Inventory Optimization using ABC/FSN Matrix Analysis

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Abstract— **This study focuses on Arogya Garments, a textile leader, to explore how their inventory management practices affect their financial health. Recognizing the importance of efficient inventory control for cost management, customer satisfaction, and overall operations, the study will analyse the connection between inventory practices and economic indicators like profitability and resource utilization. The goal is to provide valuable insights that Arogya Garments can use to optimize its inventory strategies. Ultimately, this study not only helps Arogya Garments improve efficiency and strengthen its market position but also contributes to a wider understanding of how inventory management within the textile industry.**

Index Terms— **ABC Analysis, ABC-FSN Matrix FSN Analysis, Levels of inventory**

I. INTRODUCTION

The fact that the textile industry performs in a fast-changing environment makes the inventory management as one of the components necessizes by the organization to thrive. Arogya's Garments, being the prime figure in the trade, faces the problem of maintaining proper inventory status to answer the consumers' desire but lessening the holding fees. This work intends to dive into the impact of inventory management practices at Arogya Garments.

Inventory management is a crucial aspect that facilitates efficiency in operations, cost control, and customer satisfaction. An enterprise can achieve the balancing of risk of not having in stock with too much over-stocking by maintaining optimal inventory levels. This in its turn influences the enterprise activity in a direction of using the resources optimally and enhancing profitability. Even though it calls for capacity planning and implementation of the right inventory management techniques, attaining this precision in stocking up remains a main challenge.

Arogya Garments is the fact that many of the textile-related companies must deal with demands that fluctuate regularly, with disruptions of supply chain and faced the challenge of inventory obsolescence as well. Thus, the economic effect of implementing the inventory management practices is considerable, hence the way the inventory practice they use directly affect their economic results necessitates understanding.

This study will include studying correlations between different inventory management techniques and some major economic indicators of Arogya Garments. Through the mixed methods approach we are going to apply: a quantitative analysis combined with qualitative inquiry technique, we hope to detect what exactly is wrong with the currently used inventory management strategies and how it is affecting the profitability, the operational effectiveness, and the customer satisfaction.

This study not only help Arogya Garments in its efforts, but also, it has a value outside the concern of Arogya Garments. This way its results could be used by the industry, more generally, as a source for study on the best practice inventory management, and beyond the sector, it may discover plenty of insights valuable for similar organizations facing the same challenges.

NEED AND SCOPE OF STUDY

Inventing the effect of inventory management techniques used in the case of Arogya Garments is paramount for improving the operational efficiency levels, decreasing the costs, and increasing customer satisfaction. The study main purpose is identifying techniques the business utilizes for managing its inventory and correlating these with economic results such as profitability and assets utilization. It strives to help the practitioner by identification of areas to improve in techniques used for such as demand forecasting and reorder points and at the same time-sharing ideas on how to make those techniques more effective. The report will be achieved thorough both qualitative analysis and quantitative review and the recommended coping mechanism for the management of items, streamlining of procedure and risks reduction will be proposed. Finally, the results will come to help decision-making of strategic management team of Arogya Garments enabling the company to gem its leading position on the textile market.

OBJECTIVES:

- To know about the various stock records maintained by Arokya garments.
- To determine the levels of inventory at Arokya garments
- To categorize the inventory using ABC model and FSN Model.
- To analysis using ABC - FSN matrix

II. REVIEW OF LITERATURE

The progress of numerous organizations relates to their capacity to give merchandise and administrations at right quality, amount and at the right area. In view of this reason, this study analyses stock administration rehearses in Contract Pastry shop and their belongings on monetary execution. Kehinde Busola, E., Ogunnaike Olaleke, O., & Adegbuyi, O. (2020)

Computer spare parts (CSPs) inventory management (IM) is vital for some organizations. Abundance stock prompts high-capacity costs. Then again, the absence of CSP firmly affects the nature of administration. The level of benefits made by this organization is 48%, and this requires a

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mediation to forestall misfortunes. Emar, W., Al-Omari, Z. A., & Alharbi, S. (2021).

The review inspected ABC examination stock administration practice and item nature of assembling firms, an investigation of De Joined Food Sources Businesses Restricted. The goal of the review was to research the impact of ABC investigation on item nature of De Joined Food Varieties Enterprises Restricted. Jesujoba, E. O., & Adenike, A. A. (2021).

The review surveyed the inventory management (IM) systems that are involved by SMEs in the assembling area of Harare, Zimbabwe. The review included the populace from Glenview complex. Siya So Mbare, Kuwadzana, Gaza land and Magaba modern destinations. Hamandishe, T., & Kanyepe, J. (2019)

Storage warehouses are used by all kinds of organizations to ensure that sales and production go properly. This study will address ways to better manage the large inventory of community enterprises in Udonthani province by using ABC analysis to divide product categories into three groups based on the value of products that turn over during the year: Group A, Group B, and Group C. These groups are ranked in order of significance. The annual inventory value of Groups A, B, and C is based on the research outcome. Muenjitnoy, A., Seanbudda, P., & Kuanmuang, S. (2023, March)

This study examined how inventory control management systems affect businesses. The performance in Tanzania's manufacturing sector: an analysis of a Mwanza City-based food and beverage manufacturing company. The study's explicit goals were to identify the kinds and purposes of inventory control management procedures are used to ascertain how these procedures effect organizational performance as well as how technology used to operationalize inventory control management procedures affects performance inside the business. Mbugi, I. O., & Lutego, D. (2022).

Since having too much or too little inventory is undesirable, the aim of inventory management in a manufacturing company is to maintain the ideal level balance. It is indisputable that good inventory management contributes significantly to a company's high success, especially in the industrial sector. Adato, A. A. (2022).

The study's objective was to examine the ABC-VEN Matrix-based pharmaceutical inventory management in a few West Shewa zone healthcare facilities. From March 15, 2019, to May 31, 2019, a facility-based cross-sectional study was carried out in medical institutions within the West Shewa zone. The data was analyzed using an MS Excel spreadsheet. In the three years between September 12, 2015, and September 5, 2018, approximately 539 medicinal products. Deressa, M. B., Beressa, T. B., & Jemal, A. (2022)

The health industry has stepped up throughout the outbreak. This is because the healthcare sector has grown because of the rising demand for drugs and medical supplies to treat COVID-19. Developments in the manufacturing sector are closely related to the robustness of the supply chain. Suryaputri, Z., Gabriel, D. S., & Nurcahyo, R. (2022).

The goals of a business are to create, market, and profit. Whether a company is an industrial unit or a trading organization, inventories are essential to its operations. As a result, this subject becomes extremely important. Sirisha, T., & Kalyan, D. N. B. (2022)

The utilization of spare parts has expanded dramatically in Indonesia due to the country's growing heavy equipment-dependent sectors. Most of these spare parts are still imported, necessitating Indonesian warehouse storage. Rupawan, D. P., & Ishak, D. P. Shortage

The Cutting material stock to the ideal levels without interfering with manufacturing processes is one way that textile companies can become more efficient and competitive in all markets. Umry, T. F., & Singgih, M. L. (2019).

A deficiency of proficient inventory management techniques has been noted in certain Ghanaian organizations, leading to the failure of most of these organizations. The study's goal was to investigate a particular Ghanaian company's current inventory management procedures and internal controls. Otchere, A. F., Adzimah, E. D., & Aikens, I. (2016).

However, the manufacturing industry has not yet fully utilized inventory management techniques. In this study, 146 products were used as raw materials for an assembly, and inventory management techniques such as ABC and VED analysis were used in the manufacturing business. Kumar., Sarika, Yadav., Swatantra, Kumar, Jaiswal. (2021)

This article conducts a contextual analysis of inventory control methods in the Indian manufacturing industry, focusing on ABC and HML analyses. The company aims to manage inventory costs effectively and employs various methods like VED, XYZ, and S-O-S. ABC categorizes items into A, B, and C based on total cost usage, while HML classifies items into high, medium, and low categories based on unit cost. Pragati, Jadhav., M., D., Jaybhaye. (2020).

Efficient inventory management relies heavily on proper inventory classification, where the "Importance and Exception" (CIE) concept plays a crucial role in maximizing efficiency with minimal effort. To optimize and forecast inventory, it is imperative to categorize products effectively. Dinesh, Dhoka. (2013).

This research aimed to enhance inventory management in a footwear company by utilizing indicators derived from various analyses, including ABC classification, demand forecasting, safety stock, reorder point, and economic order quantity. The study classified inventory items based on economic importance through ABC analysis and proposed indicators to determine optimal replenishment moments and purchase lot sizes. Ji, Chang, Liu., Yue, Wu. (2014).

A manufacturing industry's global market inventory stands as a crucial asset. The ABC analysis, widely employed in manufacturing, classifies inventory items as A, B, and C based on annual consumption value, facilitating efficient control over a vast inventory. S.R., Nadarajah., Kamaruddin, Radzuan. (2018).

The core function of production firms involves transforming raw materials into finished goods. Ensuring a seamless production process requires strategic handling of raw materials questions arise about the quantity to purchase, storage methods, release protocols, associated costs, and overall material control. Himanshu, Mahant., Sanjeev, Singh, Chouhan., Abhishek, Yadav. (2012).

III. Research Methodology:

This study is dedicated to exploring the intricacies of inventory management and practices within Arokya garments firm over the last ten years, utilizing a secondary data collection approach. The research methodology is carefully structured to gain a comprehensive perspective on how the company manages its inventory.

The study places a particular emphasis on delving into key inventory management concepts such as Various Levels of inventory, ABC and FSN Analysis. This focused examination aims to provide valuable insights into the practical application of these concepts within Arokya garments day-to-day operations during the study period.

Conducting a temporal analysis is crucial to recognize patterns and trends in Arokya garments inventory management practices over the ten years. This temporal assessment will aid in identifying any notable shifts or adaptations in response to internal or external factors, adding a dynamic element to the study.

This research methodology aims to provide a nuanced and thorough understanding of Arokya garments inventory management practices over the past ten years. The study is poised to contribute valuable insights to the existing body of knowledge in the domain of inventory management. Data collected from these sources will be subjected to a meticulous analysis to extract meaningful insights into the efficiency, challenges, and successes of Arokya garments firm materials inventory management.

IV. Data Analysis and Findings

4.1 ABC ANALYSIS

Rank	PRODUCT	Value	Percentage of Items	Percentage of Value	ABC
1	CLASSIC TRUNK	3900000	2%	13%	
2	PREMIUM VEST (RN)	3216000	4%	24%	
3	ENERGY TRUNK (PKT)	2565000	5%	33%	A
4	HERO BRIEFS (IE)	2160000	7%	40%	
5	REMO BRIEFS	1728000	9%	46%	

TABLE 4.1.1 Category A

Source: (Secondary Data)

Significance of A Category: These are items that are of the highest value or significance to the business. Although they may represent a small portion of the total number of items in inventory, they usually account for a significant portion of the inventory value or sales revenue. It is crucial to closely monitor and manage these items to prevent stockouts or overstock situations.

Category A: These are the top priority items, representing the highest value. They include products such as Classic Trunk, Premium Vest (RN), Energy Trunk (PKT), Hero Briefs (IE), and Remo Briefs. Although they constitute only a small percentage of the total items (9%), they contribute significantly to the overall value (46%). These items should be closely monitored and managed to ensure optimal stock levels and minimize the risk of stockouts.

6	HERO PLUS	1620000	11%	52%	
7	PREMIUM VEST (RNS)	1215000	13%	56%	
8	PREMIUM VEST (CP)	1064250	15%	59%	
9	ENERGY TRUNK (WPKT)	787500	16%	62%	
10	OBITO H/S T-SHIRT	551250	18%	64%	
11	IZOLE PREMIUM PANT	461250	20%	66%	
12	NEPTUNE CTN H/S	450000	22%	67%	
13	JOSHVA TRACK PANT	420000	24%	68%	
14	OLIVER H/S T-SHIRT	387600	25%	70%	B
15	ASTER T-SHIRT	386100	27%	71%	
16	YUVAN BERMUDA	371850	29%	72%	
17	PRINCE CTN LPN F/S	360000	31%	74%	
18	MENS JOGGERS	360000	33%	75%	
19	LUIS TRACK PANT	338100	35%	76%	
20	AUSTIN BERMUDA	336300	36%	77%	
21	ENIYAN TRACK PANT	333000	38%	78%	
22	BEAST TRACK PANT	315000	40%	79%	

TABLE 4.1.2 Category B

Source: (Secondary Data)

Interpretation

Significance of B Category: Items in this category are moderately important. They are not as critical as Category A items, but they still require attention and careful management. They typically represent a moderate portion of the inventory value or sales revenue.

Category B: These items are moderately important and have moderate demand and unit costs. Theses includes Hero Plus, Premium Vest (RNS), and Premium Vest (CP). They represent a higher percentage of items (29%) compared to Category A but contribute to a lower percentage of the total value (26%). Effective inventory management strategies should be employed for these items to balance stock levels and costs.

23	PRIME MENS T-SHIRT	283500	42%	80%	
24	YOUNG BERMUDA	270900	44%	81%	
25	LUFFY MENS T-SHIRT	270000	45%	82%	
26	BENTLEY TRACK PANT	263250	47%	83%	
27	ANT MAN TRACK PANT	260100	49%	84%	
28	COOPER F/S T-SHIRT	242250	51%	85%	
29	OTIS SHORTS	241500	53%	86%	
30	SMITH PNT CLR W.O/PKT T	240000	55%	86%	
31	SMART TRACK PANT	228000	56%	87%	
32	KIMBER TRACK PANT	228000	58%	88%	C
33	BUTTLER TRACK PANT	222000	60%	89%	
34	MIKE TRACK PANT	220500	62%	89%	
35	VARMA T-SHIRT	219000	64%	90%	
36	STEVE COLLAR TS	210000	65%	91%	
37	HELMER TRACK PANT	209100	67%	92%	
38	SANDY TRACK PANT	200250	69%	92%	
39	HERO BRIEFS	190500	71%	93%	
40	AQUA-MAN JOGGERS	188100	73%	94%	
41	DANIEL SHORTS	184500	75%	94%	
42	JAWAN 3/4th PANT	182850	76%	95%	
43	LEX LYCRA JOGGERS	180900	78%	95%	
44	SPIKE TRACK PANT	169650	80%	96%	
45	FREDDIE JOGGERS	157500	82%	97%	
46	ERIC TRACK PANT	155775	84%	97%	
47	AKHIL JOGGERS	148350	85%	98%	
48	ALFA BERMUDA	144000	87%	98%	C
49	EDGAR PNT CLR PKT TS	117300	89%	98%	
50	OPTIMUS TRACK PANT	116100	91%	99%	
51	FRANK COLLAR PKT TS	103500	93%	99%	
52	ALAN PRT BERMUDA	91200	95%	100%	
53	LEE TRACK PANT	72000	96%	100%	
54	HARVIS PN CLR W.O/PKT T	34500	98%	100%	
55	CHARLIE JOGGERS	33600	100%	100%	

TABLE 4.1.3 Category C

Source: (Secondary Data)

Interpretation

Significance of C Category: These items are of relatively low value or significance compared to Category A and B items. While they may represent a large portion of the total number of items in inventory, they usually contribute only a

small percentage of the inventory value or sales revenue. Management focus on these items is typically lower, and they may be subject to more relaxed inventory control policies.
Category C: These 33 Products have the low value. They constitute most of the total items (62%) but contribute less to the overall value (28%). That include various T-shirts, Bermudas, and Track Pants. While individually they have lower value, collectively they still contribute to the inventory and need to be managed efficiently to avoid overstocking.

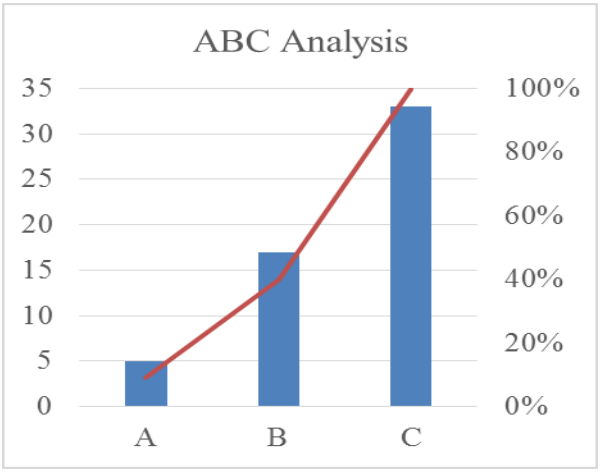


Figure 4.1
Source: (Secondary Data)

Pareto charts complement ABC analysis by visually highlighting the most significant inventory items (Category A), aiding in resource prioritization and performance improvement. They facilitate focused efforts on managing vital few items, ensuring optimal stock levels, procurement, and strategic decision-making. Pareto analysis enhances ABC's effectiveness, guiding efficient resource allocation and continuous improvement in inventory management practices.

4.2 FSN ANALYSIS

TABLE 4.2.1 Fast-moving Items

No.	PRODUCT	Sales	FSN
1	CLASSIC TRUNK	3300000	
5	HERO BRIEFS (IE)	2240000	
6	PREMIUM VEST (RN)	2376000	
4	HERO BRIEFS	1560000	
10	HERO PLUS	4125000	
2	ENERGY TRUNK (PKT)	1120000	
9	REMO BRIEFS	525000	
3	ENERGY TRUNK (WPKT)	540000	F
7	PREMIUM VEST (RNS)	360000	
8	PREMIUM VEST (CP)	330000	
43	BENTLEY TRACK PANT	270000	
35	CHARLIE JOGGERS	290000	
55	IZOLE PREMIUM PANT	348000	
44	ANT MAN TRACK PANT	411800	

Source: (Secondary Data)

Interpretation
FSN analysis helps in identifying fast-moving items, which are crucial for meeting customer demand promptly.
Significance lies in ensuring optimal stocking levels to prevent stockouts and maintain high service levels. Prioritizing fast-moving items ensures timely fulfillment of customer orders, leading to enhanced customer satisfaction and loyalty.
Fast-moving Items: These 14 are products have categorized as **F** has a high consumption rate and generate significant sales. They are crucial for maintaining and monitored to ensure continuous availability.

42	SMART TRACK PANT	322000	
50	BUTTLER TRACK PANT	252000	
33	MENS JOGGERS	199800	
38	JOSHVA TRACK PANT	202500	
49	SANDY TRACK PANT	455600	
14	COOPER F/S T-SHIRT	347480	
24	PRINCE CTN LPN F/S	378000	
17	LUFFY MENS T-SHIRT	344000	
11	VARMA T-SHIRT	200000	
16	OBITO H/S T-SHIRT	296000	
18	OLIVER H/S T-SHIRT	141800	
15	ASTER T-SHIRT	233640	S
32	FREDDIE JOGGERS	133000	
29	OTIS SHORTS	159620	
37	LEX LYCRA JOGGERS	110500	
25	DANIEL SHORTS	180000	
30	ALFA BERMUDA	240000	
13	PRIME MENS T-SHIRT	114000	
28	AUSTIN BERMUDA	108300	
26	YOUNG BERMUDA	109200	
36	AQUA-MAN JOGGERS	196000	
27	YUVAN BERMUDA	68000	
53	ERIC TRACK PANT	96000	

TABLE 4.2.2 Slow-moving Items
Source: (Secondary Data)

Interpretation
Identifies slow-moving items that require careful management to prevent overstocking and excessive holding costs. Significance lies in maintaining sufficient inventory levels to meet sporadic demand while minimizing the risk of obsolescence.
By managing slow-moving items efficiently, businesses can reduce holding costs associated with excess inventory, freeing up capital for more profitable investments.
Slow-moving Items: The 23 products categorized as S has a moderate sale; their movement rates are relatively slower compared to fast-moving items. Businesses should assess the reasons behind their slow movement and consider strategies to boost sales or manage inventory levels efficiently.

12	NEPTUNE CTN H/S	102000	
54	LUIS TRACK PANT	73600	
34	AKHIL JOGGERS	63000	
45	OPTIMUS TRACK PANT	63000	
48	ENIYAN TRACK PANT	72000	
52	HELMER TRACK PANT	51300	
39	JAWAN 3/4th PANT	30000	
40	MIKE TRACK PANT	55000	
47	BEAST TRACK PANT	56350	N
41	LEE TRACK PANT	98400	
46	SPIKE TRACK PANT	36270	
19	STEVE COLLAR TS	52900	
31	ALAN PRT BERMUDA	43700	
20	FRANK COLLAR PKT TS	76000	
23	MITH PNT CLR W.O/PKT T	54000	
51	KIMBER TRACK PANT	60000	
22	EDGAR PNT CLR PKT TS	57000	
21	ARVIS PN CLR W.O/PKT T	27750	

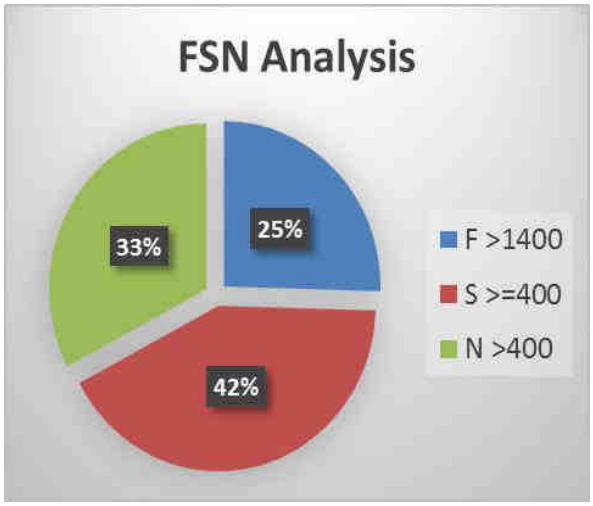
TABLE 4.2.3 Non-moving Items:
Source: (Secondary Data)

Interpretation
Identifies non-moving items that pose the risk of obsolescence or dead stock. Significance lies in taking prompt action to liquidate or dispose of these items to minimize losses and free up storage space.

Eliminating non-moving items streamlines inventory operations, reduces clutter, and enhances overall operational efficiency.

Non-moving Items: The 18 Products categorized as N has a minimal sales activity. This indicates potential issues such as low demand, product obsolescence. It is essential to address the root causes of non-movement and take appropriate actions, such as clearance sales or discontinuation, to prevent inventory stagnation and free up warehouse space.

Figure 4.2



Source: (Secondary Data)

FSN analysis offers specific benefits for each category of inventory items, ranging from efficient inventory management and risk mitigation to improved customer satisfaction and working capital optimization. By leveraging FSN analysis, businesses can tailor their inventory management strategies to the unique characteristics and significance of each category, ultimately driving better outcomes and profitability.

4.3 Various Levels of Inventory

Formula:

Minimum Level = ROP – [Normal Consumption * Each Unit of Cotton * Avg. time]

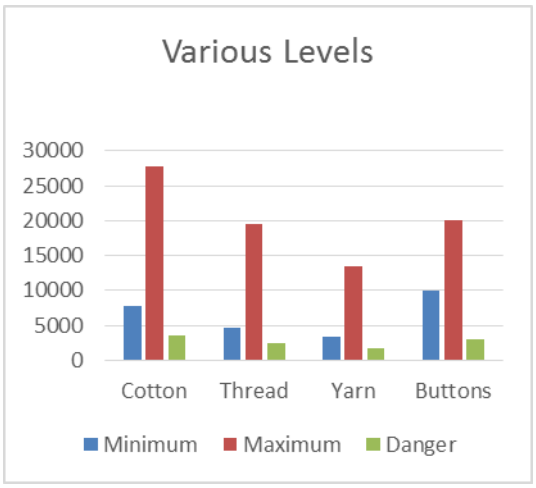
Maximum Level = ROP + ROQ – [Minimum Consumption * Each Unit of Cotton * Avg. time]

Danger Level = Avg. Daily Demand * Lead time for emergency Supplies

Table 4.3.1 Various Levels of the Inventory

Raw Material	Various Levels		
	Minimum	Maximum	Danger
Cotton	7800	27800	3500
Thread	4600	19600	2380
Yarn	3400	13400	1680
Buttons	10000	20000	3000

Figure 4.3



Source: (Secondary Data)

Interpretation

Minimum Level:

The minimum inventory level for cotton is 7800 kilograms. Cotton is a primary raw material used in textile manufacturing. The thread is 4600 kilograms. Thread is essential for stitching fabrics together, and having enough stock on hand prevents production delays and ensures the timely completion of garments. The minimum inventory level for yarn is 3400 kilograms. Yarn serves as the basic building block for weaving or knitting fabrics. The minimum inventory level for buttons is 10,000 pieces.

Maximum Level:

The maximum inventory level for cotton is 27,800 kilograms. The maximum inventory level for thread is 19,600 kilograms. Like cotton, maintaining a higher maximum inventory of thread enables bulk purchasing. The maximum inventory level for yarn is 13,400 kilograms. A higher maximum inventory of yarn provides a buffer against supply chain disruptions. The maximum inventory level for buttons is 20,000 pieces. This level ensures an ample supply of buttons for garment production.

Danger Level:

Cotton is the primary material, for danger level quantity of 3500 kilograms.

The danger levels of Thread are 2380 kilograms, its importance in the production of the final product.

Sub-Category	No. of item	% of item	Usage value	% usage value
Sub-Category I	14	26%	37260250	70%
Sub-Category II	26	47%	12788515	24%
Sub-Category III	15	27%	3111620	6%

4.4 ABC-FSN Matrix Analysis

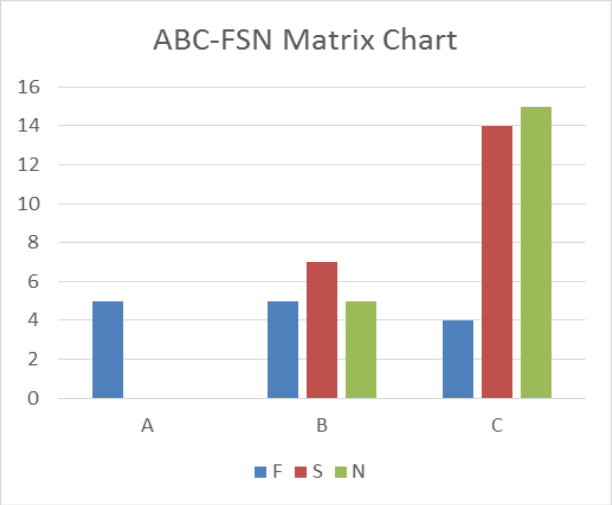
The combined analysis of ABC and FSN is done using three-dimensional selective inventory control model. The ABC – FSN matrix

TABLE 4.4.1: ABC-FSN matrix analysis

CLASS	A	B	C	Total
F	5	5	4	14
S	0	7	14	21
N	0	5	15	20
Total	5	17	33	55

Source: (Secondary Data)

Figure 4.4.1



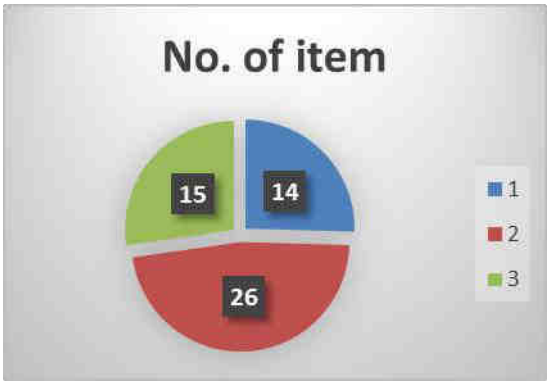
The ABC-FSN Matrix Analysis in which the composition of fast moving, slow moving and non-moving inventory in class A, class B and class C is indicated accordingly.

TABLE 4.4.2 Sub-category of ABC-FSN matrix element

ABC-FSN matrix element	SUB-CATEGORY	% by volume	CONTROL	REVIEW	STOCKING REMARKS	PLACE IN STORE
AF	I	7.89	Strict	Superior	Maximize	Counter
AS	I	18.94	Strict	Superior	Maintain	Rack
AN	I	1.57	Strict	Superior	Elimination needed	Back store room
BF	I	3.15	Strict	Superior	Maintain	Rack
CF	I	0.52	Strict	Superior	Keep safety stock only	Counter
BS	II	23.68	Moderate	Periodic	moderate	Rack
BN	II	3.68	Moderate	Periodic	Keep safety stock only	Back store room
CS	II	25.78	Moderate	Periodic	Minimize up to safety stock	Rack
CN	III	14.73	Less	Not needed	Minimize	Back store room

ABC-FSN Matrix

Figure 4.4.2



Source: (Secondary Data)

- Category I composed of AF, AS, AN, BF, CF, which utilized 70% of Value.
- Category II comprised of slow-moving items BS, BN, and CS, utilized 24% of Value.
- CN group was under category III.

V. SUGGESTIONS AND CONCLUSION:

ABC Analysis

Category A items, being the most valuable and critical, require focused attention.

This entails continuous monitoring, precise demand forecasting, and efficient replenishment strategies to maintain optimal stock levels and promptly meet customer demands. Items in Category B, with moderate importance, need to strike a balance between stock levels and costs. Although Category C items may have low value, they collectively contribute significantly to the inventory. Employing efficient management practices such as inventory rotation, negotiating better pricing with suppliers, and periodic clearance sales can help optimize inventory levels and reduce carrying costs for these items.

FSN Analysis

The FSN analysis highlights the varying performance levels of products, ranging from fast-moving to non-moving items, indicating a diverse inventory mix. The presence of a significant number of slow-moving and non-moving items suggests an imbalance in inventory management, possibly due to overstocking or inaccurate demand forecasting. Fast-moving items contribute significantly to overall sales, underscoring the importance of effectively managing these high-performing products to maximize profitability. Implement strategies to reduce excess inventory levels, such as clearance sales, product bundling, or liquidation. Explore opportunities to enhance the visibility and promotion of slow-moving items to stimulate sales. Regularly monitor inventory performance metrics and adjust inventory management strategies accordingly to maintain a healthy balance between fast-moving and slow-moving items

Various Levels of Inventory

Consider maintaining a buffer stock of raw materials above the minimum inventory levels to mitigate the risk of stockouts. This buffer can act as a safety net during periods of increased demand or supply chain disruptions. Consider diversifying the supplier base for critical raw materials like

buttons to reduce dependency on a single source. Having multiple suppliers can provide flexibility and resilience in the face of supplier disruptions or quality issues. Maintaining high inventory levels requires adequate storage space. The significant quantities of cotton, thread, and yarn imply the need for spacious and well-organized storage facilities. Insufficient storage capacity could lead to congestion, accessibility issues, or deterioration of stored materials. Collaborate closely with suppliers to establish transparent communication channels, share demand forecasts, and negotiate flexible delivery schedules. Building strong partnerships with reliable suppliers can help mitigate supply chain risks and ensure timely replenishment of raw materials without the need for maintaining excessively high. Cotton emerges as the most significant raw material in this context. Its substantial requirement suggests that any disruption in the cotton supply chain could severely impact production. Maintain buffer stocks of critical materials like cotton, thread, and yarn. Optimize stock levels to balance the continuity of supply and minimize carrying costs.

CONCLUSION

Effective inventory management is vital for AROKYA GARMENTS' financial health and competitive edge. By optimizing stock levels, the company reduces storage costs and prevents lost sales, leading to improved cash flow and profitability. Additionally, timely order fulfilment keeps customers happy, fostering loyalty and repeat business. Furthermore, efficient inventory management streamlines operations, minimizing wasted resources. Finally, by adapting inventory strategies to market trends and customer desires, AROKYA GARMENTS gains a significant advantage over competitors. These inventory management strategic investment that fuels AROKYA GARMENTS' growth and solidifies its standing within the garment industry.

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