

# A Conceptual Paper on Reverse Logistics

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**Abstract:- The growing competitions due to globalization and rapid technological progress have led organizations to strive to improve the efficiency of their supply chain. Improving the efficiency of reverse logistics processes, such as the recovery of returned products or the elimination of products at the end of their useful life, is a way for companies to maintain and increase their competitiveness and market share. The volume and monetary value of products moving in the opposite direction in the supply chain have increased and continue to increase, particularly as environmental, legal and customer service requirements increase in the market. It has been reported that the value of returned products in the commercial sector has exceeded \$ 100 billion per year. This process of returning products through the supply chain is the process of reverse logistics and can encompass many different logistics activities. This paper conceptualizes reverse logistics and provides in detail the advantages and disadvantages of the same.**

## I. INTRODUCTION

Reverse logistics is defined as “The process of planning, implementing, and controlling flows of raw materials, in-process inventory, and finished goods, from a manufacturing, distribution or use point to a point of recovery or point of proper disposal”. In other words, Reverse logistics deals with the processes associated with the flows of products, components and materials, from the users / owners to the re-users.

A company that can adequately develop and monitor the processes of reverse logistics in product returns and reverse logistics can be mutually beneficial for the company and the customers. Increasing the understanding of factors related to reverse logistics and product performance can help identify areas the management and manufacturing of the supply chain where changes in the reverse logistics process may be required.

Activities under this subject are determination of disposal, recycling, reconditioning, disposal, resale, storage or transportation; depending on the type of product or material returned. Some reverse logistics activities have a counterpart in the forward distribution channel, but the difference lies mainly in the divestment activities and the final action on the product. These activities are a key factor in why the management within a company needs to focus the necessary resources in the reverse logistics process and monitor and properly measure their reverse logistics processes. Possible penalties for not responding adequately to the company's reverse logistics needs could be higher transportation costs, higher storage and storage costs, higher repair costs for returned products and a second loss of value. defective products or process. The objective of this dissertation is to

develop a solid understanding of the role and the key advantages that influence the process of reverse logistics in an organization in the context of the supply chain.

## II. REVIEW OF LITERATURE

In the article “**Reverse logistics processes in plastic supply chains**” by **Magdalena** says that plastic play a crucial role in the development of the economy and helps in the sustainable growth as well. Plastics are used in various ways, in vehicle it is used to lighten the weight of the car to increase fuel usage, in manufacturing company it is used for packaging of the merchandise, in food industry it is used to protect food from getting exploited by keeping it in plastic. Whatever we use need plastic but at the same time it is a kind of material which is non-recyclable in nature. It also says that plastic industry needs to use reverse logistic to allocated and channelize used plastic in a productive manner. It can be done by recovering and treating plastic waste under well planned environmental standards and by taking comprehensive approach into consideration for usage of the plastic.

In the article “**The components of reverse logistics management**” by **Punyapon** focuses on components of reverse logistics. To find out the appropriate solution, researcher used two methods such as qualitative and focus group method where she had interviewed 21 and 15 people from logistic and supply chain industries. After a proper research she found out that First is Return Policy and Procedure (RPP) which was the guidelines for operation relating to product return from the wholesaler or retailer back to the starting point which is manufacturing site. Second is Remanufacturing or Refurbishment (ROR) which was a process from the beginning that was component sorting for inspection to know the value which are send back for the remanufacturing process for recycle and reuse.

In the article “**Reverse logistic: Overview and challenges for supply chain management**” by **Sergio Rubio and Beatriz Jimenez** says that Reverse logistic is a main part of an industry and now all the companies and professionals are considering the recovery of EoU products as a business opportunity. Most challenging part is to design the reverse logistic network. Which includes collection, inspection and recovery process. Now we have good amount of data to work on these line because there are many a professionals and various organisation started showing their interest towards RL activities.

In the article “**Investigation of barriers and factors affecting the reverse logistics of waste management practise: A case study in Thailand**” by **Sumalee Pumpinyo and Vilas** shows that in Thailand reverse logistic is mainly performed by the informal sector and those are classified into downstream, middle stream and upstream. If

waste can be separated from the sources can actually reduce the cost, where else end users want to continue recycling waste, waste cleanliness and correct sorting in the production house. It also says that non-franchise SCs in Thailand should improve their worker skills, technology and economies of scale through proper training and development of information system. Development in this sector can sustain recycling and training programs for RL specialist and supportive initiatives from the government to improve recycling practices in the nation.

In article “**Reverse logistic and challenges: supply chain management of automobile industry**” by **Syed Abdul and Yu Zhang** says that reverse logistic can be defined as the process of transferring the products from their final destination for making an appropriate disposal. With time, the importance of RL is growing in the automobile sector. Now, it is very important for the organisation to focus on RL in order to utilise the resources properly. This study focuses on various problems faced by the automobile industry in implementing the RL. These challenges namely are less willingness to pay, competition, lack of support from the retailers, negative perception of the consumer and distributors.

In the article “**The importance of reverse logistics**” by **Guldem Elmas and Fevzi Erdogmus** shows reverse logistics is in demand now. Many a firm has started investing into reverse logistics in order to reduce the cost, increase revenues and increase customer services at the same time. To implement the RL activities properly it is important to design the RL network properly. At times, RL activities become a survival kit when firm’s name and goodwill are on the stake. In today’s economy it is important to respond to the internal and external changes and with that it is equally important to use fair approach in manufacturing product and following the environmental standards properly.

### III. ADVANTAGES AND DISADVANTAGES

Since Reverse Logistics is a relatively new research and empirical area, the reader has to understand a lot of terms before getting into this topic. The advantages of Reverse logistics are described below.

1. RL enables a supplier to get items from the purchaser or send unsold stock back to the producer to be dismantled, arranged, reassembled or reused; limiting general expenses for an association.
2. Reverse logistics can be profitable in expanding item lifecycles, inventory network multifaceted nature, viable practices and buyer inclinations; which must be enhanced to keep up profitability and development.
3. Gains can incorporate; expanding speed of manufacturing, reducing costs (transportation, managerial, and post-retail upkeep, repair and substitution), holding clients by enhancing administration objectives and meeting manageability objectives.

4. More value can be gained from utilized/returned products as opposed to labor, time and expenses of crude materials associated with the first inventory network.
5. Enhanced consumer loyalty and satisfaction by giving careful consideration to defective merchandise, and repairs of merchandise. Reverse co-ordinations can incorporate picking up criticism to make changes and to enhance the comprehension of genuine explanations behind item returns.
6. Reverse logistics can be considered as a technique. An effective technique must contain the procedures to guarantee assurance of information. Information ruptures may not seem as if they have a specific connection to manageability, however an organization's maintainability is estimated by its capacity to keep up cheerful clients while lessening sway on the Earth. At the point when an information break happens, it can possibly obliterate an organization's client base. This decreases the immediate dangers to the business.
7. In the first place, organizations can recover damaged gear and parts which are either rescued or revamped and accordingly recovers an incentive out of the faulty parts. Besides, the bundling and deficient materials are gathered and reused along these lines producing scrap an incentive back for the organization. Thirdly unsold and outdated hardware are gathered again from the purpose of offer which empowers the merchants and stockists to purchase unquestionably stocks from the organization realizing that he can simply return unused stock and not remain to lose in the deal. Merchants will probably be available to stocking all quick moving and additionally moderate moving stocks.
8. According to the consumer and society, the company stands to pick up a decent standing and notoriety of being a capable organization that deals with the e-waste waste produced and in this manner emerges for its corporate administration arrangements.
9. Reverse logistics has been effectively adjusted as the promoting system. Restored PCs are sold at bring down costs by every driving brand and the interest for such workstations is by all accounts developing. The extra parts utilized by the PC producers to benefit the workstations and PCs on guarantee or deal incorporate renovated parts. Numerous electronic and purchaser solid assembling organizations offer to purchase back or trade offer for the old hardware rather than the client buying a fresh out of the box new item. In consumer electronics and white goods, the trade offers are a major hit amid markdown deal seasons.

If Reverse Logistics has advantages, it certainly has some disadvantages and effects to the company. They are described below.

#### A. *Lack of trained personnel*

This is the most concerning issue that one may confront while outsourcing the logistics. With the absence of prepared experts, no specialist organization will fulfil the needs with their administrations. Just trained professionals and prepared chiefs will have the capacity to furnish with the most recent and front line innovation.

#### B. *Lack of inventory information*

Because of the absence of inventory data, business may confront an absence of key performance indicators that can cost the business a lot. Since execution pointers and cautions are the most vital piece of any store network administration framework.

#### C. *Lack of Clear Strategy*

Most of the 3PL provider who are new in the industry and are not having the services of well established professionals might not be able to provide you with a satisfactory strategic planning, which may actually increase the challenges of outsourcing.

#### D. *Improper Costing*

It may influence the entire procedure of outsourcing to fall flat, if the supplier can't give appropriate costing, since a definitive objective of outsourcing is diminishing the cost. Along these lines, one would need to watch out for the general costing of the procedures.

#### E. *Lack of Customer Support*

It has been seen that since a 3PL supplier is working with heaps of different organizations also. In this way, they can't offer their 100% focus to a specific client, which can be extremely disappointing for the organizations.

#### F. *Improper Project Management*

It has been seen in different outsourcing setups that the absence of proper project administration, baseless timetables, and undeliverable guarantees result in a failure of contract.

### IV. CONCLUSION

To conclude, this conceptual research paper about reverse logistics covered the meaning and a deep insight into its pros and cons. One narrative that we were successful to establish was reverse logistics should no longer be seen simply as a cost centre for retailers. Conversely, a well-planned reverse logistics strategy can be a crucial factor in improving a company's competitive advantage and creating tangible and

intangible market opportunities. With clearly defined processes and measures, retailers can generate efficiencies and gather valuable information that will make reverse logistics a profitable investment. In the retail industry, reverse logistics plays a key role in consumer returns and the way retailers handle returns effectively. While this may seem like a simple process of transferring goods from customers to return centre, retailers face many operational challenges. For example, hazardous waste and associated disposal methods impose strict restrictions on the management of reverse logistics

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