Common Inventory Related Problems. A Study on Manufacturing

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Abstract: **The objective of this paper is to explore and reveal the most common inventory issues faced by industries particularly the manufacturing sector. Dealing with anticipated stock outs, surplus of stocks, abnormal stocks, inaccurate inventory data, replenishment issues, supplier's commitment and poor forecasting.This paperadds value to the industrialist and practioners on the most remarkable issues pertaining to managing inventory especially addressing and dealing with the most common issues in the multinational company's warehouse.**

Keywords: Inventory management, Manufacturing, Stocks

I. INTRODUCTION

The lifeblood of business is getting the products to customers on time and in good condition. Thus, business needs a good inventory management system to achieve operational efficiency as to meet deliver the products on time and in condition. Inventory is a significant input in the activities of the supply chain of companies (Nadarajan, Chandren, Abdul Rahim, Radzuan, Mohd Nawi, 2018). Inventory is known as a physical asset of any materials or unsold items remaining at warehouse in order to meet production plans and to fulfill customer orders. An effective and efficient inventory managementhelps to meet sales demand, control the cost and generate revenue for the company (Nadarajan, et al., 2018). Basically, there is positive relationship between inventory and company profit (Chandren, Nadarajan, & Abdullah, 2015). In sum, a good inventory management enhances customer service, profitability and cashflow (Wild, 2017). However, managing inventory is a challenging task which requires full commitments of the companies. As matter of fact, the manufacturing industries do put lot of emphasize on managing inventory effectively and becomes part and parcel of the company to engage at all time to ensure sufficient inventory in meeting production plan and sales and also to eradicate any overstocking condition that may affect the business cash flow or the financial position of the company.In fact, the inventory management has positive association with firm performance (Elsayed, 2015). As for concerning the inventory management, there are three main types of inventory refer to Figure 1 require to focus on in implicating cost of having those inventories would likely affect the financial position of a company.
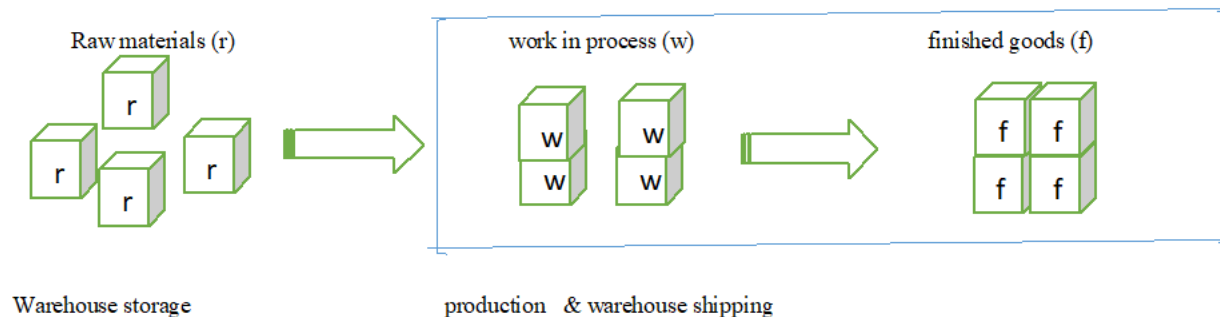

Figure 1: Inventory Types Designated Storage, Production Flow and Shipping

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 is not new and has been in forefront for many years in many companies especially manufacturing and it does not mean in a way to save cost itself but to ensure sufficient flow of raw materials in order to maintain the productions plans and do also to meet the customer order as always. In order to mitigate the above scenarios questions to ponder as follows:

i.   What is the order quantity?
ii. When to create order?
iii. How many to keep?
iv. When to deliver the order?
v.   What is the safety stock levels require?

vi. What is the inventory turnover?
vii. What is the balance of supply and demand of raw materials?
viii. What is the cause and effect when a sudden cancellation of the order especially finished goods taken place?
ix. What is the warehouse storage space requirements?
x. What is the nature of the quality of incoming raw materials?
xi. What is the level of shortages affecting the supply to production?
xii. What is the level of excess quantity affecting financial position?
xiii. What is the level of slow moving materials and obsoletes?

Well to address these questions the direction of supply and fulfilling the customer orders is the utmost decisions require by managements to relook in a way for sustainability supply without distortion on replenishments and procurements process along the way.

II. LITERATURE REVIEW

Before begin to look at possible solutions, must have a full understanding of what are the unique and common inventory problems. Begin with the idea that every aspect is a problem, unless there is a financial reason for it. Listing all the categories of inventory problems that signify big losses, including obsolete material, overstocking, shortages and defective material.

2.1 Overstocking or Excess

Keeping too much stock on hand can be as problematic as having too little. Overstock impacts business cash flow and leads to inventory-related problems, such as storage and loss(Nadarajan, Nadarajah & Bahaudin, 2014). At the same time keepingit too long eventually leads to quality issues and succumb to spoilage and spoiled products mean your investments go down the drain, along with your potential profits and indirectly a loss to the company financial. Issue of having surplus stock require more warehouse spacing and this further implicate drainage of money spending on every cubic square feet. On top of that require more workforce in handling surplus materials this accounted for more non value added investment. Beside that impact from this do also succumb to missing parts due to pilferage or placing materials in different location due to negligence of the handler.

2.2 Obsolete or Dead Stock

The most worry point of having excess stocks shall increase high probability leading towards having more obsolete stocks which does not count for meeting future requirement (Nadarajan & Chandren, 2011). Obsolete and slow moving materials also known as abnormal stocks condition is the outcome of cancellation orders, the concern models may no longer in production and due to intense innovation the

materials subjects to design change quite frequent and directly the order place initially becomes a liability to the company. Dead stock are items that can't be sold for a number of other reasons: they've gone out of style, out of season, or the products become otherwise irrelevant. Often an item is declared "dead" after sitting on a shelf for 12 months.

a. Stock outs or shortage

There is occasion when production affected due to insufficient supply of raw materials called as shortage or stock outs (Nadarajan, Nadarajah & Bahaudin, 2014). This is one of the critical issues face by many companies despite having perfect systems in place such as materials requirement planning (MRP) and experience manpower. There are many reasons for this to happen and one of the most anticipated due to poor planning or poor forecasting (Nadarajan & Chandren, 2011). Despite that some occasionally due to sudden pattern change by the product designer handle by engineers, sudden delay of shipment by suppliers, quality issues, shortcomings for the incoming materials such as quantity reported discrepancy versus the actual contents of the delivery.

b. Poor forecasting

Normally many companies carry out their planning through engagement of forecast on independent demands such as the final products where the actual sales reflects on (Chandren, Nadarajan & Nadarajah, 2012). Reason of doing so due the lead time issues varies for different types of materials and the supplier's policy. While carrying out the projection, the materials planners or purchasing depends so much on past historical data for input for the projections of the independent demand (Mohd Nawi, Nadarajan,, Ibrahim, & Mustapha, 2017). There are many ways or techniques in assisting the planners such as naïve approach, moving average, exponential smoothing and lot to add on but due to poor engagement in predicting eventually leads to either shortage or excess materials.

c. Defective or spoilage

Defective been sort it out while during inspection or through visual exposure detected of the poor conditions of the materials while spotted at warehouse and require either replacement or rework or creating new order due to spoilage which totally cannot function at all(Nadarajan & Chandren, 2011). As far concerning on inventory perspective for this kind of damages taken place means short of quantity for the concern materials therefore the supply to production could be halt.

d. Inaccuracy of Inventory data

Book keeping or recording all incoming materials as well the quantity kept at warehouse must be always accountable between logical and physical quantity must be accurate. (Chandren, Nadarajan, & Nadarajah, 2012). However, there are cases whereby the discrepancy in quantity seems to be exposed. Logical quantity means reported in the documents

(bin card) or computer system such as SAP MRP and physical quantity means the actual quantity reflected at the locality storage area. Such problems occur when either one is not accountable leads to shortage or excess shown in the records or found discrepancy in quantity at the physical storage area. Cause of this to happen due to receiving entry error in the system itself, or location error of the materials subject for further checking is a waste of time.

e. *Suppliers planning & delivery commitment*

Delay in delivery could be one of the area to be concern by many companies due to commitments of the suppliers failed to deliver on time as stipulated in the purchase order agreement (Nadarajan, Abdul Rahim, & Mohd Saifudin, 2019). This further leads to shortage of materials. On top of that there are some cases due to capacity allocation or tight capacity may lead to delay in delivery further.(Nadarajan, Chandren, & Mohamed Elias 2013). Despite that the nature of the delivery further halt on the condition of materials such as defective been exposed and found abnormal short packing further dampen the inventory issues.

III.CONCLUSION

Based on the above discussions, this paper concludes that the main factors inventory problems lies on the seven main cases that require further company's involvement especially the stakeholders from top to down approach by looking back on cost efficiency ,lack of qualified human resources, integrated information system is very important to provide real time information for management. This further influence or enhance supply chain flexibility and coordination among departments. Furthermore, demand forecasting can help the business restock in time by helping to calculate reorder point levels and alerting you when it's time to contact your suppliers to ship in some more stock. For future studies, we do suggest to examine the techniques related to inventory simulation and lead time delivery to maximize efficiency.

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