. Currently, they diversified by offering various services and by ensuring various activities. The principal 3PL has their own warehouses, transport fleets and their credits are often deployed throughout the world. Most 3PL have specialized their services through differentiation, with the scope of services encompassing a variety of options ranging from limited services to broad activities covering the supply chain.

II. Purpose Of The Study

The very few research initiative has been undertaken in India that has focused on Logistics outsourcing & its effect on Industry in India. In recent years, however, there has been a welcome change in this kind of thinking and an increasing number of industries are now beginning to view logistics as a tool to augment customer experience and improve revenues. Several large business houses and mid-sized enterprises now realize the truth that logistics as a tool, for an effective and efficient business that result in greater revenues and improved profitability. Indian manufactures and distributors are generally quite skeptical and/or unaware about logistics outsourcing. As compared to Western Europe and the US the volume of outsourcing by Indian shippers is presently as low as around 10% compared to 50-80% in Western Europe and the US. The

reasons of not outsourcing logistics activities in India are perceived risk, and losing control of sensitive organizational information and vested interests in keeping logistics activities in-house.

Aims and objectives

The aim of this research is to find the use of 3PL in Indian companies from the users’ perspective and to identify the improvement opportunities in the Indian environment. In order to achieve the aim of this research, the following objective is established.

• Objective

To identify factors and features of 3PL service providers which are most significant for selecting 3PL by users of 3PL in India.

III. Research Methodology

The research study is exploratory as well as descriptive in nature. Exploratory study is a fact-finding investigation with adequate interpretation with first-hand information. Descriptive study concentrates on finding facts to ascertain the nature of something as it exists. Mainly the study is designed to explore information and secondary data are also used for providing information for formulating and reaching at the conclusion of the study.

The sample size of this study was 92 companies within India. The target respondents were taken from various industries including automotive, retail, chemical/healthcare, high-tech/electronics, fashion/textiles, food and beverage, FMCG etc. 52 respondents presently use 3PLs and 40 respondents are not using 3PLs.

Data Analysis

Null Hypothesis: the size of companies and focus on core competence as reason of using a 3PLs services have no association.

focus on core competence * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
focus on core competence	no	Count	14	13	27
		Expected Count	17.7	9.3	27.0
		Residual	-3.7	3.7	
	yes	Count	20	5	25
		Expected Count	16.3	8.7	25.0
		Residual	3.7	-3.7	
Total		Count	34	18	52
		Expected Count	34.0	18.0	52.0

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.544 ^a	1	.033		
Continuity Correction ^b	3.386	1	.066		
Likelihood Ratio	4.670	1	.031		
Fisher's Exact Test				.044	.032
N of Valid Cases	52				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.65.					
b. Computed only for a 2x2 table					

Decision And Conclusion

Since the p-value is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that association was founded between size of the companies and focus on core competence as reason of using a 3PLs services ($\chi^2(1) = 4.544, p = .033$).

Null Hypothesis: the size of companies and logistics cost reduction as reason of using a 3PLs services have no association.

logistics cost reduction * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
logistics cost reduction	n o	Count	13	12	25
		Expected Count	15.9	9.1	25.0
		Residual	-2.9	2.9	

	yes	Count	20	7	27
		Expected Count	17.1	9.9	27.0
		Residual	2.9	-2.9	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.728 ^a	1	.099		
Continuity Correction ^b	1.859	1	.173		
Likelihood Ratio	2.751	1	.097		
Fisher's Exact Test				.150	.086
N of Valid Cases	52				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.13.

b. Computed only for a 2x2 table

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and logistics cost reduction as reason of using a 3PLs services ($\chi^2(1) = 2.728, p = .099$)

Null Hypothesis: the size of companies and access to emerging technologies as reason of using a 3PLs services have no association.

		size of the companies		Total	
		large	small		
access to emerging technologies	no	Count	27	14	41
		Expected Count	26.0	15.0	41.0
		Residual	1.0	-1.0	
	yes	Count	6	5	11
		Expected Count	7.0	4.0	11.0
		Residual	-1.0	1.0	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.478 ^a	1	.489		
Continuity Correction ^b	.115	1	.735		
Likelihood Ratio	.469	1	.494		
Fisher's Exact Test				.503	.362
N of Valid Cases	52				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.02.
 b. Computed only for a 2x2 table

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and access to emerging technologies as reason of using a 3PLs services ($\chi^2(1) = .478, p = .489$)

Null Hypothesis: the size of companies and improving customer services as reason of using a 3PLs services have no association.

		size of the companies		Total	
		large	small		
improving customer services	no	Count	27	8	35
		Expected Count	22.2	12.8	35.0
		Residual	4.8	-4.8	
	yes	Count	6	11	17

		Expected Count	10.8	6.2	17.0
		Residual	-4.8	4.8	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	
Pearson Chi-Square	8.642 ^a	1	.003			
Continuity Correction ^b	6.932	1	.008			
Likelihood Ratio	8.569	1	.003			
Fisher's Exact Test				.005	.004	
N of Valid Cases	52					
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.21.						
b. Computed only for a 2x2 table						

Decision And Conclusion

Since the p-value is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that there is an association between size of the companies and improving customer services as reason of using a 3PLs services ($X^2(1) = 8.642, p = .003$).

Null Hypothesis: the size of companies and improve the logistics process as reason of using a 3PLs services have no association.

improve the logistics process * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
improve the logistics process	no	Count	26	9	35
		Expected Count	22.2	12.8	35.0
		Residual	3.8	-3.8	
	yes	Count	7	10	17
		Expected Count	10.8	6.2	17.0
		Residual	-3.8	3.8	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	
Pearson Chi-Square	5.409 ^a	1	.020			
Continuity Correction ^b	4.076	1	.044			
Likelihood Ratio	5.333	1	.021			
Fisher's Exact Test				.032	.022	
N of Valid Cases	52					
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.21.						
b. Computed only for a 2x2 table						

Decision And Conclusion

Since the p-value is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that there is an association between size of the companies and improve the logistics process as reason of using a 3PLs services. ($X^2(1) = 5.409, p = .020$).

Null Hypothesis: the size of companies and reduction in capital investment as reason of using a 3PLs services have no association.

reduction in capital investment * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
reduction in capital investment	no	Count	18	11	29
		Expected Count	18.4	10.6	29.0
		Residual	-.4	.4	
	yes	Count	15	8	23
		Expected Count	14.6	8.4	23.0
		Residual	.4	-.4	

Total	Count	33	19	52
	Expected Count	33.0	19.0	52.0

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	
Pearson Chi-Square	.055 ^a	1	.815			
Continuity Correction ^b	.000	1	1.000			
Likelihood Ratio	.055	1	.815			
Fisher's Exact Test				1.000		.523
N of Valid Cases	52					
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.40.						
b. Computed only for a 2x2 table						

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and reduction in capital investment as reason of using a 3PLs services ($\chi^2(1) = .055, p = .815$).

Null Hypothesis: the size of companies and productivity improvement as reason of using a 3PLs services have no association.

productivity improvements * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
productivity improvements	no	Count	26	13	39
		Expected Count	24.8	14.3	39.0
		Residual	1.3	-1.3	
	yes	Count	7	6	13
		Expected Count	8.3	4.8	13.0
		Residual	-1.3	1.3	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	
Pearson Chi-Square	.691 ^a	1	.406			
Continuity Correction ^b	.249	1	.618			
Likelihood Ratio	.678	1	.410			
Fisher's Exact Test				.510		.305
N of Valid Cases	52					
a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.75.						
b. Computed only for a 2x2 table						

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and productivity improvements as reason of using a 3PLs services. ($\chi^2(1) = 0.691, p = .406$)

Null Hypothesis: the size of companies and increasing inventory turn as reason of using a 3PLs services have no association.

increasing inventory turn * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
increasing inventory turn	no	Count	28	13	41
		Expected Count	26.8	14.2	41.0
		Residual	1.2	-1.2	
	yes	Count	6	5	11
		Expected Count	7.2	3.8	11.0
		Residual	-1.2	1.2	
Total		Count	34	18	52
		Expected Count	34.0	18.0	52.0

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.724 ^a	1	.395		
Continuity Correction ^b	.244	1	.621		
Likelihood Ratio	.704	1	.401		
Fisher's Exact Test				.482	.306
N of Valid Cases	52				
a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.81.					
b. Computed only for a 2x2 table					

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and increasing inventory turn as reason of using a 3PLs services. ($\chi^2(1) = .724, p = .395$)

Null Hypothesis: the size of companies and expansion to unfamiliar as reason of using a 3PLs services have no association.

expansion to unfamiliar markets * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
expansion to unfamiliar markets	no	Count	29	13	42
		Expected Count	27.5	14.5	42.0
		Residual	1.5	-1.5	
	yes	Count	5	5	10
		Expected Count	6.5	3.5	10.0
		Residual	-1.5	1.5	
Total		Count	34	18	52
		Expected Count	34.0	18.0	52.0

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.295 ^a	1	.255		
Continuity Correction ^b	.590	1	.442		
Likelihood Ratio	1.248	1	.264		
Fisher's Exact Test				.287	.219
N of Valid Cases	52				
a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.46.					
b. Computed only for a 2x2 table					

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and expansion to unfamiliar markets as reason of using a 3PLs services. ($\chi^2(1) = 1.295, p = .255$)

Null Hypothesis: the size of companies and others as reason of using a 3PLs services have no association.

others * size of the companies cross tabulation					
			size of the companies		Total
			large	small	
others	no	Count	28	13	41
		Expected Count	26.0	15.0	41.0
		Residual	2.0	-2.0	
	yes	Count	5	6	11
		Expected Count	7.0	4.0	11.0
		Residual	-2.0	2.0	
Total		Count	33	19	52
		Expected Count	33.0	19.0	52.0

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.951 ^a	1	.162		

Continuity Correction ^b	1.090	1	.296		
Likelihood Ratio	1.892	1	.169		
Fisher's Exact Test				.181	.148
N of Valid Cases	52				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.02.

b. Computed only for a 2x2 table

Decision And Conclusion

Since the p-value is greater than our chosen significance level $\alpha = 0.05$, we do not reject the null hypothesis, and conclude that there is no association between size of the companies and others as reason of using a 3PLs services. ($\chi^2(1) = 1.951, p = .162$)

IV. Conclusion

The majority of the respondents who do no outsource logistics activities gave the following reasons ranked from most often provided reason to least:

Company has adequate skills and resources

Fear of loss of control over the logistics function

Losing touch with significant information

Uncertainty in service levels provided

Lack of shared goals and difficulty in obtaining organizational support did not consider as significant factors not to undertake outsourcing by most of the respondents. In summary, of the factors that result in companies deciding not to outsource their logistics activities, the most significant was that companies indicated that they had adequate in-house expertise and resources. Also, of the respondents selected this reason, about two-third were large companies. This is reasonable because those large companies are usually big enough to have their own logistics departments and resources.

- The majority of respondents that do outsource logistics activities are under pressure to cut costs for logistics and capital investments and focus on core competence. Logistics cost reduction is on the topmost same as the countries like USA, Australia, Western Europe, Singapore, Saudi Arabia, Malaysia and India (Lieb&Randell, 1994; Millen et al., 1997; Bhatnagar et al., 1999; Sohail&Sohal, 2003; Sohail& Al-Abdali, 2005; Sahay& Mohan, 2006). Other main reasons are improving the customer service and the logistics process. Unlike previous studies, improving customer service is not very high on the list in this survey. Furthermore, there is a clear link between the success of outsourcing and the identification of these reasons for outsourcing. It seems that large companies tend to recognize more about logistics cost reduction and small companies more experienced with improving customer services. Moreover, companies no longer outsource only for cost reasons. It is important for companies to understand the many and varied needs and purposes, advantages and disadvantages of outsourcing before making such a decision.

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