

Impact of Inventory Management in Paper Industries

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Abstract – The domestic paper industry today urged the government to immediately curb cheaper import from ASEAN countries by imposing 10-15 per cent safeguard duty. The industry also demanded that the government should impose 10 percent special additional customs duty on overseas purchase of paper and paperboard. At present, imports of paper and paperboard attract 10 percent customs duty. It has been brought to zero level to ASEAN countries under the free trade agreement and recently duty-free shipments have been permitted from Korea. There is a surge in imports from ASEAN countries, especially from Thailand at zero duty. This is affecting domestic players and we have asked government to impose a safeguard duty of 10-15 percent. Indian paper manufacturing Association (IPMA) and vice chairman of Kolkata based West coast paper mills, said restricting imports are necessary as the domestic paper industry “struggling to sustain because of high cost of raw material, especially of wood.” The production cost is very high in India when compared with other countries because of high cost of wood.

Keywords: - Raw Material, Finished Goods, Market Chain and Supply.

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INTRODUCTION

The effect of inventory management in an organization cannot be underestimated. Its key objective is to minimize cost or maximize profit by having optimal inventory. The level of inventory is influenced by the following factors; stock at hand, lead-time variation, inventory costs and demand information based on forecasts.(Jossop 1986) The above factors are essential in making sound inventory decisions. In the present era the focus on inventory control has grown due to immense progress in information technology integrated within stock management and establishment of long-term supplier relationships. The journals we have gone through focus their attention on at least one country in the five continents. The aim was to ensure we get comprehensive results on the topic. Organizational performance is mainly reflected in the profits made. In most of the journals, gross margin and net operating margin are used to analyse the profits of the organization while inventory turnover is suitable for inventory analysis. A more practical example is the Japanese country, which came up with the total quality management and Ohno's 7 Muda (waste) principles

Inventory is necessary evil that every Organization would have to maintain for various purposes. Optimum inventory Management is the goal of every inventory

planner. Over inventory both cause Financial Impact and health of the business as well as effect business opportunities.

Inventory holding is restores to by Organization as hedge against various external and internal factors, as precaution, as opportunity, as a need and for Speculative purpose.

Why Organization maintain Raw material Inventory most of the Organization have raw material inventory warehouse attached to the production facilities where raw materials. Consumables and packing materials are stored and issue for production on IIT basis. The reason for holding inventories can vary form case to case basis.

1. **Meet variation in production demand:** - Production plan changes in response to the sales, estimates, orders and stoking patterns. According the demand for raw materials supply for production varies with the production plan in terms of Specific SKU as well as batch qualities. Holding inventories at a nearly warehouse helps issue the required quality and item to production just in time.

2. **Cater to cyclical and Seasonal Demand :-** Market demand and supplies are seasonal depending upon various factors like seasons; Festivals etc. and post sales data help Companies to anticipate a large surge of demand in market well in advance. According they stock up raw materials and hold inventories to be able to increase production and rush supplies to the market to meet the increased demand.
3. **Economies of Scale in Procurement: -** Buying raw materials in larger lot and holding inventories is found to be cheaper for the company than buying frequent small lots. In such cases one buys in bulk and holds inventories at the plant warehouse.
4. **The advantage of price Increase and Quality Discount: -** If there is a price increase expected few months down the line due to changes in demand and supply in the National and International market, Impact of Taxes and budget etc. The company's tend to buy raw materials in advance and hold stocks as a hedge against increased cost.
5. Companies resort to buying in bulk and holding raw material inventories to take Advantage of the quantity discounts offered by the supplier. In such cases the saving on account of the discount enjoyed would be substantially higher than that of Inventory carrying cost.
6. **Reduce transit cost and transit times:-** In case of raw materials being imported from a foreign country or from a faraway vendor within the country, one can save a lot in terms of transportation cost by Buying in bulk and transporting as a container load or a full truck load. Part shipment can be costlier. In terms of transit times for full container shipment or a full truck load is direct and faster unlike part shipment load where the freight forwarder waits for other loads to fill the container which can take several weeks. There could be a lot of factors resulting in shipping delays and transportation too, which can hamper the supply chain forcing companies to hold safety stock of raw materials inventories.
7. **Long lead and high demand items need to be hold in inventory: -** Often raw materials supplies from vendors have long lead running into several months. Coupled with this if the particular item is in high demand and short supply one can expect disruption of supplies. In such cases it is safer to hold inventories and have control.

FINISHED GOODS INVENTORY

All manufacturing and marketing companies hold finished goods inventories in various locations and all through FG supply chain while finished goods move through the supply chain from the point of manufacturing unit. It reaches the end customer, depending upon the sales and delivery model, the inventories may be owned and held by the company or by intermediaries associated with the sales channels such as traders, trading partners, stockiest, distributors and dealer, C & F agents etc.

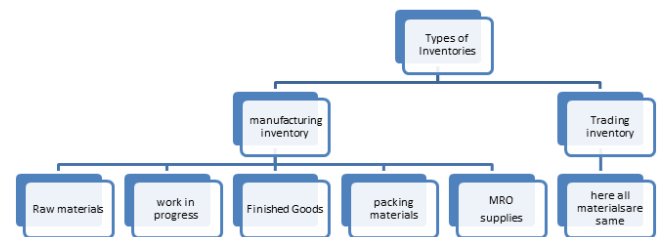
1. **Market and supply chain design:-** organizations carryout detailed analysis of the market both at national as well as international/ global levels and workout the supply chain strategy with the help of SCM strategist as to ideal location for setting up production facilities, the network and number of warehouses. Required to reach products to the market with-in and outside the country as well as the mode of transportation, inventory holding plan, transit times and order management lead times etc. keeping in mind the most important parameter being, to achieve customer satisfaction and demand fulfillment.
2. **Production strategy necessitates inventory holding:-** The blue print of the entire production strategy is dependent upon the marketing strategy. According to organizations produce based on build to stock or build to order strategy in manufactured against specific orders and does not warrant holding of stock other than in transit stocking, build to stock production gets inventories at various central and forwarded location to be able to cater to the market demands.
3. **Market penetration:-** marketing departments of companies frequently run branding and sales promotion campaigns to increase brand awareness and demand upon ready availability of inventory of all products at nearest warehousing location so that product can be made availability at short notice-in terms of number of house bad time at all sales locations throughout the state and city. Any non-availability of stock at the point of sales counter will leads to deep in market demand and sales. Hence holding inventories becomes a necessity.
4. **Market size, location and supply design:-** Supply chain design takes into account the location of market, market size, demand pattern and the transit lead time required to

reach stocks to the market and determine optimum inventory holding locations and network to be able to hold inventories at national, regional and local levels and achieve two major objectives. The first objective would be ensure correct product stock is available to service the market. Secondly stocks are held in places where it is required and avoid unwanted stock build up.

5. **Transportation and physical barriers:-** market location and the physical terrain of the market coupled with the local trucking and transportation network often demand inventory holding at nearest locations. For example hilly region may require longer lead time to service. All kinds of vehicles may not be available and one may have to hire dedicated containerized vehicles of huge capacities. In such cases it will have as inventory holding plan for such markets. Far away market locations means longer bad times and transportation delays. Inventory holding policy will take into account these factors to work out the plan.
6. **Local tax and other government rules:-** In many countries where GST is not implemented regional state tax rules apply and vary from state to state. Accordingly while our state may offer a tax rebate for a particular set of product category, another state may change higher local taxes and lower inter-state taxes. In such cases the demand for product from the neighboring state may increase than from the local state. Accordingly inventory holding would have to be planned to cater to the market fluctuation. While in case of exports from the country of origin into another market situated in another country. Our needs to take into account the rules regarding import and customs duties to decide optimum inventories to be held route or at destination.
7. **Production lead times:-** FG inventory holding becomes necessary in cases where to lead time for production is long. Sudden market demand or opportunities in such cases require. FG inventories to be built up and supplies to be effected.
8. **Speculative gain:-** companies always keep a watch on the economy, annual state budget, financial environment and international environment and are able to for and estimate situations, which can have an impact on their business and their sales. In cases where they are able to estimate and increase in industry prices, taxes or other levies which will result in an overall price increase, they tend to buy and hold huge stocks of raw materials at current

prices. They also hold up finished stock in warehouses in anticipation of a impending sale price increase. All such moves cause companies to hold inventories at various stages.

9. **Avoid certain costs:-** finally organizations hold FG inventories to satisfy customer demand, to reduce sales management and ordering costs, stocks out costs and reduce transportation costs and lead times.



Material Management:-

Material management can be defined as that function of business that is responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling material in an optimum manner so as to provide service to the customer, at a pre-decided level at a minimum cost. It involves estimating the individual requirements of parts, preparing materials budget forecasting the level of inventories, scheduling the orders and monitoring the performance in relation to production and sales. Basically the job of material manager is to provide, to the user departments right material at the right time in right quantity of right quality at right price from the right source. To meet these objectives the activities under taken include selection of sources of supply, finalization of terms of purchase, placement of purchase orders, follow up, maintenance of relation with vendors, approval of payments to vendors, evaluating, rating and developing vendors. The key objectives of material management are:-

- To buy at the lowest price, consistent with desired quality and service.
- To maintain high inventory turnover, by reducing excess storage, carrying costs and inventory losses occurring due to deteriorations, obsolescence and pilferage.
- To maintain continuity of supply, preventing interruption of the flow of materials and service to users.
- To maintain the specified material quality level and consistency of quality this permits efficient and effective operation.

- To develop reliable alternate source of supply to promote a competitive atmosphere in performance and pricing.
- To minimize the overall cost of acquisition by improving the efficiency of operations and procedures.
- To hire, motivate, develop and train personnel and to provide a reservoir of talent.
- To develop and maintain good supplier relationships in order to create a supplier attitude and desire furnish the organization with new ideas, products and better prices and service.
- To achieve a high degree of cooperation and coordination with user departments.
- To maintain good records and controls that provides an audit trail and ensures efficiency and honesty.
- To participate in make or buy decision.

CONCLUSION

Inventory management is essential to every company, having inventories. Companies need to have stock, but in such amount to avoid out-of-stock and overstock situations. Inventory management can improve company's inventory control existing situation and decrease costs of the company. Agent system, in turn, proposes the automation of this process, it can support several forecasting methods and it reacts to changes in the environment. In this paper, the existing inventory management situation is analysed, twofold improvement is proposed – to use inventory management with the aim to decrease company's inventory level and holding costs by avoiding overstocks and to apply the agent system in order to automate the inventory management processes and to timely react to demand deviations from the forecasted demand by making corrections in replenishment policies.

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