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Supply Chain For Reverse Logistics Issues And Opportunities

Background

Reverse logistics or returns supply chain refers to the chain of movement of products from customers/end-users back to the OEM or manufacturer. Product returns could be on account of several reasons such as: no questions asked returns in case of e-commerce companies, return due to delivery of wrong products, return of defective products by end-users or return of used products under exchange schemes operated by companies such as TTK Prestige.

Reverse supply chains for e-commerce companies are a significant driver of their business hence these tend to be well defined with strong control over the returns process. In contrast, for other fast moving consumer, electrical and electronic goods companies, returns primarily relate to products with performance defects being returned by end-users. For such companies, the emphasis often is on defining direct supply chains for movement of goods from the factory location to dealers/retailers and customers. Designing and developing the supply chain for returns and rejections is often an afterthought when setting up a new business or even for established businesses.

Lack of well-defined returns supply chain can lead to several issues impacting all aspects of business such as profitability, inventory management, working capital and reconciliations with suppliers in case of outsourced manufacturing. Returns and defective products have characteristics that increase complexity for companies and logistics teams such as low value, small shipment sizes, per unit freight costs as high as three to six times the primary freight cost, lack of specific storage space and absence of incentive for dealers and retailers or even business unit heads in managing returns. This often results in product returns being treated akin to scrap by participants in the returns supply chain. Interestingly a few companies such as Surpluss and GreenDust had started businesses to procure returned and defective products and re-sale them in the market place after re-furbishment. However, some of these companies have shut down indicating the significant challenges in managing reverse logistics even for specialised companies.

Returned products have specific characteristics such as low volume and values, absence of incentives to supply chain participants for handling and lower management focus. This increases risk of inefficiencies in the returns supply chain.

Industry Specific Features - Reverse Logistics

The returns supply chain has distinct characteristics that vary significantly depending on the nature of the industry. Some of the key industries where returns are significant are:

Sales return and warranty ratios by industry

Industry Type	Sales Return (as % of Sales)	Warranty (as % of Sales)	Warranty Period
FMCG	0.1 - 0.5	NA	1 month to 1 year
FMEG & Home Appliances	0.2 - 4.3	0.3 - 2.2	Lighting products- 6 to 12 months Fans- 2 to 5 years Air coolers- 1 to 3 years Kitchen appliances- 3 to 5 years
Consumer Lifestyle	0.1 - 1.0	0.0 - 0.4	Watches & jewellery - 1 to 2 years Mattresses- 1 to 10 years Luggage-1 to 3 years
Furniture	0.2 - 1.4	0.0 - 0.3	1 to 2 years
Stationery	0.4 - 2.1	NA	NA
Clothing	0.5 - 7.1	NA	NA

Source: Publicly available information of minimum 2 companies in each sector for 2021 and 2022

NA = Information not available

As can be seen from the above table, warranty periods of consumer/electrical products range from 1 year to as high as 10 years and sales returns range from a low of 0.1% of sales to as high as 7.1% of sales. Further, a glance at the financial statements of consumer companies indicates that on average, outward freight costs are generally in the range of 1% to 6% of sales.

In case of e-commerce companies, returns are a primary part of the business with returns including 'no questions asked' returns being as high as 30% of sales. Given such high % of returns, the reverse supply chain by default is well defined and controlled.

Our experience indicates that for consumer goods companies, the per unit freight cost for returns is generally three to six times the cost for primary transport. Further, inventory of returned products tends to accumulate at all points in the supply chain from retailers, dealers, warehouses and factory locations. Returned goods are also treated similar to scrap by participants in the supply chain resulting in further damage to what would otherwise have been re-sale or re-usable goods.

The Returns Process

The returns process starts with customers registering complaint for defect in product performance by:

- Calling customer care number of the manufacturer;
- Online by uploading product identification number and images of defective products on company website;
- Return at the retail store where product was purchased or at other stores/dealers.

Local service centres are responsible for repairs of the product in case of fixable complaints. Defects where service centres are unable to resolve the product defect, leads to the initiation of returns process with dealers/retailers providing a credit note or replacement product to the customer. Activities in a typical returns supply chain are depicted on the next page:

Representation of a typical returns process

Customer

- Initiates complaint for defect through website, customer care or retail point.
- Defective goods under warranty are returned if service team is unable to resolve defect.

Retailer/Service centre

- Repairs products for minor defects
- Inspects sale invoice to determine warranty.
- Checks physical condition of product and company code.
- Issues replacement and claims credit from company.

Dealer/Distributor

- Collects returns from individual retailers under geographical area.
- Claims credit from company.
- Stores invevtory and arranges for shioment.

Warehouse/factory

- Primary point for decision to scrap, repair or salvage of returns.
- Sorting and inventory management for returns.
- Appointment of transporters, rate contracts.
- Performs reconciliation with dealers/transporters/Vendors.

Vendor (if manufacturing outsourced)

- Arranges for inspection of physical condition.
- Checks warrenty coverage and issues credit to Selling Company.

Returned spare parts pose a bigger challenge given their small values compared to the full product value. Most returned/replaced spares are discarded at the point of return by service centres and dealers unless there is a specific requirement to claim the value of discarded spares from outsourced vendors.

Cost Of Poorly Defined Returns Supply Chain

Poorly defined returns supply chains result in several costs and inefficiencies for companies affecting a wide spectrum of activities and business units. Some of the key costs are as follows:

Inventory blockage

Absence of mechanism for timely movement of returned goods back to factory location leads to inventory pile up at retailers, dealers and warehouses and consequently blockage of working capital.

Re-sale of products in the grey market

Weak controls over monitoring of rejections increases risk of pilferage and resale of full product or parts of the damaged product in the market at steep discounts. This poses reputation risk for brands which need to prevent re-sale of products as well as misuse of labels and logos on returned products.

Damage to returned goods

Retailers and dealers are given credit immediately upon acceptance of return. Thus they have limited incentive in proper handling of rejected goods. There is limited control over handling of rejected goods during storage and transport as these are considered akin to scrap by participants in the supply chain. This increases the risk that rejections that are repairable or re-usable could be further damaged leading to complete loss.

Warehouse space and storage costs

Built up rejection inventory requires earmarked space for storage to avoid mixup with fresh products leading to increased warehousing, handling and storage costs.

Expiry of warranty period (for outsourced products)

Outsourced products are required to be sent back to the OEM within warranty periods agreed. Delay in returns increase risk that while such products that were in warranty at the time of customer returns, slip out of manufacturer warranty prior to their return.

Inefficient use of managerial time

Weakly defined returns supply chains result in managerial time being spent on unproductive activities such as follow-up of accumulated inventory of returns and reconciliations with suppliers/dealers.

Accounting issues

There may be timing differences in return of goods at various points in the supply chain. The returns process results in accounting issues including, timing of recording reversal of sales and cost of goods sold, accounting for freight on returns – inward or outward freight and compliance with GST Act.

Reconciliation issues

Rejected goods that are pending return to the factory or original manufacturers can be a source of issue in reconciliation with dealers and manufacturers. As per terms of supply, payments are often held for goods to be returned under warranty.

Key Decisions For Companies In Defining Returns Supply Chain

Companies need to consider above risks when defining the returns supply chain. Some of the key decisions that companies need to take are:

MIS systems

The primary step that companies need to take is to evaluate the quality of information captured by existing MIS systems. Returns data by dealer, sales person, product, geography, inventory ageing and time period for movement of goods needs to be tracked. Deep data analytics and technologies such as predictive analytics can be used to identify weak links in the returns supply chain.

Repair, re-use or destroy

Companies need to perform a detailed cost-benefit analysis to decide if returned goods can be repaired and re-sold in the market or if the salvaged material can re-used in manufacturing. In case the cost of repair or freight cost is too high and material cannot be re-used then decision would be made to destroy the returned goods.

Define controls over product destruction

A secondary decision is the point of destruction. Most companies prefer to destroy rejections in their factory premises for control purposes and to prevent the risk of re-sale by dealers/other participants in the supply chain. Destruction of returns at dealer or distributor location saves freight cost but reduces entity's control over the products.

Identify cost effective transport mode for return of goods

Transportation for primary shipment is often decided based on rate contracts with freight providers for high frequency routes. This ensure competitive freight rates given high volumes and reliable and timely delivery of inventory given long term contracts and vehicle availability. Given small quantities of product return shipments, courier companies or smaller transporters covering remote geographical areas would need to be identified.

Define frequency (monthly, quarterly) for returns from dealers to warehouse

Depending on the quantum of returns, frequency of return shipments at each point in the supply chain needs to be decided. For example, companies may mandate shipment only once number of rejected units exceeds 10 for large value SKUs and 50 or 100 for smaller ticket SKUs or specify time periods (monthly, quarterly) for return shipments.

Identify separate storage areas and define handling process for rejections

Separate storage areas should be identified in warehouses and at dealer locations for storage of returns. Process of segregating and sorting rejected materials should be well defined to avoid inventory pile up.

Negotiate warranty period for outsourced manufacturing considering return timelines

In case manufacturing is outsourced to third parties, companies need to negotiate warranty periods with end suppliers which consider the duration of returns. If the company offers 12 months' warranty to its customers, it would need to negotiate, say 16 or 18 months' warranty with its outsourced suppliers. Companies need to negotiate the most cost efficient and effective way of dealing with product warranty to be claimed from overseas suppliers. Logistics costs generally prohibit returns back to the manufacturing source. Decisions would include identifying mechanisms and documentary evidences to ensure smooth processing of warranty claims by overseas manufacturers.

Outsourcing returns management and use of technology

New-age logistics companies like WarelQ and ExpressBees specialise in reverse logistics process using data analytics and customised ERP. Companies wanting to focus on core operations can outsource the reverse logistics process to such specialised services providers.

In summary, rejections and returns can be a significant hidden bottleneck for most companies given the unique nature of rejected products. Designing well-defined returns process provides an opportunity to companies to achieve efficient inventory management, lower logistics costs and ensure adequate brand protection.

References:

- Annual reports for FY20-21 and FY21-22 of listed companies in sectors such as Furniture, Stationery, Fast Moving Consumer Goods, Apparel and Lifestyle products.
- Website of companies such as ExpressBees.com and WareiQ.com.
- News articles about reverse logistics companies such as GreenDust and Surpluss.

- A Chartered Accountant and Chartered Financial Analyst with over 20 years of experience in assurance and financial due diligence services. His experience includes several years spent with multinational and Indian accounting firms in the Middle East and India.
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