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The concept of inventory management with ABC Technique

Saileja Sevella

Research Scholar, Osmania University, Hyderabad, Telangana, (India)

ABSTRACT

Inventory Management is very important for the organizations. . If the inventory in not managed properly, it can lead to increase in storage cost, working capital crunch, wastage of labor resources, increase in idle time, disruption of the supply chain, etc. All this leads to a reduction in sales and unsatisfied customers. Therefore, inventory management is an important aspect of the business which should not be ignored and must be managed properly. Always Better Control analysis provided a good insight into the situation and enabled a considerable improvement in the company's performance. This paper will investigate the relationship and the ability between inventory management practices towards inventory management performance. This paper is focusing on the technique of inventory management.

Keywords: ABC analysis, inventory management, working capital crunch,labor resources.

I. INTRODUCTION

Inventory management is an important aspect of any successful business. It is the process of overseeing and controlling the flow of inventory units a business uses in the production or manufacture of goods for sale or distribution. Inventories are usually made up of a combination of goods, raw materials and finished products, and effective management of these items is essential to ensure optimal stock levels and to maximize the earning potential of the company.

It also allows a business to prevent or mitigate any inventory-associated losses. Inventory management software is used by businesses for various reasons: it can track the costs of inventory throughout the manufacture and sales process, tell businesses when to replenish stock, and allow them to track profits. It can also be used to forecast inventory levels and prices, as well as expected product demand.

Effective inventory management is important as not only is inventory one of the most valuable assets to a business; there is a direct link between inventory levels and company profits. Inventory represents an investment that is tied up until either the item is sold, or it is used in the production of another item that is sold. Businesses are reliant on having items in stock; otherwise customers will simply go to a competitor who can provide what they want.Inventory management involves keeping track of a company’s stocked goods. It monitors their weight, dimensions, amounts and location. This helps business owners know when it’s time to replenish products, or buy more materials to manufacture them.

Effective inventory management is essential for ensuring a business has enough stock on hand to meet customer demand. If inventory management is not handled properly it can result in a business either losing money on potential sales that can’t be filled, or wasting money by stocking too much inventory. An inventory management system can help prevent these mistakes.

II. OBJECTIVE

To understand the concept of ABC Analysis.

III. IMPORTANCE

Inventory management systems help businesses order inventory by accurately recording consumer sales. Electronic inventory systems can track sales in a real-time format, ordering inventory automatically when current stock hits a predetermined minimum level. Computerized inventory management systems allow companies to properly order and maintain several different types of goods. Different styles, colors or sizes can easily be managed to ensure that consumer demand is met through offering a variety of goods. Most companies use inventory management to keep stock items separate from similar goods; this allows management to determine which items are selling well and which items need to be reduced from inventory based on poor sales. Properly managing goods is largely based on the cost of the goods incurred by the business.

Using inventory management systems will help companies find the lowest price on inventory items and ensure that the best deals are reached when purchasing these items. Purchasing goods by volume also helps companies to lower their cost on inventory, ensuring that low prices are assured to consumers. Inventory management systems track costs from purchased goods and can prepare a report indicating which vendors have the lowest cost on goods.

IV. CONCEPT

Inventory Management is a practice of tracking and controlling the inventory orders, its usage and storage along with the management of finished goods that are ready for sale.ABC Analysis allows inventory/purchasing managers to segregate and manage the overall inventory/suppliers into three major groups. This allows different inventory/supplier management techniques to be applied to different segments of the inventory/suppliers in order to increase revenue and decrease costs.**ABC** inventory **management technique** which can help in efficient inventory management.

ABC ANALYSIS

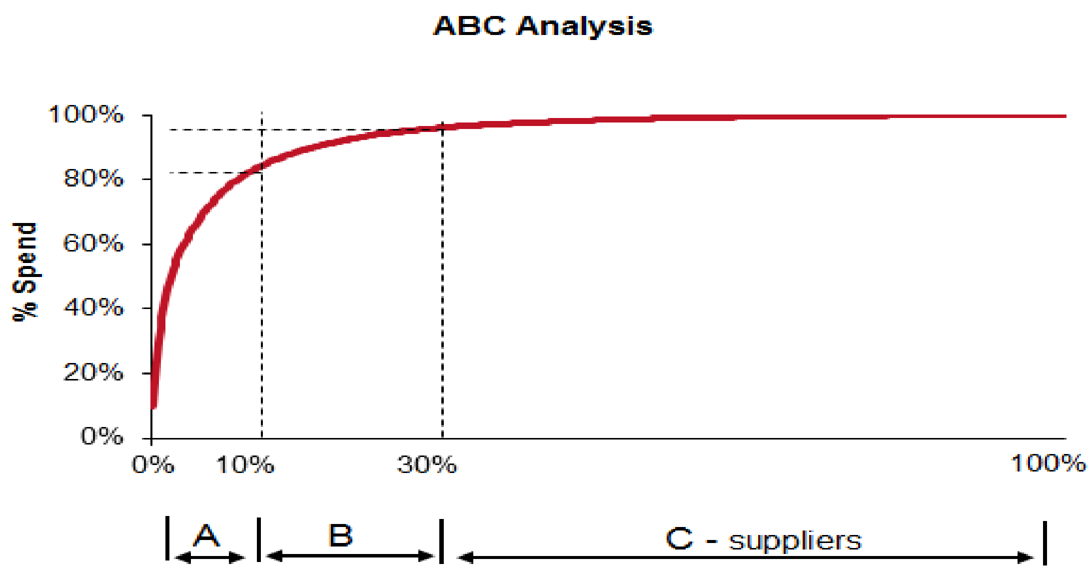
ABC stands for Always Better Control technique. ABC analysis is an inventory management technique where inventory items are classified into three categories namely: A, B, and C. The items in A category of inventory are closely controlled as it consists of high-priced inventory which may be less in number but are very expensive. The items in B category are relatively lesser expensive inventory as compared to A category and the number of items in B category is moderate so control level is also moderate. The C category consists of a high number of inventory items which require lesser investments so the control level is minimum

The ABC approach states that a company should rate items from A to C, basing its ratingson the followingrules:

A-items are goods which annual consumption value is the highest; the top 70% of the annual consumption value of the company typically accounts for only 10% of total inventory items.

B-items are the interclass items, with a medium consumption value; those 20% of annual consumption value typically accounts for 20% of total inventory items.

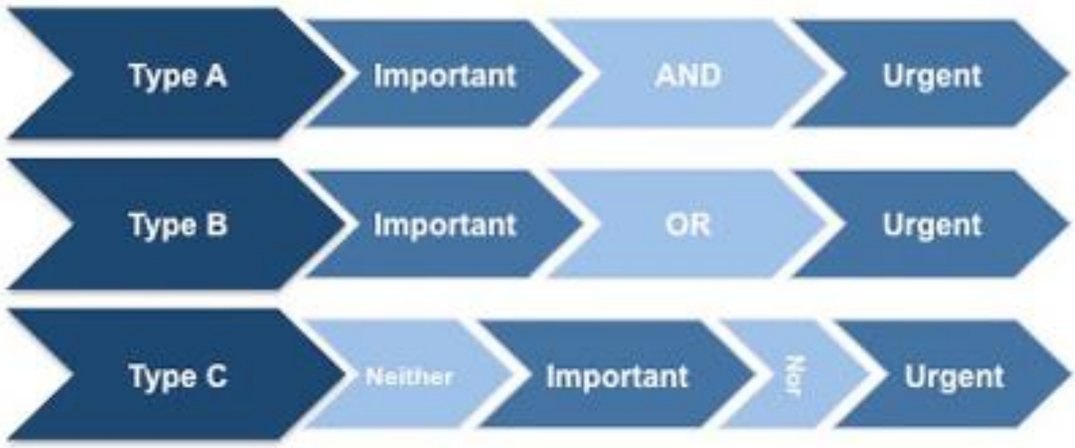
C-items are, on the contrary, items with the lowest consumption value; the lower 10% of the annual consumption value typically accounts for 70% of total inventory items.



■ The annual consumption value is calculated with the formula:

(Annual demand) x (item cost per unit)

■ Through this categorization, the supply manager can identify inventory hot spots, and separate them from the rest of the items, especially those that are numerous but not that profitable.



A Class items	B Class items	C Class items
1. Very strict control 2. Maximum follow up 3. Rigorous value analysis 4. Handled by senior officers	1. Moderate control 2. Periodic follow up 3. Moderate value analysis 4. Handled by middle management	1. Loose control 2. Follow up in exceptional cases 3. Minimum value analysis 4. Can be delegated

Steps for the classification of items:

1. Find out the unit cost and the usage of each material over a given period;
2. Multiply the unit cost by the estimated annual usage to obtain the net value;
3. List out all the items and arrange them in the descending value(Annual Value);
4. Accumulate value and add up number of items and calculate percentage on total inventory in value and in number;
5. Draw a curve of percentage items and percentage value;
6. Mark off from the curve the rational limits of A, B and C categories.

V. DATA ANALYSIS & INTERPRETATION

PRODUCTS	RATE	Total	ANNUAL COMSUMPTION VALUE	CUMULATIVE ANNUAL CONSUMPTION	CATEGOTIZATION
1	7.41	72566834	537720240	537720240	A
2	32.81	8228968	269992440	807712680	A
3	19.85	7108862	141110911	948823591	A
4	14.52	4830993	70146018	1018969609	A
5	27.33	4699157	128427961	1147397570	A
6	4.05	4093871	16580178	1163977747	A
7	47.84	2617573	125224692	1289202440	A
8	46.22	2333590	107858530	1397060970	A

9	43.88	2150860	94379737	1491440706	A
10	44.09	1967492	86746722	1578187429	A
11	23.87	1535226	36645845	1614833273	A
12	86.00	1521348	130835928	1745669201	B
13	30.00	1316888	39506640	1785175841	B
14	41.76	1244732	51980008	1837155850	B
15	38.09	1207313	45986552	1883142402	B
16	1.00	764957	764957	1883907359	B
17	29.25	745980	21819915	1905727274	B
18	13.72	635137	8714079.6	1914441353	B
19	36.59	623559	22816024	1937257377	B
20	80.50	561426	45194793	1982452170	B
21	56.88	554518	31540984	2013993154	B
22	52.99	544869	28872608	2042865762	B
23	350.00	542792	189977200	2232842962	C
24	37.71	429562	16198783	2249041745	C
25	27.26	396715	10814451	2259856196	C
26	76.13	267572	20370256	2280226453	C
27	59.92	254621	15256890	2295483343	C
28	35.26	181353	6394506.8	2301877850	C
29	30.03	131374	3945161.2	2305823011	C
30	9.29	67905	630837.45	2306453848	C
31	47.82	31955	1528088.1	2307981937	C
32	25.71	24725	635679.75	2308617616	C
33	31.98	21922	701065.56	2309318682	C
34	92.35	20453	1888834.6	2311207516	C
35	23.25	16823	391134.75	2311598651	C
36	12.62	7950	100329	2311698980	C
37	10.00	5356	53560	2311752540	C
38	48.00	2900	139200	2311891740	C
39	25.85	2331	60256.35	2311951996	C
40	53.15	1015	53947.25	2312005944	C

0.7*2312005944of Total ACV is A items.
0.9*2312005944of Total ACV is B items.
0.1*2312005944of Total ACV is C items.

VI. FINDINGS

70% of Total ACV is consumed by category ‘A’ items, 20% of Total ACV is consumed by category ‘B’ items and 10% of the ACV is consumed by category ‘C’ items.11 items are ranked A, 11 items are ranked B and remaining all items are ranked C. A items are vital for the organization because it yields more profits for the organization.

CONCLUSION

Inventory management is very vital to the success and growth of organizations. Companies need to have stock but in such amount to avoid out-of-stock and over stock situation. ABC classification is to ensure that purchasing staff use resources to maximum efficiency by concentrating on those items that have the greatest potential savings and selective control will be more effective than an approach that treats all items identically. ABC analysis is a great way to transform your data into actionable measurements that you can use to reduce overhead costs and drive profits.

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