

# A Study on the Application of Operations Management in an Apparel Industry

Sumana Bhattacharjee

Shillong Engineering & Management College, Meghalaya

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## ABSTRACT

Operations management focuses on carefully managing the processes to produce and distribute products and services. Major, overall activities often include product creation, development, production and distribution. . India's textiles sector is one of the oldest industries in Indian economy dating back several centuries. In this paper, the functioning of merchandising, sampling department and fabric sourcing of an apparel industry in Tamil Nadu is discussed in detail.

**Keywords:** merchandising, sampling department, fabric sourcing.

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## I. INTRODUCTION

Operation is concerned with the transformation of inputs into the required output or services. Management is the continuous process, which combines and transforms various resources used in the operations system of the organization into value added services. Operation Management is the set of interrelated management activities, which are involved in manufacturing of certain products or services. It is a field of management that deals with effective planning, scheduling, use and control of a manufacturing or service organisation. According to S. Buffa 'production or operation management deals with decision making related to production process so that the resulting goods and services are produced according to specifications ,in the amount and by the schedule demanded and at a minimum cost'. The Association of Operation Management defines operation management as 'the field of study that focuses on the effective planning ,scheduling, use and control of manufacturing or service organisations through the study of concepts from design engineering, industrial engineering, MIS, quality management, production management, industrial management and other functions as they affect the organisation'. Operation management is the business function that manages that part of a business that transforms raw materials and human inputs in to goods and services of higher value. It is a business activity that deals with the production of goods and services. The term operation includes management of materials, machines, and inventory control and storage functions. Operations management includes a set of activities performed to manage the available resources in an efficient manner in order to convert inputs in to desired outputs. Operations in an organization can be categorised into manufacturing operations and service operations. Manufacturing operations is a conversion process that includes manufacturing yields a tangible output: a product, whereas, a conversion process that includes service yields an intangible output: a deed, a performance, an effort.

Operation managers are concerned with planning, organizing, and controlling the activities which affect human behaviour through models. India's textiles sector is one of the oldest industries in Indian economy dating back several centuries. Even today, textiles sector is one of the largest contributors to India's exports with approximately 13 per cent of total exports. The textiles industry is also labour intensive and is one of the largest employers. The textile industry has two broad segments. First, the unorganised sector consists of handloom, handicrafts and sericulture, which are operated on a small scale and through traditional tools and methods. The second is the organised sector consisting of spinning, apparel and garments segment which apply modern machinery and techniques such as economies of scale.

Karur is a city in the Kongu Nadu region of India in state of Tamil Nadu. Karur is one of the oldest towns in Tamil Nadu and has played a very significant role in the history and culture of the Tamils. Karur is a major home textile centre and has five major product groups — bed linens, kitchen linens, toilet linens, table linens and wall hangings. The town generates around ₹6000 crores in foreign exchange through direct and indirect exports. Allied industries like ginning and spinning mills, dyeing factories and weaving employ around 300,000 people in and around Karur. Handloom Exports from Karur began on a modest scale with just 15 exporters in 1975 Karur is also home to an integrated textile park, the ₹130 crore Karur Textile Park Limited (KTPL) a premier facility of its kind in the country for its technical and ancillary facilities. Overall, according to the recent status Karur makes around Rs 6,000 crore (\$300 million) a year in foreign exchange through direct and indirect exports. With associated industries like ginning and spinning mills, dyeing factories, weaving, around 3.5 lakh people are labouring in and around the place called the "Karur" or in this made-up manufacturing hub. On the international textile map, Karur has become synonymous with handloom "made-ups" as Tirupur in the hosiery product. The weaving industry came to Karur from Kerala and has

earned a reputation for its high quality handloom products today. Today Karur has thousands of exporters and also their products are being exported to the International leading chain stores. Due to this healthy atmosphere India is enormously gaining its foreign exchange in recent period.

Now let's study the following departments of one such garment industry of karur.

## II. MERCHANDISING

Merchandising is a process through which products are planned, developed, executed and presented to the buyer. It includes directing and overseeing the development of product line from start to finish. Marketing and merchandising department: A team of merchandisers and marketers work together under a profit controls head. Merchandisers handle the foreign buyers. The teams are made according to the buyers being handled. Two type of merchandising is done in garment exports----- marketing merchandising and product merchandising.

### • Marketing merchandising:

Main function of marketing merchandising is product development, costing, ordering. Marketing is a set of activities that begin with identification of need of the product or service and ends with taking the product to the customer and keeping him happy with it. Marketing is not merely promoting a product or service to create the need for it among the targeted consumers but anticipating and satisfying the needs of the customers while at the same time keeping an eye upon the goals of the organization. Merchandising is a subset of marketing. It is the process of presenting the products to the buyer in such a manner so as to affect his buying pattern. It is a very subtle process that affects the buying decisions of a customer in a market place without him getting to know anything about it. Thus, it primarily has to do with placing of products in a manner so as to catch the attention of the customer.

This involves providing all buying information to the customer in an eye catching manner and placing the product in a shelf in such a manner so as to make him go for a particular product. Without merchandising, many products find themselves languishing in the shelves of the stores, in the malls as they have to compete with dozens of other products on their own. This proves it easier for big companies as their products get picked up on the basis of reputation and costly advertising. With a proper merchandising strategy, it is possible for a marketer to sell out a particular product despite severe competition from bigger and better brands. Merchandising takes advantage of the plight of the consumer who faces a glut of information and finds himself with far too many choices. This is done by helping a customer arrive at a buying solution by simplifying his decision making process.

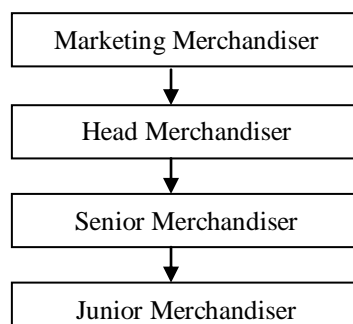
### • Product merchandising:

Product merchandising is done in the unit. This includes all the responsibilities from sourcing to finishing i.e. first sample onwards, the product merchandising work start and ends till shipment.

A Merchandisers' key responsibility is as follows:

- ❖ Product development
- ❖ Market and product analysis
- ❖ Selling the concept
- ❖ Booking orders
- ❖ Confirming deliveries
- ❖ Designing and sampling
- ❖ Costing
- ❖ Raw material
- ❖ Flow monitoring
- ❖ Production follow ups
- ❖ Payment follows

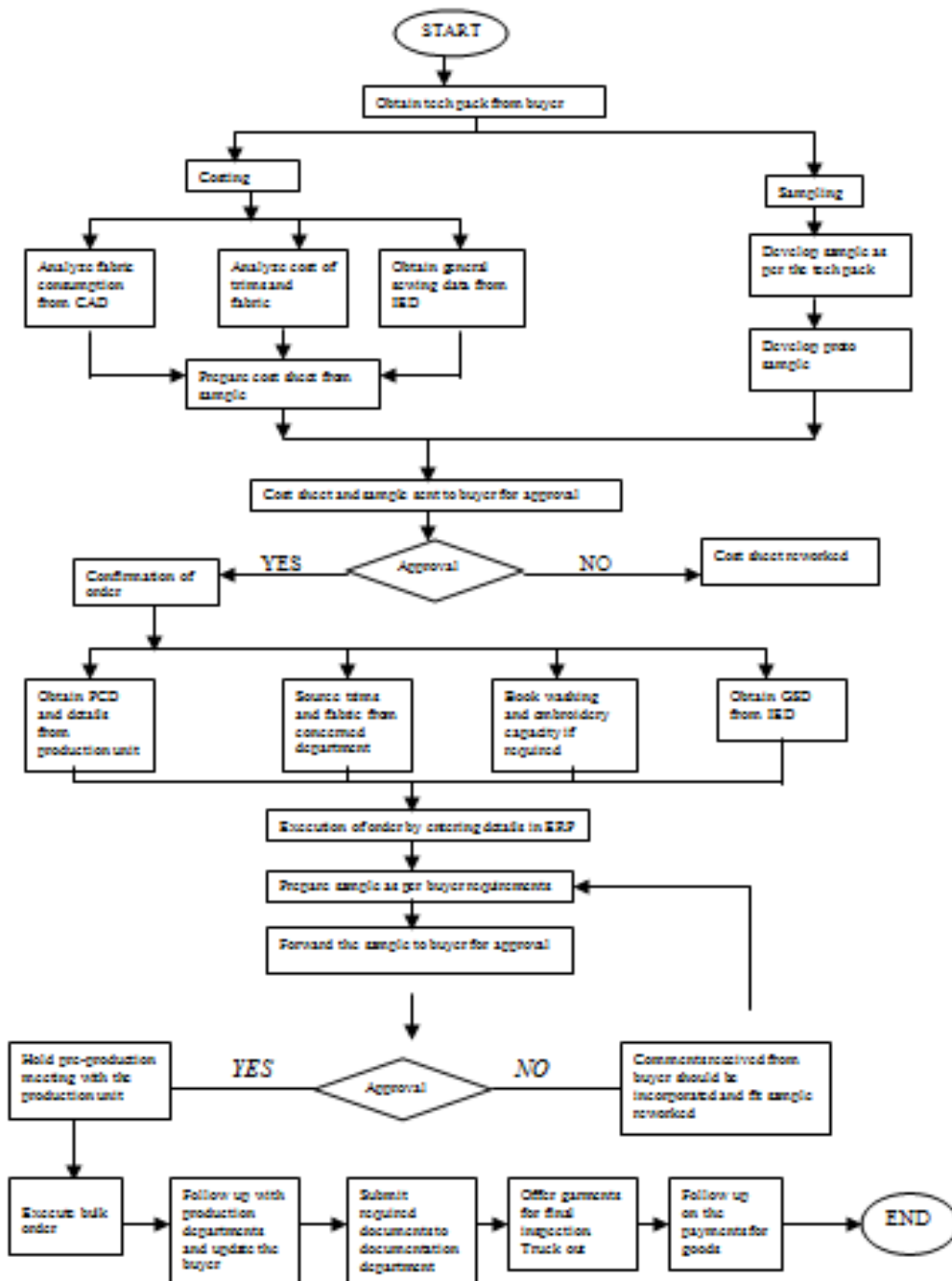
### • Department Structure:



In an export house, merchandising is a combination of business and technical aspects. Senior merchandisers have responsibilities of products development and coordinating with the buyer, the garment styles that meet buyer's expectations in regards to delivery, quality, and price point. Junior merchandiser have the responsibility of handling paper work and follow up, retailing with buyers, oversees communication etc. once the order is placed, it is their duty to complete the necessary paper work, provide breakdown information to all other department and get samples approved for fit, colour and quality. Communication with overseas and domestic suppliers, approval of production samples, and development of fabric and yarns are also included in product development which are coordinated with other departments. Merchandisers have to negotiate with the buyers on pricing, work out delivery schedules, and investigate for future buyers. Overall we can say that merchandising is the core department of the entire industry.

• **Costing:**

The most important activity for the merchant is to estimate correctly and negotiate for the cost of production before the buyer sends on his PO. During the predevelopment stage, an initial costing occurs to get an idea of the garment cost likely to be incurred per piece. These costs include general raw material cost, manufacturing cost, washing cost, mark up cost etc. Once the production sample is approved and the grading done a final costing is done accurately using fabric averages from the CAD, cost of trims etc.



### III. SAMPLING DEPARTMENT

In any export house, the sampling department is one of the most important departments and it plays a vital role in the uplifting of an unit. Sampling department directly coordinates with the merchandising and production department. Sampling is done to see how the product will look like when produced in bulk and to check whether there are any discrepancies in the pattern are made according to the buyer's specification.

Merchandiser procures order from the buyer. The buyer sends specification sheet, sketches, fabric details, establishment details, stitch type etc. to the merchandiser. Merchandiser files this information along with the details regarding costing, average, prototype, fit, correction, size set and approval into a style package and hands it over to the sampling department head. Sampling is the product development stage. It is process by which a small number of garments are made so as to match the buyer requirement and to get approval from the buyer so as to start off the production.

The sampled garments represent the accuracy of the patterns and quality of production skills and techniques. The samples not only serve the purpose of communicating correctly with the buyer regarding their styles and products, but it also helps to calculate the fabric consumption along with that of thread and other accessories used. It is different from bulk production as here each tailor is multi-skilled. This department make samples on the basis of specification and requirements sent by the buyer in the tech pack.

- **Types Of Samples:**

- ❖ Proto Sample
- ❖ Fit Sample
- ❖ Pilot Run Sample
- ❖ Pre Production Sample
- ❖ Pre Size Set Sample
- ❖ Size Set Sample
- ❖ Top Sample
- ❖ Shipment Sample
- ❖ Sales Sample

- **Machine Details:**

There were a total of 300 machines in the sampling department.

- ❖ 250 operators
- ❖ 5 cutting tables
- ❖ 8 pattern making tables
- ❖ 1 conveyor belt fusing machine

- **Finishing Machines:**

- ❖ 11 ironing tables
- ❖ 1 shirt folding machine

After the confirmation of order, each sample send to the buyer has the following details attached to it with the help of a tag. It contains the details pertaining to both, what the buyer has demanded and what supplement fabric/trim etc. they have used(if applicable).

- ❖ Reference Number
- ❖ Colour
- ❖ Fabric

- ❖ Composition
- ❖ Description
- ❖ Quantity
- ❖ Style number/Size
- ❖ Store

#### IV. FABRIC SOURCING

Fabric sourcing department is basically engaged in determining how and where its merchandise i.e fabric will be obtained. It works in coordination with the merchandising department and looks after the delivery of the required goods within the scheduled time and cost. A fabric sourcer must have a knowledge about all varieties of fabric in order to execute their function effectively.

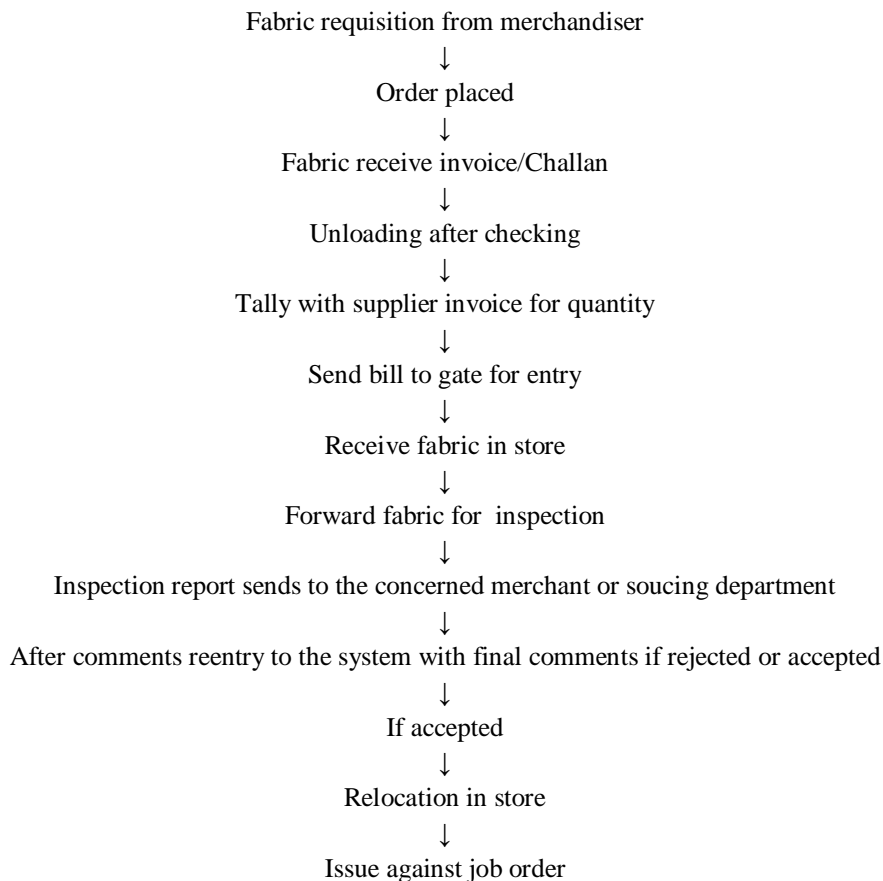
##### • Storage

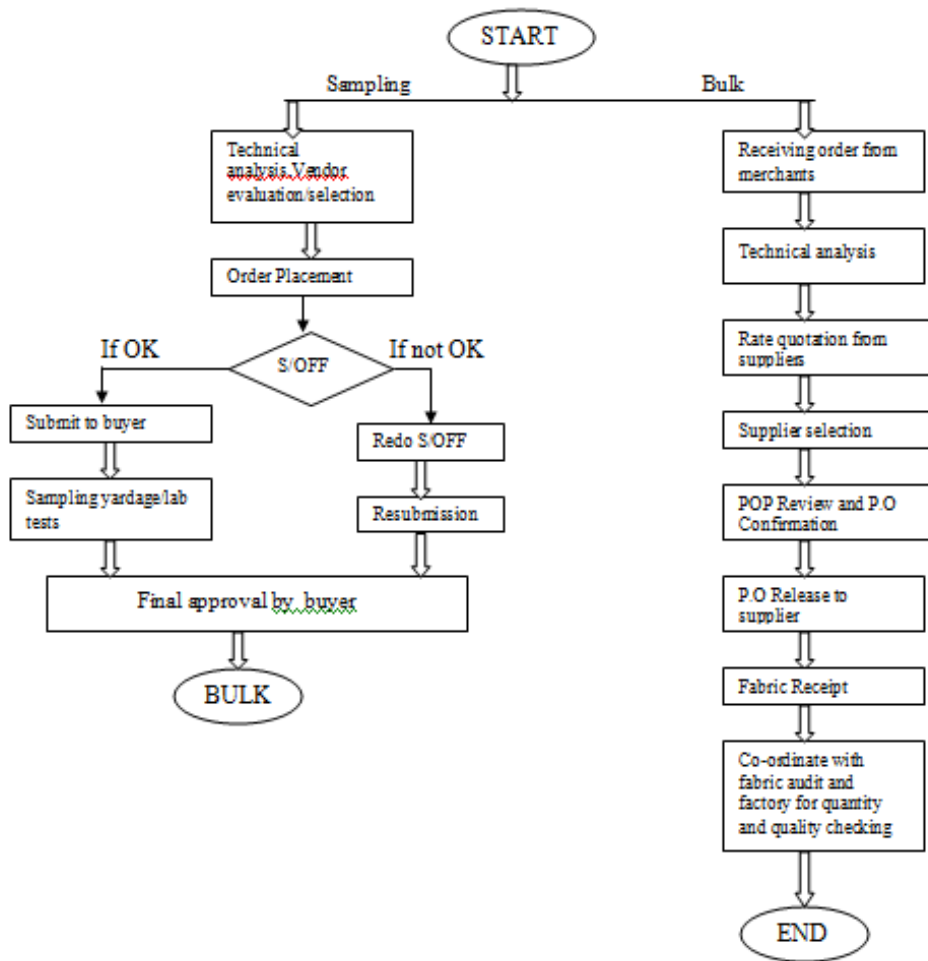
Location system of storage is followed i.e fabric packages are stored in two areas--- (a) checked fabric and (b) unchecked fabric. Such system maintains of the store makes it easy to locate the fabric whenever needed in future.

##### • Fabric Issue

The fabric store issues the fabric for cutting on challan. All fabric is not issued at one go; instead it is issued as required. The challan contains information regarding style number, colour, buyer's name, and quantity to be issued and issued for which production unit.

##### • Fabric Sourcing





### CONCLUSION

Operations management is the business function that plans organises, co-ordinates, and controls, the resource needed to produce a company’s goods and services. It is the process whereby resources, flowing within a defined system, are combined and transformed by a controlled manner to add value in accordance with policies communicated by management. The term operation includes management of materials, machines, and inventory control and storage functions. Operations in an organization can be categorised into manufacturing operations and service operations. Operation managers are concerned with planning, organizing, and controlling the activities which affect human behaviour through models. India’s textiles sector is one of the largest contributors to India’s exports with approximately 13 per cent of total exports. The textiles industry is also labour intensive and is one of the largest employers. Karur is a major home textile centre in Tamil Nadu. The town generates around ₹6000 crores in foreign exchange through direct and indirect exports. Allied industries like ginning and spinning mills, dyeing factories and weaving employ around 300,000 people in and around Karur. A systematic application of operations management leads to the production of high quality goods and services and ensures that the business operations are performed smoothly, efficiently, effectively.

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