

**EXPLORATION OF FACTORS HINDERING THE GROWTH OF 3PL
MARKET IN SRI LANKA**

Dr. M.A. Asoka Malkanthie
Senior Lecturer
Department of Marketing Management
Faculty of Management Studies and Commerce
University of Sri Jayewardenepura
Nugegoda,
Sri Lanka
maamalkanthie@sjp.ac.lk
maamalkanthie@yahoo.com

J.M.D.J.N. Jayamanna
Commander
General Sir John Kotelawala Defence University
Ratmalana
Sri Lanka
solp@navy.lk
ijanaka76@yahoo.com

ABSTRACT

With the globalization of businesses and the consequent competitive pressures, all the companies are trying to deliver customized products all over the world quickly and on time. This has placed a number of demands on the logistics systems. While today world logistic industry is practicing up to 7PL, within a short span of time, Sri Lanka is still grappling with 3PL activities. Therefore, the intention of this research is to identify the challengers, barriers / factors hindering the growth of 3PL market in Sri Lanka to facilitate the growth of the industry to meet the world competition. According to the findings, customers are quite happy about their 3PL providers, but they are not highly satisfied as well as any high trust to the 3PL providers. Costs, lack of control, lack

of coordination, lack of corporation are the main issues respectively that affect the growth of 3PL market in Sri Lanka. Inadequate capabilities are also a one of the problems. Lack of control and lack of coordination are the significant factors that diminish the satisfaction of customers and lack of control is the only significant factor that diminishes the trust of customers. Minimizing lead time between deliveries, adoption of new technology, handling no. of order channels multiplied by the number of delivery options and handling overstocks due to online sales, and adoption of new technology are considered as the future challengers in 3PL market in Sri Lanka.

Key Words: *logistics, 3PL, satisfaction, trust, hindering issues*

1. INTRODUCTION

Over the last decades, the activity of logistics has tremendously evolved (Aldebert and Hudziak, 2012). Logistics is defined as: "a part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer's requirements." (CSCMP, 2015). "Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers" (CSCMP, 2015). It is widely accepted that the outsourcing of logistics services aims at enabling the creation of strategic and operational value such as inventory and logistics cost reduction, order fill rate and

accuracy increase, and order cycle time reduction (Langley and Caggemini, 2010). For these reasons a majority of shippers, 64%, are increasingly using Third Party Logistics (3PLs) (Aldebert and Hudziak, 2012). According to the Council of Supply Chain Management professionals, Third Party Logistics (3PL) is defined as "a firm provides multiple logistics services for use by customers. Preferably, these services are integrated, or bundled together, by the provider. (Manzini et al, 2007). "Lying on a key East-West trade route and set close to India, Sri Lanka possesses the essential location advantage needed for it to develop into a key logistics hub in South Asia. Despite being a small economy, with a total trade amounting to about US\$31 billion in 2014 (Only 4% of India's US\$778 billion), the island state is an important transshipment hub in the region. It is a site where many shipping companies consolidate and deconsolidate cargo for transshipping to other destinations" (HKTDC, 2015). "World Shipping Council statistics show that the Port of Colombo, Sri Lanka's major container port on the west

coast was the busiest port in South Asia in 2013, handling 4.31 million TEUs. This puts it ahead of India's largest container port, Jawaharlal Nehru (4.12 million TEUs in 2013). In the first 11 months of 2014, the Port of Colombo reported a steady growth of 4% in container traffic, according to the Sri Lanka Ports Authority (SLPA). Notably, transshipment volume grew far faster than domestic cargo business during the period, accounting for more than 75% of total container throughput" (HKTDC, 2015). But, while today world logistics industry is practicing 4PL, 5PL, and collaboration up to 7PL, within a short span of time, Sri Lanka is still grappling with 3PL, JIT (Just in Time), and VMI (Vendor Managed Inventory). Therefore, it is an essential requirement to identify the challengers, barriers / factors hindering the growth of 3PL market in Sri Lanka to facilitate the growth of the industry to meet the world competition. Further the objectives of the research are as follows:

- a. To measure the satisfaction, and trust levels of 3PL customers and suppliers in Sri Lanka.
- b. To identify existing hindering issues of 3PL market in Sri Lanka.
- c. To understand the most significant hindering issues and its' impact that diminish the satisfaction and trust of customers in 3PL market in Sri Lanka.
- d. To identify the future challengers face by 3PL market in Sri Lanka.

2. LITERATURE REVIEW

2.1. Customer Satisfaction

Customer satisfaction is defined as customer's

overall or global judgment regarding the extent to which product or service performance matches expectations (Stank et al. 1999; Anderson and Sullivan, 1993). Customer satisfaction should be develop and maintain because customer satisfaction helps to reduce perceived risk, reduce transactions costs, increase customer loyalty and customer retention and thus impact on organizational performance (Bejou et al. 1996).

A global logistics study conducted by CGEY (2003), found that customers are satisfy with their 3PL providers and responded positively when questioned as to their intended use of 3PLs over the next 3 to 5 years(Langley, 2003). Chinese customers also showed high level of satisfaction on their logistics outsourced services (Huang, 2003). In a survey conducted in the Singaporean logistics industry found that over three-quarters (76.3%), of the users indicated that their firm's commitment to the contract services concept was moderate or extensive, while the remaining users indicated that their firms' commitment was limited or very limited. (Bhatnagar et.al.1999).

According to Gattorna, Ogulin, Selen (2004), customer satisfaction with LSPs is statistically significantly influenced by; having a signed contract with the LSP (negatively impacted on customer satisfaction), concerns of customer quality provided by the LSP, and uncertainty about cultural fit of the organization with the LSP. Further according to their findings the most important explanatory variables were obstacles rated as important in implementing LSP services, such as coordination and integration between the company and the LSP, and LSP having insufficient understanding

about the company's operations. Both factors rated negatively in terms of customer satisfaction.

2.2. Trust

"Trust is a set of specific beliefs dealing mainly with the integrity (Trustee honesty and promise keeping), benevolence (trustee caring and motivation to act in the truster's interest), competence (trustee's ability to do what the truster needs) and predictability (trustee's behavioral consistency) of a particular vendor" (Gefen et al. (1999, 2003)). According to Chenet et al. (2000), trust can be developed by having a good internal service quality within organizations and it plays a key role within service provision and is considered important in building relationships. Trust is considered to be of significant importance, not only for building relationships but also to maintain the relationships (Lagace 1991, Morgan and Hunt 1994, Oakes 1990). Termination of relationships is a loss for both parties. Hence, organizations purposely give attention and invest resources in building trust Ghijssen, Semeijn, and Wang, (2009).

2.3. Hindering Issues

The design and implementation of 3PL relations appears to be problematic. Often-cited difficulties include lack of understanding of client's supply chain needs (lack of coordination), lack of adequate expertise in specific products and markets, unrealistic customer expectations (lack of cooperation), inadequate description of services and service levels (lack of coordination), lack of logistics cost awareness by the client (cost) and lack of

3PL innovation (Ackerman, 1996; Ellram and Cooper, 1990; Wilding and Juriado, 2004).

The most often-cited problems are associated with 3PL partnerships are loss of control over the logistics function and loss of in-house capability and customer contact (Ellram and Cooper, 1990). Lack of responsiveness to customer needs is also cited as a problem of outsourcing (van, and Van, 1996). Further, many authors cite problems with respect to service performance, disruption to inbound flows, inadequate provider expertise, inadequate employee quality, sustained time and effort spent on logistics, loss of customer feedback and inability of 3PL providers to deal with special product needs and emergency circumstances (Ellram and Cooper, 1990; Gibson and Cook, 2001; Sink and Langley, 1997; Svensson, 2001; Van L., et al., 2000). Despite gaining access to logistics information systems (Rao et al., 1993), shippers appear to be dissatisfied with service provider's IT capabilities and prefer to rely on in-house systems instead (Van L., et al., 2000).

2.4. Future Challengers

Gupta, Singh and Suri, (2015) identified challenges faced by 3PL market in India as; Non industry status, The infrastructural bottlenecks, Behavioral complexities, Poor quality of logistics operations, Inefficient inspection Strategies, Increasing globalization, Low rate of technology adoption, and Skill Shortages. Zhang (2006) identified Poor infrastructure, Regulation issues and Finding qualified staff are as challenges in 3PL market in China. Further, Langley et. al. (2015), in the 19th annual third-party logistics study identified handling no. of order channels multiplied by the

number of delivery options due to online sales, handling overstocks due to returned goods in online sales, minimizing lead time between deliveries, adoption of new technology are as future challenges in 3PL market.

3. METHODOLOGY

The population of the study is considered as organizations those who are taking 3PL services in Sri Lanka. Sampling unit was taken as the respective managers of 3PL customer organizations. In order to select the respondents of Customers, Snowball sampling technique was used in this research study. In snowball sampling, 3PL companies were asked to identify their customers belong to the target population of interest. Fifty customers were taken as the sample since, similar studies has used somewhat similar sample size in their studies. For an example; Ghijsen, Semeijn, and Wang, (2009) has used 76 valid questionnaires for their study. For the purpose of measuring satisfaction level, trust level, and to identifying hindering factors affecting the growth of 3PL market in Sri Lanka (In collecting quantitative primary data.), a standard questionnaire was used as the instrument. Before collecting data from the sample, a pre test was conducted using 10 respondents. This pre test was developed to discover any possible weaknesses in the questionnaire. Consequently, in the final questionnaire, the researcher tried to eliminate the drawbacks identified in the pretest. The researcher conducted face to face interviews for the purpose of collecting qualitative primary data. Qualitative data was noted down and later the common wordings were listed by the

researcher to interpret the explanations given by the respondents. In order to measure satisfaction, and trust measurements used by Ghijsen, Semeijn and Wang (2009) were used in this research. Lack of coordination was measured according to Gattorna, Ogulin and Selen (2004), Lack of cooperation was measured according to Lau and Zhang (2006), Cost of outsourcing was measured according to Jennings (2002), Inadequate capabilities of 3PL companies was measured according to Lau & Zhang (2006) Loss of control was measured according to Blumberg (1998), Lonsdale and Cox (2000), Embleton and Wright (1998) and Beaumont and Sohal (2004). All the above dimensions of the study were measured in a 5-point Likert scale (1=strongly agree, 5=strongly disagree). As well as an open ended question was included to identify the specific factors hindering the growth of 3PL market in Sri Lankan context and to look into the factors in detail, in-depth interviews were conducted. The challengers identified in the literature review were given to respondents and asked to identify the challenges relevant to the Sri Lankan context and an open ended question was included in the questionnaire to identify any other challengers face by 3PL market in Sri Lanka. In addition to that, in order to explore the factors in detail, in-depth interviews were conducted. Further validity and reliability tests were conducted and removed the items which factor loading values are lower than 0.7.

4. ANALYSIS AND RESULTS

In order to identify the levels of satisfaction, trust and hindering issues, mean values of the

constructs were calculated. Then stepwise liner regression test was conducted to know the impact of hindering factors affecting the growth of 3PL market in Sri Lanka on satisfaction and trust.

According to the Table 4.1, customers are quite happy about their 3PL providers because mean values are above the average. But they are not highly satisfied as well as no high trust and loyalty to the 3PL providers.

Table 4.1 - Mean Values of Satisfaction and Trust

	Satisfaction	Trust
Mean	3.5946	3.390
N	50	50
Std. Deviation	.35233	.5234

Table 4.2 explains the mean values of the hindering issues that affect the growth of 3PL market in Sri Lanka. Mean values of Cost (X3), Lack of control (X5), Lack of coordination (X1), Lack of cooperation (X2) are above the average and therefore, these factors are the main issues respectively that affect the growth of 3PL market in Sri Lanka. The mean value of the inadequate capabilities (X4) is also at an average level.

Table 4.2- Mean values of the hindering issues

	X1	X2	X3	X4	X5
Mean	2.82	2.69	3.07	2.47	2.82
N	50	50	50	50	50
Std. Devi.	.69	.70	1.09	.826	.69

Further, according to the in depth interviews conducted with the customers, High labor turnover and high training cost, Lack of skills and knowledge, Lack of Industrial knowledge, . Labor Unions (Trade union activities) and Political influences respectively were identified as hindering issues that affect the growth of 3PL market in Sri Lanka.

To identify the impact of hindering issues on satisfaction and Trust, step wise Liner regression analysis was conducted.

According to Table 4.3 two models were extracted and the adjusted R square is strong in both models. Further, according to Table 4.4, both models are significant. Therefore, second model was considered as it has the highest adjusted R square.

Table 4.3- Model Summary (Customers satisfaction)

Model	R	R ²	Adjusted R ²	Std. Error
1	.824 ^a	.679	.672	.20
2	.842 ^b	.709	.696	.19

a. Predictors: (Constant), lack. control

b. Predictors: (Constant), lack. Control, lack. cooperation

According to the analysis lack of control and lack of cooperation are the significant factors ($p < 0.05$) that diminish the satisfaction of customers in 3PL market in Sri Lanka. Lack of coordination, cost and inadequate capabilities have been excluded from the model since those variables are not significant ($p > 0.05$).

Table 4.4 Significance of the models- customers satisfaction

Model	df	Mean Square	F	Sig.
1				
Regression	1	4.12	101.31	.000 ^b
Residual	48	.04		
Total	49			
2				
Regression	2	2.15	57.17	.000 ^c
Residual	47	.03		
Total	49			

a. Dependent Variable: satisfaction
b. Predictors: (Constant), lack. Control

Therefore following equation can be derived;

$$\text{Satisfaction} = 5.194 - 0.470 \text{ LC} - 0.101 \text{ LCO}$$

LC= Lack of Control

LCO= Lack of Corporation

According to the above equation of satisfaction, 5.194 is the constant of the equation. While holding lack of cooperation as constant, when lack of control increases by one unit, satisfaction will decrease by 0.47 units on average. As well as, while holding lack of control constant, when lack of cooperation increases by one unit, satisfaction will decrease by 0.101 units on average. Lack of control and lack of corporation are the two main reasons affecting the satisfaction and both factors negatively affect the satisfaction.

Next, in order to identify the impact of hindering issues on customers trust, step wise

regression analysis was conducted.

Table 4.5 Model summary- Trust

Model	R	R ²	Adj.R ²	Std. Error
1	.895 ^a	.802	.797	.23

a. Predictors: (Constant), lack. control

According to Table 4.5, adjusted R square is strong in the extracted model. Further, the model is significant.

According to the analysis, lack of control is the only significant factors ($p < 0.05$) that diminish the trust of customers in 3PL market in Sri Lanka. Lack of coordination, lack of cooperation, cost and inadequate capabilities have been excluded from the model since those factors are not significant ($p > 0.05$).

Therefore following equation can be derived;

$$\text{Trust} = 5.295 - 0.674 \text{ LC}$$

LC= Lack of Control

According to the above equation of trust, 5.295 is the constant of the equation. When, lack of control increases by one unit, trust will be decreased by 0.67 units on average. Lack of control is the main reason affecting the trust and there is a negative impact from lack of control on trust.

According to the qualitative and quantitative data of the study, future challengers of the 3PL market in Sri Lanka was identified as; minimizing lead time between deliveries, adoption of new technology, handling number of order channels multiplied by the number of

delivery options due to online sales according to the customers' point of view.

5. CONCLUSION

5.1 Key Findings

In Sri Lanka, Customers of the 3PL companies are also quite happy about 3PL service providers. But the level of satisfaction, and trust towards the service providers are not considerably high. Further, Cost, lack of Control, Lack of coordination and lack of cooperation respectively were identified as main issues in 3PL market in Sri Lanka according to the customers' point of view. These findings are supported by the findings of previous research studies such as Ackerman, 1996; Ellram and Cooper, 1990; Wilding and Juriado, 2004. In addition to that, inadequate capabilities are also an area has to be considered and to pay attention. Ellram and Cooper, 1990; Gibson and Cook, 2001; Sink and Langley, 1997; Svensson, 2001; van Laarhoven et al., 2000 also identified this as one of the main issues in 3PL industry. High labour turnover and high training cost, Lack of skills and knowledge, Lack of industrial knowledge, Labour unions (Trade union activities) and Political influences also identified as problematic areas according to the qualitative study.

Apart from that, Lack of control and lack of coordination are the significant factors affecting the customer satisfaction. Lack of control is the only significant factor that diminishes the trust of customers in 3PL market in Sri Lanka. Minimize lead time between delivers, adaptation of new technology, handling number of order channels multiplied by the number of delivery options due to online sales are

considered by the customers as the future challenges in 3PL market in Sri Lanka. The similar future challengers were identified in the 19th annual third-party logistics study as well.

5.2 Theoretical Implications

The hindering factors for the growth of 3PL markets are somewhat common across the globe. But, according to the qualitative study of this research, it was able to identify few exceptional factors that hinder the growth of 3PL market in Sri Lanka. High labour turnover and high training cost, lack of skills and knowledge, lack of industrial knowledge, labour unions (Trade union activities) and political influences also identified as main problematic areas in addition to the general hindering issues common to the globe.

5.3 Managerial Implications

The findings of the research are highly important to the decision makers in the industry. Especially providers of 3PL companies can implement necessary changes to provide a better service in order to make customers satisfy. High labour turnover and high training cost, lack of skills and knowledge, lack of industrial knowledge are few issues that providers can manage. According to the discussions had with customers, many trainees are hired for the jobs at less payment by the suppliers and they are not given proper training about the overall business performances of the organization. Therefore, by recruiting permanent employees to the companies and developing them and keeping them in the organization while rotating their jobs will help to enhance the level of business performances as well as to make customers satisfy about their services. Lack of

coordination, lack of cooperation, lack of control can be addressed by employing well trained customer relationship managers both in customer organizations and provider organizations.

5.4 Further Research

The rise of e-commerce has been impressive in the past decade. Its influence as a driving force of change in logistics is undeniable both within companies and within supply chains. It is therefore surprising that little attention has been paid to investigate and assess direct as well as indirect implications of e-commerce for Third party logistics industry. Hence, the influence of e-commerce and related information and communication technology (ICT) developments on third party logistics industry can take other paths that deserve further exploration. In addition to that lack of control was identified as one of the problems in 3PL industry. Therefore, further research could also address how managerial and balance of power issues are handled where both a 3PL and an in-house department manage logistics.

6. REFERENCES

Ackerman, K.B. (1996), Pitfalls in logistics partnerships, *International Journal of Physical Distribution & Logistics Management*, 26-3.

Aldebert, L., Hudziak, J. (2012), Addressing quality problems in 3PL processes, A case study in a 3PL Company, *Master's Thesis in Supply Chain Management*, Chalmers University Of Technology, Sweden.

Anderson, E. and Sullivan, M. (1993), The antecedents and consequences of customer satisfaction for firms, *Management Science*, 12- 2

Beaumont, N. and Sohal, A. (2004), Outsourcing in Australia, *International Journal of Operations & Production Management*, 24- 7

Bejou, D., Wray B., and Ingram T. N. (1996), Determinants of relationship quality: An artificial neural network analysis, *Journal of Business Research*,.36-. 2

Bhatnagar, R., Sohal, A.S., & Millen, R. (1999), Third Party Logistics Service: a Singapore Perspective, *International Journal of Physical Distribution & Logistics Management*, 29- 9

Blumberg, D.F. (1998), Strategic assessment of outsourcing and downsizing in the service market, *Managing Service Quality*, 8- 1

Chenet, P., Tynan, C. and Money, A. (2000), The service performance gap: Testing the redeveloped causal mode, *European Journal of Marketing*, .34- 3

CSCMP (2015) Definition of logistics, [Online], <http://www.cscmp.org/> [Accessed :17th November 2015].

Ellram, L.M. and Cooper, M.C. (1990), Supply chain management, partnerships and the shipper-third party relationship, *International Journal of Logistics Management*, 1-. 2

Embleton, P.R. and Wright, P.C. (1998), A

- practical guide to successful outsourcing, *Empowerment in Organizations*, 6- 3
- Gattorna, Ogulin, Selen, (2004), An empirical investigation of 3rd- and 4th-party logistics provider practices in Australia, Proceedings of the ANZAM, 2004
- Gefen, D. and Silver M. (1999), Lessons learned from the successful adoption of an ERP system. *Proceedings of the 5th International Conference of the Decision Sciences Institute*, Athens, Greece
- Gefen, D., Karahanna, E. and Straub D. W. (2003), Trust and TAM in online shopping: An integrated model, *MIS Quarterly*, vol.27, no 1
- Ghijssen, P., Semeijn, J., Wang, A. (2009), 'Modern 3PL Services in China: The Role of Trust', *Journal of International Business and Economy*, vol.10, no.2
- Gibson B.J, Cook R.L, (2001) 'Hiring practices in US third - party logistics firms', *International Journal of Physical Distribution & Logistics Management*, Vol. 31 no. 10.
- Gupta, A., Singh, R.K., Suri, P.K. (2015), 'Study of Best Practices and Challenges for Logistics Providers in India', *International Conference of Advance Research and Innovation (ICARI-2015)* 397 ICARI HKTDC Research (Hong Kong Research Trade Development Centre), (2015), "Sri Lanka: An Emerging Logistics Hub in South Asia".
- Huang, D. (2003), Third-Party Logistics in China: Still a Tough Market, <http://www.mercemc.com/defaultFlash.asp?section=Perspectives>, [Accessed:10th November 2015].
- Jennings, D. (2002), Strategic sourcing: benefits, problems and a contextual model, *Management Decision*, 40- 1
- Lagace, R. R. (1991), An exploratory study of reciprocal trust between sales managers and salespersons, *Journal of Personal Selling and Sales Management*, 11- 2
- Langley, J. and Capgemmini, (2012), Third-Party Logistics-Results and Findings, 16th Annual Study.
- Langley, J. and Capgemmini, (2003), Third Party Logistics – Results and Findings of the 2003, 8thAnnual Study.
- Langley, J. and Capgemmini, (2010), Third-Party Logistics- Results and findings, 15th Annual Study.
- Langley, J. and Capgemmini, (2015), Third-Party Logistics- Results and findings, 19th Annual Study.
- Lau, K. H. and Zhang, J. (2006), Drivers and obstacles of outsourcing practices in China, *International Journal of Physical Distribution and Logistics*, 36,-10
- Lonsdale, C. and Cox, A. (2000), The historical development of outsourcing: the latest fad?

- Industrial Management & Data Systems*, 100, - 9
- Manzini, A. R., Pareschi & Persona, A. (2007), Logistics outsourcing: an examination of third-party providers, *International Journal of Logistics Systems and Management*, 3-2
- Morgan, R. and Hunt S. (1994), The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58- 3
- Oakes, G. (1990), The sales process and the paradoxes of trust, *Journal of Business Ethics*, 9, - 8
- Rao, K., Young, R.R. and Novick, J.A. (1993), Third-party services in the logistics of global firms, *Logistics and Transportation Review*, 29- 4.
- Svensson , G, (2001), The Impact of Outsourcing on Inbound Logistics Flows, *The International Journal of Logistics Management*, 12 - 1.
- Sink, H.I., Langley, C.J. and Gibson, B.J. (1996), Buyer observations of the US third-party logistics market, *International Journal of Physical Distribution & Logistics Management*, 30- 5
- Sink, H. L. and Langley, C. J., (1997), A Managerial Framework for the Acquisition of Third-Party Logistics Services. *Journal of Business Logistics*, 18,
- Stank, T. P., Goldsby T.J., and Vickery S.K. (1999), Effect of service supplier performance on satisfaction and loyalty of store managers in the fast food industry, *Journal of Operations Management*, 17-2.
- Van, D.D.A. and Ploos van, A.M.J. (1996), Outsourcing logistics management activities, *International Journal of Logistics Management*, 7- 2
- Van Laarhoven, P., Berglund, M. and Peters, M. (2000), Third party logistics in Europe – five years later, *International Journal of Physical Distribution & Logistics Management*, 30- 5
- Wilding, R. and Juriado, R. (2004), Customer perceptions on logistics outsourcing in the European consumer goods industry, *International Journal of Physical Distribution & Logistics Management*, 34- 8
- Zhang, J, Lau, K.H, (2006), Drivers and obstacles of outsourcing practices in China, *International Journal of Physical Distribution & Logistics Management*, 36 -10.