International Journal of Research in Engineering, Science and Management
Volume-3, Issue-8, August-2020
journals.resaim.com/ijresm | ISSN (Online): 2581-5792 | RESAIM Publishing

Analyzing Inventory Management System in Textile Spinning Mill for Improving Productivity

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***Abstract*: Inventory management is a system concerned with integration of information, transportation, acquisition, inspection, material handling, warehousing, packaging and control of supplies and ensuring security of inventory. Inventory management aims at discovering and maintaining optimal levels of investment in all types of inventories and maximizing the flow of goods, information and other related resources like people and energy from the point of origin to the point of final consumption. The broad objective of this re-search was to establish the role of inventory management approaches on the performance of product manufacturing company. The study established that manufacturing companies use information technology, FSN, ABC method as inventory management approaches. The study also concludes that there was a strong positive correlation between the inventory management practices and operational performance of the product manufacturing company. The researcher recommends that the manufacturing companies should develop a policy framework to facilitate faster implementation of the best inventory management practices such as ABC and FSN. It is also recommended that such firms should consider investing in modern technology. This will reduce inventory costs and improve returns and productivity. Finally, the firms should also strengthen the supplier relation to the level of partnerships.**

***Keywords*: ABC, FSN, Inventory cost, Inventory management, Productivity, Product manufacturing companies.**

1. Introduction

The batch production is a style of manufacturing which compiles the different components of a product through step by step process. This basically means that the raw material moves through the production line in batches, so that there is a pause between each step as a batch moves through. When implementing batch manufacturing there are a few characteristics which make it both a credit and a bur-den to itself. There are both batch production advantages and disadvantages. The first thing to consider is the amount of resources that need to be allocated for batch manufacturing. Each batch goes back to inventory be-tween each step, which means that more resources have to be spent on keeping stocks. Even if the stock doesn't take up too much space, still it required to pay for moving it from and to inventory. Inventory changes (resulting from changes in inventory management policy of the firm) affect the net working capital level and the level of operating costs of inventory management in a firm as well. These operating costs are result of storage, insurance, transport, obsolescence, wasting and spoilage of inventory.

In this process, manufacturing company situated in southern part of India has been identified for case analysis. It consists of multi production cells to produce multiple products in a make-to-stock fashion. Complicating factors at present for the company for planning are the stochastic demand, setup time, batch processing and finite buffer capacities. The main aim of this project is the development of a methodology integrating production and inventory decisions which can be used for the evaluation and optimization of a wide range of batch production inventory systems.

2. Industry Overview

Sri Murugan Spinning Mills commenced spinning operations in the year 2008 with an installed capacity of 10,000 spindles. The weaving division started in the year 2009 is located in Coimbatore, Tamil Nadu. Weaving Wider & Narrow width looms producing 3 lakh metres per month. They work on 60s, 40s varieties of yarn.

3. Objectives of Inventory Management

1. To analyze the ratios of different materials in inventory.
2. To analyze the classification of materials in stock.
3. To propose Economic Order Quantity (EOQ) for reducing the ordering and carrying cost in inventory.
4. To make suggestions for possible improvements.

4. Problems in Inventories

In the context of inventory management, the firm is faced with the problem of meeting two conflicting needs,

1. To maintain a large size of inventories of raw material and work-in-process for efficient and smooth production and a finished goods for uninterrupted sales operations.

2. To maintain a minimum investment in inventories to maximize profitability.

5. Scope of the Study

Inventory is actually „money" kept in the storeroom and inventory management is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interests of an organization. Hence good inventory management is good financial management. The researcher had tried to find the efficiency in inventory management; number of days needed for stock clearance and also proposed the material requirement planning. The analysis of the value of stock left at the end of the financial year and the forecasting of inventory consumption and weighted average price had been done. This research would help the firm to avoid future shortages, to purchase the materials advance and at most economical price, to improve stock as per EOQ, POQ, Inventory turnover ratio, Stock level (Cotton and Polyester). Efficient inventory management ensures reasonable utilization of equipment and labour and the industry would be able to build up reputation and better relationship with customers.

6. Research Methodology

The study was confined to the Textile Spinning Mill, for a period of 2014 - 2019. Research is a systematic effort to gain knowledge. It can be referred to as the search of knowledge.

7. Data Collection

Data collection method is an important task in every research process; the data collected in research process were based on primary and secondary data. The data used for the study is secondary data, which are collected from various inventory records maintained by the finance, purchase and store department, computer database, profit and loss account, magazines, periodical pamphlets and from the books of renowned authors

8. Analysis and Interpretation

Analysis

Analysis is the process of placing the data in an or-dered form, combining them with existing information there by finding out its implication. Only analyzing brings out information from the data. Analysis involves organizing the data in a manner, while interpretation is what which explains the facts of figures.

Interpretation

Interpretation is the process of relating various factors with other information. It brings out the relation between the finding to the research objective and hypothesis framed for the study beginning.

A. Inventory usage for 5 years

Table 1
Inventory usage for the period of 2014-2015 is taken

Components	In Lakhs	Percentage
Raw material	103.75	44
Work in progress	69.92	29.2
Finished goods	39.07	16.4
Stock of packing materials	4.23	2
Stock of consumable spares and stores	20.25	8.4
Total	**238.26**	**100**

Interpretation

The major share of total inventory of manufacturing company comprises of Raw materials and work in pro-gress. From this table it is clear that raw materials from the largest proportion of total inventory (44%) and (29%) of work in progress, finished goods are (16.4%), packing ma-terials and consumable spares are very essential for pro-moting smooth operation. In 2014-15 table shows that five major components of inventories are balancing their pro-duction.

Table 2
Inventory usage for the period of 2015-2016 is taken

Components	**In lakhs**	**Percentage**
Raw material	79.06	39
Work in progress	64.19	32
Finished goods	46.22	23
Stock of packing materials	6.08	3
Stock of consumable spares and stores	6.67	3.2
Total	202.22	100

Interpretation

The major share of total inventory of manufacturing company comprises of raw materials and work in progress. From this table it is clear that raw materials from the largest proportion of total inventory (39%), and (32%) of work in progress, finished goods are (23%), packing materials and consumable spares are very essential for promoting smooth operation. In 2015-16 table shows that five major components of inventories are balancing their production

Table 3
Inventory usage for the period of 2016-2017 is taken

Components	**In lakhs**	**Percentage**
Raw material	73.90	35.4
Work in progress	48.45	23.2
Finished goods	51.66	25
Stock of packing materials	6.67	3.2
Stock of consumable spares and stores	27.73	13.3
Total	208.41	100

Interpretation:

The major share of total inventory of manufacturing company comprises of raw materials and work in progress. From this table it is clear that raw materials from the largest proportion of total inventory (35.4%), and (23.2%) of work in progress, finished goods are (25%), packing materials and consumable spares are very essential for promoting smooth operation. In 2016-17 table shows that five major components

of inventories are balancing their production.

Table 4
Inventory usage for the period 2017-2018 is taken

Components	In lakhs	Percentage
Raw material	52.63	36.3
Work in progress	9.60	7
Finished goods	49.49	34.2
Stock of packing materials	4.91	3.4
Stock of consumable spares and stores	27.65	19.12
Total	144.28	100

Interpretation:

The major share of total inventory of manufacturing company comprises of raw materials and work in progress. From this table it is clear that raw materials from the largest proportion of total inventory (36.3%), and (7%) of work in progress, finished goods are (34.2%), packing materials and consumable spares are very essential for promoting smooth operation. In 2017-18 table shows that five major components of inventories are balancing their production.

Table 5
Inventory usage for the period of 2018 -2019 is taken

Components	In lakhs	Percentage
Raw material	57.61	40
Work in progress	37.03	26
Finished goods	13.84	9.6
Stock of packing materials	5.33	3.7
Stock of consumable spares and stores	29.84	20.7
Total	143.65	100

Interpretation:

The major share of total inventory of manufacturing company comprises of raw materials and work in progress. From this table it is clear that raw materials from the largest proportion of total inventory (40%), and (26%) of work in progress, finished goods are (9.6%), packing materials and consumable spares are very essential for promoting smooth operation. In 2018-19 table shows that five major components of inventories are balancing their production

B. Economic order quantity

Economic order quantity is the level of inventory that minimizes the total inventory holding cost and ordering cost.

$$EOQ = \frac{\sqrt{2CO}}{I}$$

C = Annual consumption
O = Ordering cost
I = Annual Carrying cost or storage cost per unit

Economic order quantity of year 2014-2015 has been taken

Raw materials	Annual consumption (unit)	Cost of placing an order (per unit)	Storage cost (per unit)	EOQ
Cotton	1152	64	2.5	243
Polyester	1848	41	2.5	246

Economic order quantity of year 2015-2016 has been taken

Raw materials	Annual consumption (unit)	Cost of placing an order (per unit)	Storage cost (per unit)	EOQ
Cotton	1320	65	3	239
Polyester	2364	45	3.1	264

Economic order quantity of year 2016-2017 has been taken

Raw materials	Annual consumption (unit)	Cost of placing an order (per unit)	Storage cost (per unit)	EOQ
Cotton	1362	66	4	212
Polyester	2736	50	3.6	276

Economic order quantity of year 2017-2018 has been taken

Raw materials	Annual consumption (unit)	Cost of placing an order (per unit)	Storage cost (per unit)	EOQ
Cotton	1420	66	5	194
Polyester	2850	52	3.9	276

Economic order quantity of year 2018-2019 has been taken

Raw materials	Annual consumption (unit)	Cost of placing an order (per unit)	Storage cost (per unit)	EOQ
Cotton	1500	68	6	184
Polyester	3000	56	4	290

Interpretation:

During 2014-15 the ordering quantity of cotton is 243 larger than 2018-19 that is 184, the ordering cost is low in 2014-15 than 2018-19,184. Because order placed few. In the case of polyester, the ordering quantity of 2014-15 is 246 it is lesser than 2018-19, 290. The ordering cost will lesser in 2018-19. Because order placed few.

C. Period order quantity

Cotton – Period order quantity

$$\text{Number of orders per year} = \frac{\text{Annual Requirement}}{\text{EOQ}}$$

Year	Annual Consumption	EOQ	Number of Orders per year
2014-2015	1152	243	5
2015-2016	1320	239	6
2016-2017	1362	212	6
2017-2018	1420	194	7
2018-2019	1500	184	8

Interpretation:

In these five years (2014-15 to 2018-19) the highest number of orders of total cotton yarn is 2018-19 the lowest number of

cotton is in 2014-15, the number of orders of cotton yarn is increasing trend.

Polyester – Period order quantity:

$$\text{Number of orders per year} = \frac{\text{Annual Requirement}}{\text{EOQ}}$$

Interpretation:

When comparing these five years (2014-15 to 2018-19) the number of orders of polyester per year are same and highest in the last 3 years, 10 (2016-17 to 2018-19). The minimum number of orders is 8 in 2014-15.

Year	Annual Consumption	EOQ	Number of Orders per year
2014-2015	1848	246	8
2015-2016	2364	262	9
2016-2017	2736	276	10
2017-2018	2850	276	10
2018-2019	3000	290	10

D. Order interval

Cotton – Order interval:

$$\text{Order interval} = \frac{12 \text{ or } 365}{\text{No. of Orders per Year}}$$

Year	Annual consumption	EOQ	No. of Orders per year	Order interval
2014-2015	1152	243	5	73
2015-2016	1320	239	6	61
2016-2017	1362	212	6	61
2017-2018	1420	194	7	52.14
2018-2019	1500	184	8	46

Interpretation:

The order interval of cotton in the year 2014-15 is 73. It is higher than the other four years. The lowest interval is 46 in 2018-19, the order interval is in increasing trend.

Polyester – Order interval

$$\text{Order interval} = \frac{12 \text{ or } 365}{\text{No. of Orders per Year}}$$

Year	Annual consumption	EOQ	No. of Orders per year	Order interval
2014-2015	1848	246	8	47
2015-2016	2364	262	9	41
2016-2017	2736	276	10	37
2017-2018	2850	276	10	37
2018-2019	3000	290	10	37

Interpretation:

When comparing these five years (2014- 15 to 2018-19) the order interval of polyester per year are same lowest in the last 3 years, 37 (2016-17 to 2018-19). The maximum number of orders is 47 in 2014-15.

E. Inventory turnover ratio

$$\text{Total Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

Cost of Goods Sold = Opening Stock + Purchase – Closing Stock

$$\text{Average Stock} = \frac{(\text{Opening Stock} + \text{Closing Stock})}{2}$$

Year	Cost of goods	Average stock	Ratio
2014-2015	188.1670089	1392.786106	7.4
2015-2016	111.9184782	1403.307659	13
2016-2017	10.5660083	1573.103225	15
2017-2018	108.5047831	1292.724321	12
2018-2019	83.9250767	1026.966277	12.2

Interpretation:

In this five years period the inventory turnover ratio is 15 higher in 2015-16, it indicate that the materials are fast moving, lower obsolescence and material losses etc. In this period (2014-19) the lower inventory turnover ratio is 7.4 in 2014-15. It indicates that materials are slow moving, & highest obsolescence.

F. Inventory conversion period

$$\text{Inventory Conversion Period} = \frac{\text{Number of days in a year}}{\text{Inventory turnover ratio}}$$

Year	Inventory turnover ratio	Inventory conversion period
2014-15	7.4	49.3
2015-16	13	28
2016-17	15	24.3
2017-18	12	30.4
2018-19	12.2	30

Interpretation:

In the year 2014-15, inventory conversion period 49.3 is higher than 2017-18, 30. Because the higher inventory turnover ratio is reducing the inventory conversion period and the lower inventory turnover ratio increase the inventory conversion period.

G. Stock level

Maximum level = Reorder quantity – (minimum consumption × minimum reorder period)

Minimum level = Reorder level – (normal consumption × maximum reorder period)

Reorder level = Maximum consumption × maximum re-order period

Average stock level = minimum level + ½ reorder quantity.

Year	Maximum level	Minimum Level	Reorder Level	Average stock level
2014-2015	2699	2304	3456	2426
2015-2016	3879	3360	5040	3480
2016-2017	3232	2880	4320	2986
2017-2018	4729	4289	6435	4386
2018-2019	4354	4080	6120	4172

Interpretation:

When comparing the stock level of cotton in 2014-15 and 2015-16 the maximum level of cottons is 3879 in 2015-16, it is higher than 2699 in 2014-15. When comparing the stock level of cotton in 2016-17 and 2017-18, the maximum level of cotton is 4729 in 2016-17. It is higher than 4354 in 2018-19. The minimum level of cotton is 2304 in 2014-15 is lower than 4289 in 2017-18. The reorder level of stock level (cotton) is 6435. It is the highest level of the comparing in these 5 years. When comparing the average stock level in this 5 years the maximum average stock lev-el is 4386 in 2017-18. The minimum average stock level is 2426 in 2014-15.

H. ABC analysis

The ABC system is widely used classification technique to identify various items of inventory for purposes of inventory control. On the basis of unit cost involved, the various items are classified into 3 categories:

1) A, Consisting of items with the large investment.
2) C, with relatively small investments but fairly large number of items.
3) B, which stands mid-way between cate-gory A & C.

Category A needs the most rigorous control, C requires minimum attention and B deserves less attention than A but more than C.

A CLASS (HIGH VALUED ITEMS)

1. Ball bearing RMS-14
2. Bloster for Ring Twist Sceolowell
3. Faller Bar 11/12 Pin 6 Gill
4. Jukypully 2×4”
5. Lifter bracket 4-3/4 AD
6. Pressing Roller Reem 4-1 / 2×8-1/2”
7. Top Rail L/R.H (MS) 1st Section Chain Link Type
8. V Belt 3v-1180 (japan)
9. Gun Metal Bar 1-1/2”
10. Super Enamel Wire # 18
11. Super Enamel Wire # 19
12. Super Enamel Wire # 20
13. Super Enamel Wire # 21
14. Super Enamel Wire # 22
15. Super Enamel Wire # 23
16. Super Enamel Wire # 35
17. Silver Can plate-Bottom 28×40”
18. Film (Wrapping Film)
19. Roller Bearing (for secoloyel Ring Twist)
20. Spindle for Sac R. Twist O/D 3/4” Pitch 6-1/2
21. Spindle for Sac R. Twist O/D 5/8” Pitch 6-1/2

B CLASS (MODERATE VALUE ITEMS)

1. Bearing Socket – 1306K
2. Brass conductor 2-5/8×15/8
3. Felt Bob Clip
4. C I Stop Motion Weight Lever L/H 4-3/4 SD
5. C I Stop Motion Weight Lever R/H 4-3/4 SD
6. Gun Metal Bush 1-3/4X2-1/4X2-3/4 (Half Round).
7. Helical pinion 21TX8DP
8. M S Chain S Sprocket 18TX5/8”×1”
9. Right Angles 12”
10. Tension Pulley 4-1/4” AD
11. Gauge Meter
12. Hammer 2-1/2 LBS
13. Hand Top 1/2” BSW
14. Yarn guide curls

C CLASS (LOW VALUE ITEMS)

1. Ampere Tube No.: 01
2. Card Pin 0.092×1”
3. Card Pin 0.071×1-3/8”
4. Ring Traveler Medium
5. Gill Pin 0.072×1 – 5/8”
6. G I Screw 1/4×1/2
7. PVC Socket 3/4”
8. Nylon Clip

Categories	Total No Items in classes	Percentage
A	22	50
B	14	31.82
C	8	18.18
Total	44	100

Interpretation:

The above table shows the classification of various components as A, B & C classes using ABC analysis techniques based on unit value. From the classification A classes are those whose unit value is more than Tk. 100 and constitutes 50% of total components. B Classes are those whose unit value is between Tk. 25-100 constitutes 31.82% of total components and C Classes are those whose unit value is less than Tk. 25 constitutes 18.18% of total components. It is good that the company maintains its inventories based on its value using controlling techniques.

I. FSN analysis

All the items in the inventory are not required at the same frequency. Some are required regularly, some occasionally and some very rarely. FSN classifies items into Fast moving, slow moving and Non-moving.

F – FAST MOVING ITEMS

1. Axle Spindle 4-3/4” AD

2. Ball Bearing E-15 Ball
3. Bearing 810
4. Ball Bearing 6203
5. Ball Bearing 6205
6. Needle Bearing 4900
7. Paper Spool 10×2-3/4×1-3/4×1-1/8
8. Ring Travallers Medium
9. Belooning Spring 3/4×3-3/4
10. Faller Bar 18/19 Pin 4 Gill Sq. Head 1stDrg
11. Faller Bar 26/27 Pin 4 Gill Sq. Head 2ndDrg
12. Ceramic Runner 3/4×3/4
13. Lenix Belt 7'-6"×5.5"
14. Nylon delivery Contract 2 Hole 4-3/4 SD
15. Power Grip Belt 300L
16. Oilet Bush ½"X5/8x5/8"
17. V Belt A-33
18. Shuttle Guide Key
19. V Belt A-82 V

S – SLOW MOVING ITEMS

1. 1st Stripper Staves (SF) 5X47X010.X1-3/16" for T/C
2. 1st Worker Staves (SF) 5X47X103X1-1/2" for T/C
3. Aluminum arm L/R.H for Roll Former Auto
4. Conducts 3rd Drg
5. Ball Bearing LT-21 With Socket
6. Ball Bearing 6209
7. Ball Bearing 6210
8. Bevel Pinion (MS) 20TX8DP with Boss B-7/8"
9. C I Bevel Pinion 21TX6DPX1 – 5/8"
10. Drawing Roller 5-1/2" SD L/H Thread 80 Spindle M/C
11. Faller Block R/H, L/H Top & Bottom for 2nd Mackie
12. Five Star Pinion (2ndDrg)
13. Relive Valve / pin/ Bush
14. V Belt CC-254

N – NON MOVING ITEMS

1. Arm stud
2. Ball Bearing 1209 K (Double)
3. Ball Bearing 6001
4. Ball Bearing 606
5. Ball Bearing 6203
6. Bobbin Rail Plate 4-3/4 AD (Half Round)
7. C I Fork 4-3/4 AD (Tension Pulley)

Categories	Total no. of items	Percentage
F	21	50
S	14	33.33
N	7	16.67
Total	42	100

Interpretation:

In the above table shows the classification of various components as FSN items using FSN analysis techniques based on movements. From the classification F items are those which moves fastly and constitutes 50% of total components. S items are those which move slowly constitutes 33.33% of total components and N items are those which doesn't move (Non-moving items) constitutes 16.67% of total components. According to data given, there is no Non-moving item. It is not good as the company maintains low percentage in moving items.

9. Findings

The following findings are derived from the Sri Murugan spinning mill

1. From the above analysis of inventory man-agement it is found that the company follows a systematic and well planned purchasing procedure for each material.
2. The component of inventory includes raw material, working progress, finished goods, packing material and consumable spares and stores.
3. The major share of total inventory of manufacturing company comprise of raw material and working progress. In 2014-15 the percentage of raw material was 44%. It is decreasing trend in each year, it indicates that there is raw material shortage than the previous year.
4. Economic order quantity shows a decreasing trend in case of cotton in 2014-15 economic order quantity was 243 then it fails into 239 in 2015-16.
5. In case of polyester in 2014-15 economic order quantity was 246 then it raise in to 290 in 2018-19. So it shows an increasing trend through the five years.
6. Inventory turnover ratio 7.4 in 2014-15, then it increases 13 in 2015-16. The highest ratio of inventory turnover ratio is 15 in 2014-15. In 2018-19 it reaches 12.2%.
7. The maximum stock level of cotton material in 2017-18 is 4729, it is the largest material usage in these 5 years. The highest reorder level of material is 2017-18 is 635.
8. The maximum stock level of polyester materials in 2016-17 is 5616. It is the largest material usage in these 5 years. The highest reorder level of material is 2016-17 is 7740.
9. From the classification A classes are those whose unit value is more than Tk. 100 and constitutes 50% of total components. B Classes are those whose unit value is between Tk. 25-100 constitutes 31.82% of total components and C Classes are those whose unit value is less than Tk. 25 constitutes 18.18% of total components. It is good that the company maintains its inventories based on its value using controlling techniques
10. From the classification F items are those which moves fastly and constitutes 50% of total components. S items are those which move slowly constitutes 33.33% of total components and N items are that which doesn't move (Non-moving items) constitutes 16.67 of total components. According to data given, there is no Nonmoving item. It is not good as the company maintains low percentage in moving items. It is not good as the company maintains low percentage in fast moving items

in compared to Slowing moving inventories based on movements using controlling techniques.

10. Suggestion

1. According to EOQ, as the company does not follow not follow EOQ for its purchasing, the company can be adjusted to order materials. This will reduce the cost & help to enhance the profit of the company.
2. The company is required to maintain safety stock for its components in order to avoid stock-out conditions & help in continuous production flow.
3. Under ABC analysis, the management must have more control on A than B&C, because A class constitutes more (50%) of higher values. There should be tight control exercised on stock levels, to avoid deterioration. This is done through maintaining low safety stock, continuous check on schedules & ordered frequently in inventories, in order to avoid over investment of working capital.
4. The company must not go to the Non-moving items as far as possible, because there will be unnecessary blocking of working capital. This would hinder the other activities of the organization.
5. The inventory turnover ratio indicates whether investment in inventory is within proper limit or not. It also measures how quickly inventory is sold. It requires maintaining a high turnover ratio than lower ratio. A high ratio implies that goods inventory management systems and it also reflects efficient business activities.

11. Conclusion

Inventory is the important part in the manufacturing firm. In India on an average 60% of the current assets of the manufacturing industry is from the inventory. Therefore, the firm has to maintain the inventory in such a way that it reduces the cost involved in the inventory and increases the productivity of the firm. The Sri Murugan spinning mill is a social welfare organization and their main aim is to provide job to the people and also given some special benefit to them i.e.; promotion, bonus, etc. The objective was successfully achieved in average level but the financial position of the company is unsatisfactory. The smart and talent administrative forces are the advantage of the company but the weak working capital and poor technical facilities are the main barriers of the company because of non-usage of the modern machineries. It will reduce cost of human resources.

The company inventory management system is based on tradition method it is not much effective to the company. Their inventory controlling systems are manual and traditional as a big organization they can't track inventories properly. If the organization creates a good inventory management system, it will help to in-crease the profitability of the organization through reducing the unnecessary costs.

A better inventory management system will surely be helpful in solving the problems the company is facing with respect to inventory and will pave way for reducing the huge investment or blocking of money in inventory. From the analysis we can conclude that the company can follow the Economic Order Quantity (EOQ) for optimum purchase and it can maintain safety stock for its components in order to avoid stock-out conditions & help in continuous production flow. This would reduce the cost and enhance the profit. Also there should be tight control exercised on stock levels based on ABC analysis of maintain high percentage in fast moving items in inventories as per on FSN analysis for efficient running of the inventory. Since the inventory Turnover ratio shows the increasing trend, there will be more demand for the products in the future periods. If they could properly implement and follow the norms and techniques of inventory management systems, they can enhance the profit with minimum cost.

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