

# A Study of effect of Assortment planning on Inventory Management in Retail Sector

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## Abstract

**Introduction** : The Retail Industry today is mainly divided into the Fast Moving Consumer Goods (FMCG) and White Good industry. The FMCG industry of the brick and Mortar shops is being fast overtaken by the e-commerce sites such as Big basket, Super Daily Etc. However, the white goods industry for Consumer Electronics (Except Mobile phones, laptops and accessories) is still reliant on the age old brick and mortar shops to a large extent. The subject paper would like to explore the relations between the age old retail management model of Assortment Planning and deduce a relationship with the Inventory Management model.

**Significance** : The study is aimed at understanding the inventory management systems of White good retailers. The current system is then to be compared with various best practices in the inventory management principles applied globally.

### Research Methodology :

In the secondary data collection, the author will collect all the relevant data and reports from the previous researchers in the field of assortment planning in retail stores.

**Scope** : To understand the relationship between the Assortment Planning Model vis-a-vis the Inventory Management techniques so as to optimise the stocks for white goods in brick and mortar shops.

**Findings/Result** : The success of assortment planning can be measured using the level of customer satisfaction with the retailers' product assortments and the buyer's evaluation of the quantitative decisions they made. Findings from these previous studies imply that the success of assortment planning is influenced by the use of related merchandising and other factors.

**Keywords:** Assortment Planning, Inventory Management, FMCG, Retail Sector, White Goods Industry

### 1. Introduction

Assortment strategies are utilized by retailers in blocks and concrete and online business to choose a regular schedule how to allot stock to their stores as a major aspect of their product arranging forms. Such methodologies are vital for retailers since they straightforwardly influence how their clients associate with their product, and along these lines, their image. The choices that these methodologies help make are what to offer, where to sell it, when to sell it, who to offer it to, and the

amount to sell . The purchasers have various inclinations of items and retailers must offer the variety of items that fulfills the requirements of different shoppers . So as to augment the retailers target of upgrading benefit viable of limitations like constrained space accessible for show, characterized financial plan for the quantity of items and their SKU's, it is relevant that stock conveyed to meet an ideal help level and last yet not the least to satisfy the consistently changing necessities of the purchasers is optimised.

Assortment planning (AP) is a procedure of choosing types and number of item to be kept from a given product offering and furthermore to decide the ideal degree of stock of these items. The basic issue looked by the retailer during the time spent AP is to evaluate the interest for every item and further utilizing these interest appraisals to build up a benefit work and picking the best exhibit of items to augment benefit under different requirements (Rajaram, 2001).

Stock Management is basically about determining the shape and situation of supplied merchandise. It is required at various areas inside an office or inside numerous areas of a gracefully system to go before the standard and arranged course of creation and supply of materials<sup>1</sup>.

## 2. Rationale of the Study

One of the most important aspects of the retail management philosophies is to ensure that the retailer is able to manage his stocks based on the market understanding and is able to cater to all of its customers without any stock outs and maintain optimum inventory levels. However most of the small and medium sized shops are not able manage and maintain its inventory due to various limitations in terms of space, working

capital and understanding of the changing demand in the market.

The study is aimed at understanding the inventory management systems of White good retailers. The current system is then to be compared with various best practices in the inventory management principles applied globally. Finally the author would attempt to find a approach that would help the retailer to better understand his current inventory and to ensure to maintain the inventory at optimum levels without foregoing the profitability and facing stock outs.

## 3. Review of Literature

Assortment planning is basically about determining the shape and situation of supplied merchandise. It is required at various areas inside an office or inside numerous areas of a gracefully system to go before the standard and arranged course of creation and supply of materials. See Kök et al. (2008) for a more extensive review.

Consumer decision models establish the principal stage for variety arranging, and might be classified as (1) utility based models, and (2) exogenous demand models. While the utility based models accept that each purchaser partners utility with each product the retailer can identify the market share of each SKU once the utilities distribution is known by the retailer, the Exogenous Demand model assumes that every consumer has its own set of favourite products and the utility of the product reduces with substitution of the favourite product. These models help the retailer to arrive at different set of assortment based on the different underlying assumptions of utility of the product.

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<sup>1</sup>Inventory Management - <https://en.wikipedia.org/wiki/Inventory>

#### 4. **Statement of Research Problem**

The Research problem tries to minimize inventory costs for white goods as the space required and costs of white goods is high. The techniques of the various inventory management problem are Economic Order Quantity (EoQ) where optimum quantity at which order shall be placed to reduce the inventory costs for an establishment.

Assortment optimisation means choosing a lot of products to offer to a gathering of clients to maximise revenue. The various depended factors for assortment planning are self service, shelf space and inventory management. If the retailer fails on proper assortment management and optimisation, the shelf space is wasted as well as inventory costs increase. The various factors that are used for the proper assortment planning are Days of Sale (DOS) which indicate the number of days it takes for the product to run out if the sales continue at the same speed often evaluated on the 30-60-90 days basis.

Safety stock is considered to estimate the stock out based on the market demand and the expected fluctuations. The problem of the retailer is to understand the level of stock that he has to maintain at his end based on the factors such as stock out and overstocking leading to higher inventory costs.

#### 5. **Research Objectives**

The research would be focussed on identifying the following:

1. To study existing inventory management philosophies in accordance with Assortment Planning.
2. To identify the need for future study.

#### 6. **Need and Importance**

The empirical work will help us understand the current inventory levels in the retail shops and help achieve optimum inventory levels for the white goods shop. The significance of the test will help us in understanding the gaps in the theoretical and actual methods of assortment planning and inventory management in the real world.

Secondly, the research will help the retailers in summing up the current hypothetical work to deal with progressively complex issues looked by the retailers for better store operations and better financial management for the stores.

#### 7. **Research Methodology**

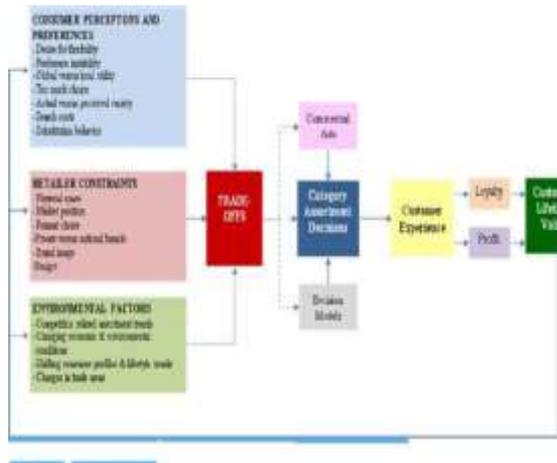
In the secondary data collection, the author will collect all the relevant data and reports from the previous researchers in the field of assortment planning in retail stores. This would encompass data on various demand models used by the retailers for stocking and assortment planning in the retail stores. The author will also look for data on the various inventory management techniques used by the retailers and take into consideration research done on the topic.

#### 8. **Scope of the Study**

The retail industry comprises of Food retailers, softline retailers (such as food, clothing, fabrics footwear toiletries etc), grocery and convenience retail, Hardline retailers (Automobiles, appliances, electronics and mobiles, sporting goods etc), and specialist retailers (such as antique shops, perfume shops, bookstores, musical instruments etc). Scope is to understand the pattern in different type of retail shops with different sizes and products.

## 9. Findings

### Product Assortment Planning Model -



Successful assortment planning provides the right products at the right price and time to the right customers and does not lead to losses in current or potential sales. Therefore, the success of assortment planning can be measured using the level of customer satisfaction with the retailers' product assortments and the buyer's evaluation of the quantitative decisions they made. Findings from these previous studies imply that the success of assortment planning is influenced by the use of related merchandising and other factors.

In business, a firm's performance can be measured in a variety of ways including the continuation of profit for the firm. In business, a firm's performance can be measured in a variety of ways including the continuation of profit for the firm. Other than the accomplishment of variety arranging, retail location activity factors (i.e., store the executives, deals work force, advancement of product) may influence firm execution.

### 7. Limitations of the Study

The first restriction is that our evaluating proposals disregard the impacts of replacement. Evaluating changes may adjust the valuations and decisions that

buyers make. Thus, it is significant for the establishment to remember this impediment and further gauge the adjustments popular or clients' future valuations. This could be accomplished by bothering costs and watching the subsequent interest and reexamining clients' reactions.

The subsequent restriction is that buyer reactions to value changes may change the ideal combination of various classes both in costs and limit offered at that cost. The combination choice can be concentrated with extra information on how clients showed up at their uncovered inclinations.

A third impediment is the failure to consolidate costs legitimately into our model and study its belongings in detail, as it won't be conceivable to accumulate granular costs at the purchaser level. This will introduce an open door for future examination to all the while study the effect of cost and area on shopper valuations.

The last and final limitation will be that of the central tendency bias as a part of the research methodology process where the customer tends to avoid extreme responses during an interview. Though all attempts will be made to identify and design a questionnaire that will help mitigate this bias, time availability will be one of the major constraints to design an ideal survey questionnaire for the same.

### References

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