Chapter 14 Purchasing and supply management

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• Buyers expertise can improve:
  o Progressiveness
  o Profitability
  o Productivity
• Buyers need to be aware of market trends, seasons and state of the market
• Purpose of purchasing and supply function:
  o To provide right material services and equipment
  o At reasonable price
  o Satisfy quality requirements
  o Received in correct quantities
  o At right time right place
• Purchasing supply function should:
  o Select suppliers
  o Purchase and arrange for transport to business
  o Decide what price to accept
  o Determine quality and quantity of materials
  o Expedite and receive materials
  o Control warehousing and inventory holding
  o 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:
  o Financing warehouse
  o Warehouse staff
  o 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 compromising 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 activites
- Co-ordinated with other functional management areas eg finances, marketing
- To improve co-ordination internally:
  - Open communication
  - Conscious motivation
o Standardization of specifications, procedures and documentation
o 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 customers

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 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 measureable qualities a condition or characteristics of materials expressed according to grade, class, brand of specifications
- 2 methods to describe quality
  - Specifications
  - Standardization
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
  - Lost 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:
  o Prices
  o Reliable quality
  o Timely deliveries
  o Technical support
  o Good after sales support
• Long term relationship with suppliers is important
• Important components:
  o Honesty
  o Fairness
  o Frankness

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

3.4.3. Developing suppliers

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

3.4.4. Long term relationships with suppliers

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

3.5. Pricing decisions

3.5.1. Best price

• Price traditionally regarded ad 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 use 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