

RESEARCH PROPOSAL

Name of the Applicant : **K. Saravanan**

Program : **Ph.D. in Management**

Department : **Business Administration,
Kalasalingam Business School**



Kalasalingam Academy of Research and Education
ANAND NAGAR, KRISHNANKOIL-626 126

Phone No.04563-289042

Fax No.04563-289322

Website: www.kalasalingam.ac.in

**MEASUREMENT OF SERVICE QUALITY OF REVERSE LOGISTICS AND
ITS IMPACT ON CUSTOMER SATISFACTION AND LOYALTY
IN PHARMACEUTICAL SUPPLY CHAINS
WITH REFERENCE TO TAMIL NADU**

Introduction:

Indian Logistics Industry is largely unorganised and fragmented. It is playing vital role in facilitating trade and thereby contributing to the growth of Indian Economy. Due to improved infrastructure, channel alliances, urbanisation, adoption of technology, increased customer preferences, use of technology for fast delivery are the factors leading to the growth of Logistics industry in India. This industry like a lifeline connects various markets, suppliers across the country as well as across nations.

Returns are the part of business. Reverse Logistics can add great value to the company by reducing wastages and continuing profits from existing products. In Reverse Logistics the merchandise return back to the manufacturer from the retailer. Consumers' expectations are free return shipping and easy return makes impact on decisions regarding future sales. Reverse logistics is needed almost most for every sector namely FMCG, agricultural, automobile, pharmaceutical and others. In organised retail stores maximum space is occupied by unsold off-seasonal goods where they want to fill in fresh stocks. In order to overcome losses arising out of such unsold goods, the retailers require reverse logistics.

Reverse Logistics is required to decrease the use of raw materials, reduction of disposal costs, adding value to end- of –use products, environmentally responsible behaviour, and improved customer relations, as a legal obligation and due to increased social awareness. However there are challenges in reverse logistics such as high reverse logistics cost, inability to understand the rationale of returns, poor visibility into products received and inadequate labour resources. This research focuses on measurement of service quality of reverse logistics and its impact on customer satisfaction and customer loyalty.

Problem Statement

Reverse logistics is unpredictable and complicates warehousing by making standard handling processes difficult to implement which in turn raise the cost of processing. The cost involved is not being fixed with one cost centre but spreads across entire supply chain. It offers better margin compared to freight forwarding. Major e-commerce companies like Amazon and Flipkart find it very difficult and prefer only organised supply chains. Derek Voigt et al. (2019) found that a detailed measurable metric should be applied in real case of Reverse Logistics. Empirical and quantitative research in this fields based on theories need to be developed in the academic field¹. The literature review reveals that many researches have been made on measuring service quality of logistic services and not on Reverse Logistics. Hence this research aims at measurement of Reverse Logistics Service Quality among manufacturing companies in Tamilnadu.

Review of Literature

Ahmed Gamal Mohamed et al. (2015) found that there is significant impact of reverse logistics on customer satisfaction. Further they recommend that heavy machine sector shall follow Caterpillar's reverse logistics strategy for sustainability and to delight the customers. The companies who want to be environment friendly and apply green practices shall reverse logistics².

Agrawale et al. (2018) reveals that in electronic industry there is short product life cycle due to tremendous changes in technology coupled with huge demand and high e-wastage. The cost of product return is increasing in on line business in India. Due to environmental concern, government policies and corporate social responsibility, more attention is given to reverse logistics recently. The challenges and strategic issues in reverse logistics in countries like India are critical success factors, outsourcing decisions, disposition decisions and forecasting product returns³.

Nima Kazemi et al (2019) Green supply chain can be facilitated by using Closed Loop Supply Chain Management and Reverse Logistics. Many researches have been made in general and they are not industry specific. The Managerial decisions in reverse logistics create impact on the environment which will be a grey area for the researchers⁴.

Taknaz Alsadat Banihashemi et al. (2019) conducted a research to explore the relationship between reverse logistics and sustainable performance. They found that Reverse Logistics has significant influence of sustainable economic and environmental performance⁵.

Maria Varadinov, et al. (2018) states that socioeconomic, clinic-pharmacologic needs and legislative factors influence reverse logistics activities. The financial and economic motives, the quality of life, the patient risks and other specific items greatly influence reverse logistics⁶.

Murat Selim Selvi and Yasemin Kayar (2015) states that reproduction is made by obtaining cheap raw materials. The statement related to storage, damages encountered during shipping, wrong deliveries and incorrect returns, damages encountered during shipping, waste management, and no knowledge of environmental issues, customer returns were used for analysing reverse logistics problems⁷.

Ali, A. H., Zalavadia et al.(2018) reveals that the environmental performance is highly influenced by reverse logistics performance. Recycling efficiency and quality influences economic performance and recycling efficiency positively influence social performance⁸.

Noor Irdiana Binti Ngadiman (2016) found that in food industry customers return products with damage, products recall and poor quality. Implementation of reverse logistics is the benchmark in food and beverage industries. The customer returns the products because of several reasons such as end of life, expired, product damage, products recall, poor quality and non halal products. At the early stage, the organizations must introduce and give awareness to the employees. Besides that, with the clear picture of implementation reverse logistics practices, the organizations must provide the guideline as standard procedure to be followed and fulfill by their employees and customers. In addition, the agreement and regulations by government also influence the success of reverse logistics practices⁹.

Vlachos, I (2014) conducted a study to examine the reverse logistics factors and their impact on firm performance. Three streams of factors were considered namely Resource Based factors; strategy, operations management and customer loyalty, Relational Theory includes: supply chain efficiency collaboration for supply chain and Institutional Theory includes: government support and cultural alignment. For measuring customer satisfaction 5 measures namely profitability, cost, innovativeness, perceived competitive advantage and perceived customer satisfaction were used. It is found that there is significant relationship among the above factors. Joint venture and collaboration can bring flexibility and exploiting capacities¹⁰.

Zhang Yu (2018) investigated the relationship between reverse logistics operation, environmental performance, and competitive advantage, financial and operational performance of pharmaceutical firms in India. It is found that all endogenous variables except competitive advantage are positively and significantly correlated with reverse logistics operations. Adoption of reverse logistics, firms may increase their overall performance by increasing the efficiency of manufacturing processes due to elimination of waste and reduce the supply chain cost¹¹.

Emy Ezura A. Jalil (2019) explored the relationship between customer satisfaction and reverse logistics practices in Ecommerce. Reverse logistics play a major role in increasing the confidence of the on line shoppers and customer satisfaction. The

situational factors such as advertisement and accessibility were related with customer satisfaction for this purpose. Accessibility is the most influential factor for customer satisfaction compared to advertisement. Further research need to be conducted for improvement¹².

From the reviews it is found that there are many researched carried out on logistics service quality but there is a gap on measurement of reverse logistics service quality. Reverse logistics service quality need to be studied in relation with customer satisfaction and their loyalty.

Research Objectives

1. To understand the reverse logistics practices in manufacturing industries in Tamilnadu.
2. To measure the effectiveness of service quality of reverse logistics practices.
3. To measure customer satisfaction towards reverse logistics practices.
4. To find out the relationship between Reverse Logistics service quality and Customer Satisfaction.
5. To find out the relationship between Reverse Logistics service quality and Customer Loyalty.
6. To find out the suitability of the conceptual frame work framed on Reverse logistics service quality, Customer satisfaction and Customer Loyalty.

Research Methodology

Descriptive research will be conducted to describe the current state of affairs in manufacturing industries related to reverse logistics practices and its influences on customer. Primary data will be collected from the medical retail outlets in Tamilnadu. Secondary sources like websites, Journals and text books will be referred to gather additional research inputs. A sample of 400 will be chosen using Multi- Stage sampling to collect primary data with the help of a structured undisguised questionnaire.

Analytical Tools

The primary data will be analysed using the software packages like SPSS and AMOS. Reliability and validity tests will be conducted to check the efficiency of the research instruments. Non- parametric analysis like chi square, Kalmogrov-Smirnov tests will be used to find out the association and normality. T test, ANOVA, Correlation and Regression will be used to test the relationship among the research frame work. Confirmatory Factor Analysis and Structural Equation Modeling will be utilized to conform the factor structure and to find out the model fit.

Conclusion

The research will focus on implementing the appropriate strategies to increase quality of revers logistics services and improving customer satisfaction and loyalty.

Reference:

1. Derek Voigt, Nelson Casarotto Filho, Mayara Atherino Macedo , Thais Guerra Braga and Rodrigo Ulisses Garbin da Rocha, (2019) Performance Evaluation of Reverse Logistics: Opportunities for Future Research”, Sustainability 2019, 11, 5291; doi:10.3390/su11195291
2. Ahmed Gamal Mohamed et al.(2015), “Impact of Reverse Logistics Applications on Customer Satisfaction” Proceedings of the 2015 International Conference on Operations Excellence and Service Engineering Orlando, Florida, USA, September 10-11, 2015.
3. Agrawal, Saurabh; Singh, Rajesh K.; Murtaza, Qasim (2018) : Reverse supply chain issues in Indian electronics industry: A case study, Journal of Remanufacturing, ISSN 2210-4690, Springer, Heidelberg, Vol. 8, Iss. 3, pp. 115-129, <http://dx.doi.org/10.1007/s13243-018-0049-7>
4. Nima Kazemi, Nikunja Mohan Modak & Kannan Govindan (2019) A review of reverse logistics and closed loop supply chain management studies published in IJPR: a bibliometric and content analysis, International Journal of Production Research, 57:15-16, 4937-4960, DOI: 10.1080/00207543.2018.1471244

5. Taknaz Alsadat Banihashemi, Jiangang Fei, Peggy Shu-Ling Chen (2019), "Exploring the relationship between reverse logistics and sustainability performance: A literature review" *Modern Supply Chain Research and Applications*.
6. Maria Varadinov, Joao Miranda, and Cristina Dias (2018), "A study on reverse logistics for medicines supply in hospital pharmacies" *AIP Conference Proceedings* 2040, 110010 (2018); <https://doi.org/10.1063/1.5079174>.
7. Murat Selim Selvi and Yasemin Kayar (2015), "Problems encountered in the process of Reverse Logistics and their solutions" *International Journal of Current Research* Vol. 7, Issue, 10, pp.22046-22053.
8. Ali, A. H., Zalavadia, S., Barakat, M. R., & Eid, A. (2018). The role of sustainability in reverse logistics for returns and recycling" *Archives of Business Research*, 6(7). <https://doi.org/10.14738/abr.67.4645>
9. Noor Irdiana Binti Ngadiman, Mehdi Moeinaddini, Jamilahtun Binti Ghazali, Nuur Fathin Binti Roslan(2016), "Reverse Logistics in Food Industries:A Case Study in Malaysia" *Int. J Sup. Chain. Mgt* Vol. 5, No. 3.
10. Vlachos, I (2014) A Conceptual Framework of Reverse Logistics Impact on Firm Performance. In: British Academy of Management (BAM) Conference, 09-11 Sep 2014, Belfast. <https://eprints.whiterose.ac.uk/>.
11. Zhang Yu, Ma Tianshan, Muhammad Faheem Ud Din (2018) The Impact of Reverse Logistics on Operational Performance. *American Journal of Mechanical and Industrial Engineering*. Vol. 3, No. 5, 2018, pp. 99-104. doi: 10.11648/j.ajmie.20180305.14.
12. Emy Ezura A. Jalil (2019) "Customer Satisfaction and Reverse Logistics in Ecommerce: the case of klang valley", 9th International Conference on Operations and Supply Chain Management, Vietnam.