

# Chapter 14 Purchasing and supply management

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- Buyers expertise can improve:
  - Progressiveness
  - Profitability
  - Productivity
- Buyers need to be aware of market trends, seasons and state of the market
- Purpose of purchasing and supply function:
  - To provide right material services and equipment
  - At reasonable price
  - Satisfy quality requirements
  - Received in correct quantities
  - At right time right place
- Purchasing supply function should:
  - Select suppliers
  - Purchase and arrange for transport to business
  - Decide what price to accept
  - Determine quality and quantity of materials
  - Expedite and receive materials
  - Control warehousing and inventory holding
  - Determine timing of purchases

## **1. Importance of purchasing and supply**

### **1.1. Greatest expenditure of business**

- Purchasing cost is business greatest expense
- Profit = favorable difference between income and expenditure

### **1.2. Inventory holding**

- Stock is held to prevent disruptions in transformation process
- Aim is to keep inventory levels as low as possible without interrupting operational process
- Reason – large sums of capital is tied up in inventory
- Warehousing 10 – 25% of total investment
- Includes:
  - Financing warehouse
  - Warehouse staff
  - Insurance and obsolescence

### **1.3. Profit leverage**

- If purchasing cost constitute a major portion of total cost of business a saving cost in purchasing has greater profit potential than a similar increase in sales
- Usually greater profit potential in commercial organization than in manufacturing organization

#### **1.4. Contribution to marketing of products**

- By purchasing material at right quality and price and time final products can be available in right quantities
- Retail buyer has greater influence on marketing of merchandise
- Successful marketing = availability of right products, right time, in right quantities

## **2. Management task of purchasing and supply**

### **2.1. Purchasing and supply planning**

- Formulating of objective which purchasing and supply strive to reach by particular future period
- Plans should include optimal application of resources
- 2 levels:
  - Strategic
  - Tactical
  - Operational
- Strategic level
  - Supplier alliances
  - Supply development
  - Supply chain integration
  - Long term planning
  - Availability forecasting
  - Policy formulation
  - In / out sourcing decisions
- Tactical level
  - Systems integration
  - Negotiation
  - Interface development
  - Human resource development
  - Total quality management
  - Contracting
  - Cos reduction techniques
- Operational level
  - Communication with supplier operational staff
  - Expediting
  - File and system maintenance
  - Enquiries and quotations
  - Pricing
  - Returns and recycling

### **2.2. Ongoing supply and purchasing function**

- 4 main issues to be addressed:
  - Place of purchasing and supply in organization structure
  - Internal organization of purchasing and supply function
  - Co-ordination with other functional management areas
  - Cross functional teams

### **2.2.1. Place in organization structure**

- Affected by 2 elements:
  - Centralization or decentralization
  - Hierarchical level of purchasing and supply in organization structure
- Organization with head office and various branches has a few options:
  - Centralized purchasing and supply
  - Each branch does its own purchasing
  - Combination of centralized and decentralized
- Centralized purchasing and supply
  - Standardization of purchasing and supply procedures possible
  - Greater volume of material purchased from one supplier is more cost effective
  - Better discounts for volume orders
  - Enables specialization
- Decentralized purchasing and supply
  - Business comprising different geographical areas
  - Also if plants have different activities
  - Buyers have closer contact with users

### **2.2.2. Hierarchical level of purchasing and supply in organization structure**

- Value of purchased material in relation to total expenditure of business
- Situation in supplier market
- Size of business
- Nature of material purchased and spec knowledge and skills of buyers
- Top management perception

### **2.2.3. Internal organizing of purchasing and supply**

- Informal structure
- Buyer purchase anything that is on his desk
- Get quotes, buy and receive
- Specialist groups
- Certain people order certain things
- Get to know products very well
- Can bring cost savings to company
- Or certain people work with certain suppliers
- They can build long term relationships with suppliers

### **2.2.4. Co-ordination with other functional management areas**

- 3 levels
- Purchasing and supply function must be co-ordinated internally
- Purchasing environment must be co-ordinated with purchasing and supply activities
- Co-ordinated with other functional management areas eg finances, marketing
- To improve co-ordination internally:
  - Open communication
  - Conscious motivation

- Standardization of specifications, procedures and documentation
- JIT and MRP plan and control inventory

### **2.2.5. Cross functional sourcing teams**

- Purchaser co-operates on team and colleagues of other functional management areas to perform tasks which includes:
  - Supplier selection
  - Negotiating corporate wide purchasing agreements
  - Dev cost reduction strategies
  - Dev sourcing strategies
  - Dev suppliers
  - Evaluate suppliers performance
- Objective to use cross functional teams:
  - Obtain wide perspective of problems
  - Stimulate innovative thinking
  - Obtain best value for organization and constomers

## **2.3. Control in purchasing and supply**

- Questionnaire used
- Includes the following aspects:
  - Leadership shown in introduction of new ideas
  - Percentage of purchasing contracts established
  - Knowledge and skills to lead purchasing and supply section
  - Relationships established with strategic suppliers
  - Adequacy of performance appraisal
  - Contribution to cross functional teams
  - Role in establishment and management of supply chains
  - Effectiveness of use of total purchasing leverage of firm
  - Appropriateness of purchasing policies, procedures and practices

### **2.3.1. Assessment of purchasing and supply activities**

- Price proficiency
- Supplier performance
- Timelines
- Cost saving
- Workload
- Purchasing cost
- Inventory holding
- Relationship performance with suppliers
- Relationship with other functional management areas

### **3. Purchasing process and activities**

#### **3.1. Purchasing process**

- Development and description of a need
- Choice of supplier
- Research on prices and availability
- Issuing the order and concluding the contract
- Follow up and expediting
- Receipts, inspection and distribution
- Handling errors and discrepancies
- Paying for the order
- Closing the order

#### **3.2. Quality decisions as a purchasing and supply activity**

##### **3.2.1. Role of quality in purchasing**

- 4 main factors in purchasing and supply
  - Quality
  - Supplier service
  - Delivery
  - Price
- Quality determines amount of suppliers, high quality will only be available from some suppliers
- Quality also influences inventory holding
- Smaller amounts need to be kept in inventory
- High quality is necessary for JIT and MRP inventory systems
- Quality purchased products rest on considerations:
  - Determining right quality for given goal
  - Describing quality so that buyer and seller understand
  - Controlling quality to ensure requirements are met

##### **3.2.2. Determining right quality**

- Right quality is that quality that is purchased at lowest price which satisfies a specific need and performs the function for which it has been purchased
- A buyer should have the right to question technical requirements or to request that specifications be reconsidered on strength of commercial considerations
- End user / marketing function also input on suitable quality
- Important for marketing and public relations – quality influence image of organization

##### **3.2.3. Description of quality**

- Refers to measurable qualities a condition or characteristics of materials expressed according to grade, class, brand of specifications
- 2 methods to describe quality
  - Specifications
  - Standardization

- Market grades, brands, SABS

### **3.2.4. Control of quality**

- Poor materials interrupt manufacturing process and have detrimental effect on final product
- Reduce satisfaction of end user
- Inspection = normal process of quality control
- If supplier give high quality materials can negotiate supplier certification agreement
- Materials and process is inspected for a period of time and then supplier is certified and becomes responsible for quality assurance

### **3.3. Deciding on purchasing and supply quantities**

#### **3.3.1. Need for inventory holding**

- Can be able to buy exact quantity of materials required at certain time if following criteria is met:
  - Operations function is 100% sure of quantity of materials to be used in manufacturing process
  - Marketing was 100% sure of how many products will be sold
  - There were no supply problems in supplier market
  - Incoming material completely satisfied quality requirements
- Above situation does not exist
- Many work on estimates
- Supply problems can cause organization to keep inventory
- Inventory ties up working capital
- To limit inventory holding:
  - JIT
  - MRP
  - Enterprise resource planning ERP
  - Efficient consumer response ECR
  - Automatic replenishment AR
  - Quick response QR
  - E-procurement
- Reasons for inventory holding:
  - Ensure that operations process is not interrupted
  - Allows business to utilize cost savings through longer production runs and volume discounts
- Disadvantages of too much inventory
  - Operating capital is tied up – opportunity and interest cost
  - Looses in term of depreciation, obsolescence, theft, damage
  - Cost in terms of storage, space, warehouse staff, insurance
- Disadvantage of keep to little inventory
  - Higher unit prices due to small orders
  - More urgent orders and higher transport costs
  - Strained relationships with suppliers
  - Cost of production interruptions
  - Strained relationships with users
  - Lost sales due to empty shelves in retail organization
  - Negative impact on business image

### 3.3.2. Inventory costs

- Inventory carrying costs = costs involved in keeping inventory
- Includes the following:
  - Cost of storage
  - Salaries of warehouse staff
  - Insurance
  - Property tax
  - Obsolescence
  - Wear and tear
  - Theft
  - Interest charges
  - Opportunity costs
- Inventory – ordering costs = cost of placing an order
  - Salaries of purchasing and supply personnel
  - Stationary
  - Telephone
  - E-procurement
  - Postage
- Total inventory cost = sum of inventory carrying cost and inventory ordering cost
- Ordering cost lower can carrying cost higher as order quantities increase
- Ordering cost higher can carrying cost lower as order quantities decrease
- Number of units apposite lowest total inventory cost = economic order quantity EOQ

### 3.3.3. Inventory control systems

#### Fixed order quantities

- Fixed quantity is ordered
- Same quantity is ordered every time

#### Cyclical ordering system

- Quantity of item is reviewed at fixed intervals
- Supplemented by ordering enough to bring inventory to maximum

#### Materials requirement planning MRP

- Computer assisted system
- Keep inventory as low as possible
- Suppliers must be reliable with deliveries

#### Just in time JIT

- Production / operations scheduling system
- Eliminates holding of inventory
- Suppliers must deliver right quality just in time
- Only materials used in operations can be ordered JIT

#### Quick response QR and automatic replenishing AR

- QR – where manufacturer strives to deliver products to retail in exact quantities on continuous basis with minimum lead times – minimum inventory levels
- QR is retail version of JIT



- AR – integral part of QR program
- AR – exchange relationship where supplier replenishes inventory on basis of actual usage

Efficient consumer response ECR

- ECR developed for grocery industry
- Based on same principles as QR
- Timely, accurate paperless flow of information
- Objective is to reduce cycle time in supply chain

### **3.4. Selection and management of supplies**

#### **3.4.1. Importance of selecting suppliers**

- Choice of supplier influences:
  - Prices
  - Reliable quality
  - Timely deliveries
  - Technical support
  - Good after sales support
- Long term relationship with suppliers is important
- Important components:
  - Honesty
  - Fairness
  - Frankness

#### **3.4.2. Selection process**

- Ongoing process
- Existing suppliers constantly reconsidered
- History of past performance is important
- Selection determined by:
  - Scope of transaction
  - Availability of materials
  - Strategic value of materials
  - Whether standard or custom made
- Set up a list taking into account:
  - Location
  - Progressiveness
  - General reputation
  - Financial ability
  - Technical ability
- Suppliers are then requested to quote / negotiate
- Aim is to obtain best value for money
- Final choice based on:
  - Past performance
  - Quality
  - Price
  - Delivery
  - Technical support

- Reliability
- Progressiveness
- Supplier evaluation is important:
  - Ineffective unreliable suppliers are identified
  - Improvement of supplier performance
  - Guide for developing suppliers

### **3.4.3. Developing suppliers**

- Suppliers developed for:
  - Black empowerment
  - Improve performance as a result of supplier appraisals
  - If materials do not exist in local market

### **3.4.4. Long term relationships with suppliers**

- Nature of relationships varies
- Some distant formal, some close personal
- Small involvement in standard product suppliers
- Big involvement in strategic scarce materials
- Alliance or partnership high involvement relationship
- Attributes:
  - Trust
  - Co-operation
  - Interdependence
  - Joint quality improvement efforts
  - Information sharing
  - Risk and benefit sharing
  - Joint problem solving

## **3.5. Pricing decisions**

### **3.5.1. Best price**

- Price traditionally regarded as decisive factor in rewarding orders
- Low price – high costs in other areas
- Eg risk attached to low quality and high inventory
- Right price not necessarily the lowest one
- Final cost should be decisive factor in rewarding orders
- Price should be reasonable and enable manufacturer to market product competitively
- Price should be fair to purchasing organization and supplier

### **3.5.2. Price determination**

- Methods used depends on nature of materials and value of transaction
- Published price lists – used for standard items
- Tenders, quotations, bidding

- Quotations are quick and easy
- Tenders – drawn out process, has to be followed by the letter
- Custom made materials with high monetary value

### **3.6. Timing of purchases**

#### **3.6.1. Right time to buy**

- Time at which purchases one made often determines price paid
- Aims of buying at right time is:
  - To ensure that business is supplied on ongoing basis
  - Reduce risk of price fluctuations
  - Keep inventory holding at optimum level

#### **3.6.2. Factors influencing purchase scheduling**

- Internal
  - Business policy
  - Availability of funds
  - Changes in marketing and operations
  - Physical facilities – storage
- External
  - Market conditions
  - Government regulations
  - Lead times
  - Reliability of suppliers
  - Government restriction