ABSTRACT

On the basis of definition given by Fred Haussmann, “An Idle resource of any kind provided that such resources have some economical value”. This Research Paper titled “BLUE MONEY” is an abstract of the output analysis due to “INVENTORY”. The operational and financial Inventories are always conflicting which led to coin the word “BLUE MONEY”. The undisclosed money is called as ‘BLACK MONEY’, the disclosed money is called as ‘WHITE MONEY’ while money blocked is coined as “BLUE MONEY”. “BLUE MONEY” is a very common but old fashioned word in the regions of AUSTRALIA, which means, “To waste money by unwise spending”.

The then Finance Minister Mr. C. Subramaniam on Dec. 10, 1974 provided the first estimate as “The Total Amount of money blocked in Obsolete and Surplus Material is estimated to around Rs. 2500 Crore in India”. This led the Government Departments and Multi National Companies to work on the “INVENTORY” and to determine whether it is a liability or an Asset to the organization.

'BLUE MONEY' means money blocked due to improper utilization of funds.

INTRODUCTION

Black, Champion U. Miller defined, “Inventories as expandable physical articles held for resale, for use in manufacturing a product or for consumption in carrying on any production process.

Inventory Management is the outcome in managing Inflow, Outflow, retaining of materials and extraction of maximum funds by disposing off the Surpluses, Obsolescence and the Scrap generated thereby.

D. Schall Lawrence and W. Haley Charles quoted as, “Managing the level of Investment in Inventory is like maintaining the level of the water in a tub with an open end”. If the Inflow of water is slow as compared to outflow, tub remains empty or vice versa. Hence, the expertise is to analyze how much water level is to be maintained to get continuous flow (punned here).

After the changes and new developments in the Inventory Control Techniques few parameters were laid down by Government Of India with reference to such blocked Public Money in
our developing Indian Economy, undertaking multifarious functions, impinging upon industrial activities.

This study being unique and has its own significance in the existing economic scenario, if followed judiciously can be effective and proper fund flow can be well managed and increase annual yields with less working capital funds.

OBJECTIVE OF THE RESEARCH

1. Optimum Utilization of Funds
2. To minimize Obsolescence
3. To locate and dispose off Inactive and Obsolete Items
4. Maintain Inventory Level for smooth and unhampered production cycle without much carrying cost.

RESEARCH METHODOLOGY

This Research was totally theoretical in nature and based upon the problem of Disposal of Obsolete, Surpluses. The Analytical Models which are considered for “Disposal in Isolation” (ie Strict Disposal) and “Disposal choice combined with acquisition (ie Hybrid). The “Strict Disposal” is divided to “stochastic or Deterministic use” while the “Hybrid Disposal” is further divided into “Acquisition & Disposal Model”, Models also have “Quantity Discounts and Disposal Discounts”. The “Excess Stock Rule” also called as “Surplus Disposal Rule given by Silver Pyke and Peterson suggests item wise Inventory Deplication during a particular time and is represented as :

\[
I \leq \frac{C \times 1}{D}
\]

Where

\[
I = \text{stock in hand,} \\
C = \text{time covered} \\
D = \text{expected consumption rate}
\]

ANALYTICAL MODELS

The Output of this Model is to Analyze the Quantity of excess stock ie. SURPLUSES

1. STRICT DISPOSAL MODEL
2. DETERMINISTIC USAGE
3. STOCHASTIC USAGE
4. HYBRID MODELS
5. ACQUISITION AND DISPOSAL MODELS
6. QUANTITY DISCOUNTS AND DISPOSAL MODELS

1. STRICT DISPOSAL MODEL

When an organization or a part of the organization changes its Technology or its infrastructure by new items in lieu of old, the said part of the plant is said to be in “SURPLUS INVENTORY SITUATION”. This is called as “STRICT DISPOSAL MODEL”.
2. **DETERMINISTIC USAGE MODEL**

“SIMPSON” on his Research on Naval supply stores calculated an Economic Retention Time Period. He used a constant probability of obsolescence and ignored inflation, his break even analysis had a trade off between storage and obsolescence costs verses the expenses of re-purchasing in future.

“Miller and Garg” further analysed “Simpson’s Model with consideration to inflation and used experimental distribution and constructed with an appropriate economic retention period. While “Kulshrestha” expanded Simpson’s model by incorporating and exponential ration and obsolescence. “Naddar” included both finite and infinite horizons, “Dave and Pandya” expanded Naddar’s Model by exhibiting a constant value of deterioration. They analyzed on the EOQ Model for ongoing replenishments assuming no shortage and zero lead time. They developed the amount of Surplus Stock to be retained for future consideration.

3. **STOCHASTIC USAGE**

Rosenfield, was the pioneer to analyze the effect of inventory on excess stock disposal. The demand unit as he said “demand episode” was assumed to follow Poisson distribution. He applied methodology to the actual distributor of durable goods having excess slow moving items. His model showed earning by disposal of surplus stock judiciously. He also found optimality of a myopic policy when disposing excess stock. He presumed disposal opportunity is always same at any given point and time. The myopic policy gives the economic retention quantity as:

\[
\ln \left( \frac{V + \frac{r}{i}}{A + \frac{r}{i}} \right) \left\{ \ln \frac{\Lambda}{\lambda + i} \right\}
\]

where,

- \( V \) = salvage value
- \( r \) = storage cost per unit
- \( i \) = discounts offered
- \( A \) = average sale value
- \( \lambda \) = average no. of units demanded per unit time

Hill, Giard and Mabert developed data base decision support system for spare parts inventory management in a Fortune 100 company and within two years the company could dispose of $13 million and tax saving of approximately $6 million.

4. **HYBRID MODEL**

Disposal choice cobined with an acquisition decision is called “HYBRID”. The “HYBRID” area is further divided into acquisition & disposal model and quantity discount disposal.
5.  **ACQUITION & DISPOSAL MODELS:**

Various researchers by virtue of their experience in the industry considered acquisition of plant, machinery or spare parts or a part of it or its services also contribute to the Inventory costs. Waddell analyzed the problem of Replacement of tractors in Philips Petroleum Company. Few basic questions when solved gave a fair idea for when to dispose off and how much cost to be accrued. Discounted cash flow method was used to determine the effect considering its maintenance and operational cost.

Rothkopf and Fromovitz examined the problem of rental charges paid to the supplier as a rent for a container say gas cylinders. He analyzed constant and exponentially distributed demand size as well as discounted future costs. He considered the container to be returned back to the supplier after calculating the balance cost of material if left and the rent charges and the recoupment charges of the material; If the material cost is far cheaper if the quantity left is sent back to party keeping in view the cost of rent when exceeds the cost of procurement. These holding charges can be reduced and Inventory can be saved.

Fukuda was the first to consider the acquisition and disposal decision model. While considering the ordering costs, disposal values, shortage penalties, holding costs the organization can determine planning policies for surplus disposal.

While considering the replacement of any old equipment with a new and latest technology is made, the old equipment becomes “excess” and replacement action to be taken at an ideal stage after calculating its maintenance and operating costs.

6.  **QUANTITY DISCOUNTS AND DISPOSAL MODELS:**

Sethi proposed to purchase excess quantity of units at a lower price and if it becomes “excess” to dispose of at a discounted price when the market value is in the higher side. This is a game which can be played only if you have a tract of all such commodity with a upgrading trend at any point of time then and then only this model is said to be worthy by blocking money. Not only the market trend but also the market situation, material shelf life and its demand and usability to be minutely analyzed.

Jucker and Rosenblatt further analyzed work of Sethi and concluded that the disposal of excess stock in a quantity discount has implication of probabilistic demand and disposal.

**OBSERVATIONS**

1.  Preservation of items in the available space is of great significance as the cost of space for any item stored carries price of the land, cost of construction of buildings, racks, shelves, handling equipments and the labour involved for storing, preserving and issuing of the material. To identify and issue requires proper shelves, lighting etc. The Inventory also consists of hidden costs like receiving, inspecting, stacking, handling, distribution and continuous monitoring of stored items, particularly slow moving and non moving items. To maintain the usefulness of such slow moving/non moving items need additives to preserve which is also an indirect addition to the Inventory Carrying Cost.

2.  Safety culture is to be induced as an impartial stores activity and due weight age has to be given considering the location, layout, nature of items handled. The Safety culture cannot be just forced but should come within by specially for the stores handling personnel. As a primary initiative, training programme, literature & visual display to be placed specifying the risk at that particular area. Wearing of Personnel Protective Accessories are to be encouraged while handling
specific items like gases, toxic chemicals, heavy items etc. The material handling equipment should also be in a good working conditions. All these add to the Indirect Inventory Carrying Cost.

3. Fire fighting equipments are mandatory to be kept and selection of type of firefighting equipment depend upon the usage of particular storage area. Fire escape alarms, water sprinklers and foam sprinklers, sand buckets, active smoke detectors should be installed wherever possible. All stores handling personnel should be made to familiarize to use them in case of emergency, which is also an Indirect Addition to the Inventory Carrying Cost.

FINDINGS

- “Inventory” can be “Graveyard of any organization” if not properly worked for.
- Inventory constitute of major part of current assets.
- Inventory when not properly managed will be jeopardizing organizational long run profit;
- Inventory requires full proof planning to avoid excess or shortage of operational requirements.
- The “THUMB RULE” is to pay attention to all small details as Inventory Procuring Cost, Carrying Cost, Re-ordering cost and its disposal cost with respect to time and space.

REFERENCES

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