Course Name	**: Principles of Procurement & Supply Chain**
Course Code	**: APBBA 1105**
Course Level	**: Level 1**
Course Credit	**: 4 CU**
Contact Hours	**: 60 Hrs**

Course Description
The course details the different approaches of Procurement, indicating how people should undertake fair and clear means of procurement process, focusing on specifications of goods and services needed for Procurement. The course provides different methods of improving buyer-supplier relationships.

Course Objectives
- To broaden student's Knowledge and skills in managing procurement procedures.
- To impart theories and practices involved in the procurement processes.
- To educate students the challenges embedded within the chain supply management schemes.

Course content
Introduction
- Introduction to Procurement
- Comparison between reactive and proactive procurement
- Purchasing Documentation
- Computerized Purchasing system

Procurement Process
- Identification of the need
- Procurement plan formulation
- Advertisement for pre-qualification
- Preparation of Bid documents
- Tender Board advertises tenders
- Procurement and disposal unit
- Evaluation by technical committee

Specifications
- Definition of specification in procurement
- Justification for specifications
- Components of an ideal specification
- Types of specifications
- Principles of specification writing of goods and services

Techniques and tools for quality management
- Quality assurance
- Quality Management systems(3rd Party Certifications)
- Offline and Online quality control
- Costs of Quality

Quantity Control
- Reasons for carrying or keeping stock
- Approaches to stock reduction
- Major types of costs
- Economic order quantity

Sources of potential suppliers

- Internet
- Trade directories
- Trade shows, exhibitions and conventions
- Trade journals
- Information data bases

The process of supplier Appraisal

- Technical/quality appraisal
- Financial appraisal
- Environmental appraisal

Procurement Methods

- Open domestic bidding
- Restricted domestic bidding
- Open international bidding method
- Restricted international bidding
- Quotations/proposal procurement

Outsourcing

- Definition of outsourcing
- Characteristics of outsourcing
- Candidate functions for outsourcing
- Reasons for outsourcing

The outsourcing process

- The strategic phase
- The transitional phase
- Operational phase
- Key considerations in outsourcing
- Possible reasons for failure of outsourced contracts

Supply chain business process integration

- Customer service management process
- Procurement process
- Product development and commercialization
- Manufacturing flow management process
- Physical distribution
- Outsourcing/partnerships
- Performance measurement

Mode of delivery Face to face lectures
Assessment
Course work 40%
Exams 60%
Total Mark 100%

INTRODUCTION TO PROCUREMENT

Purchasing is the process of acquisition of goods, works and services to satisfy the identified needs of an organization through legal means. It is common to use the word purchasing and procurement interchangeably but procurement is seen to be a slightly wider concept and more utilized especially where acquisitions are made for a commercial cause.

Procurement is an important function within an organization that accounts for the biggest share of expenditure in many firms. For purposes of this course, the words purchasing and procurement shall be used to mean the same thing.

Reactive Vs Proactive Purchasing/procurement:

Reactive procurement is the traditional way of carrying out purchasing duties. Typically, the procurement department would just receive orders from other departments and execute them without question. It is still common in the public sector in the developing world.

Comparison based on characteristics:
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Reactive Procurement systems	**Proactive Procurement systems**
1. Traditional	1.Modern
2. Purchasing is clerical (paper chasing	2. Purchasing is strategic (Decision makers). query processing function)
3. Purchasing is low in the Organizational chart e.g. Purchasing Assistant.	3. Purchasing is high in the organizational Chart e.g. Procurement Manager/Director
4. Purchasing reports to another function	4. Purchasing reports to the top.
5. Anyone does purchasing	5. Purchasing is done by buying expert
6. Everyone buys	6. Only purchasing section buys.
7. Many suppliers for a given item	7. Few suppliers because of relationships
8. Short term supplier relationships	8. Long term supplier relationships
9. Price is a major buying criteria	9. Criteria is far beyond price.
10 Focus is on immediate supplier	10. Focus goes beyond immediate supplier (includes 2nd tier suppliers onwards and the whole supply chain.

The above represent the five rights of purchasing; which are commonly referred to as the traditional objectives of purchasing. They are the general objectives of all Procurement Personnel regardless of the sector. However, the growth of the function and diversity of activities has led to the transition of these objectives into:

- To ensure uninterrupted flow of requirements
- To minimize waste. Anything that consumes resources but does not add value.
- To buy competitively
- Complying with external requirements e.g. regulations, green issues, etc.
- To keep inventory related costs to a minimum
- To optimize value for customers (internal and external) through out the supply chain.
- To develop effective and reliable sources of supply (suppliers who are willing to work with buyers). These will help you while in Pinch/crisis.
- To achieve maximum integration with other departments etc.

These are functional level objectives rather than company wide objectives. It should be noted that the functional interests are in no way seen to conflict with the general interests – the five rights.

Purchasing Documentation.
For purposes of this study our main focus will be on purchasing manuals.

A purchasing manual is an essential document in any entity containing the policies governing the “how to “of purchasing. The manual can contain a variety of topics, from basic instructions on how to prepare a purchase order to

the procedures used to take telephone quotations, submit a sole source justification, make an emergency perchance or negotiate a contract. A manual makes it easier to enforce purchasing policies:

Contents of a Purchasing Manual:
The manual addresses the following:

- Principles of purchasing
- Responsibilities of the purchasing agent.
- Purchasing policy.
- Unauthorized purchases.
- Preparing purchase orders.
- Purchase order return form.
- Purchase order changes..
- Procuring professional and consultant services.
- Specifications

Benefits of a purchasing manual:

- It provides in readily accessible form complete record of all standing instructions.
- It facilitates standardization of procedures.
- It facilitates training of new staff.
- It provides guidance to audit.
- It makes processes more transparent.
- Reduces occurrence of errors.
- More organized purchasing function due to clear policies.

Problems of Manuals:

- They are expensive to draft.
- They require updating as contents became inapplicable over time
- They limit staff initiative.
- They promote bureaucracy because you must follow the purchasing procedures.

Other Purchasing documents include:

- Purchase orders e.g. a Local Purchase order from the buyer.
- Contract documents – This is between the buyer and the supplier.
- Receiving reports – This is from the user department.
- Solicitation documents – These are for requesting the supplier to avail the goods and services to the buyer.
- To manage input costs, good purchasing practice is required for profitability since cost increases cannot be passed onto the customer. Such practices could include good negotiation, relationship management and spend control etc.

PUBLIC VERSUS PRIVATE PROCUREMENT:
Sectoral differences between Public and private firms do not mean a total difference in resource needs management. For example it is clear that in either sector. For example it is clear that in either sector, the traditional rights of purchasing remain crucial for the success of the purchasing professional. However, a number of diversions may be cited including the following:

Key Difference	Private Sector	Public sector
Responsibility(where you report)	Shareholders (Owners).	Public
Main objective	Profit maximization	Service delivery comes first
Source of finding	Private (Shareholders)	Public
Producers used	Exist but flexible	Tight and bureaucratic procedures

Each sector has its own characteristics that impact upon purchasing. These must be considered as in some cases they have profound impact on the success of a given venture. Although purchasing operatives may differ from sector to sector, the application of professional practices will have similar benefits in all sectors.

COMPUTERISED PURCHASING SYSTEM:

E-procurement (Electronic Procurement) is the business-to-business purchase and sale of supplies and services through the internet as well as other information and networking systems, such as Electronic data interchange (EDI). An important part of many B2B (Business to Business) sites, e-procurement is also sometimes referred to by other terms such as supplier exchange. Typically, e-procurement websites allow qualified and registered users to look for buyers or sellers of goods and services.

Some types of e-procurement:

E-sourcing: Identifying new suppliers for a specific category of purchasing requirements using internet technology.

E-Tendering: Sending requests for information and prices to suppliers and receiving the responses of suppliers using internet technology.

E-Reverse auctioning: Using internet technology to buy goods and services from a number of known to unknown suppliers.

E-Informing: Gathering and distributing purchasing information both from and to internal and external parties using internet technology.

Computers linked by networks can be used for any of the following procurement tasks.

- Access data about products available in the supply market.
- Find sources of supply.
- Make price comparisons
- Advertise the organizations' requirements
- Issue invitations to tender and let contracts
- Spot-buy from auction sites, market exchanges
- Monitor supplier performance
- Receive invoices and make payments.
- Act as a delivery channel for incoming products/services e.g. professional advices, software, notes etc.
- Making payments for consumed supplies or services.

Benefits of Computerized Purchasing:

- Reduced prices resulting from better sourcing.
- Shorter procurement cycle time resulting from faster communication e.g. instead of setting a letter, one sends an e-mail.
- Accountability and audit trail is often better than with paper work due to the nature of IT.
- Processes become more transparent.
- Less errors e.g. many electronic forms cannot be sent if the codes/data is incorrect.
- Reduced maverick (unethical or undesired) buying.
- Easier access to new and better suppliers.

Problems:

- It is expenses to acquire soft and hardware components like e-procurement software.
- Maintenance and upgrade of required software may be a hurdle to the company's profitability.
- It requires training of staff to be able to cope with e-tools for successful e-procurement initiatives.
- Computerized systems can be used to cheat an organization e.g. banks.
- Relationships with suppliers may be lost because of less physical interactions.

THE PROCUREMENT PROCESS

The word process is defined differently by different people. One dictionary (Longman) offers the following two definitions;

A connected set of natural actions or events that produce gradual or continual change over and on which humans have little control.
A connected set of human actions or operations that are performed intentionally in order to reach a particular result or as a part of an official system or established method of doing something.

The Public Procurement cycle .
The procurement cycle includes a series of steps and activities that span the procurement process. An effective and efficient step by step application of the stages involved in the cycle is the only sure way of ensuring good governance as the key objective of government policy in Uganda. Procurement and its effective management is now regarded as a global and governance issue.

Processes involved in a procurement cycle at government setting:

1. **Identification of the need:**

This is the core first step in any procurement process not necessarily at the local government setting but in any organized procurement. No procurement can be talked about without an understanding of the goods and services to be procured. The User departments must identify their needs and this has to be before the budget process is concluded because the entity's budget has to incorporate the identified needs. The success of the subsequent procurement process depends on how well the identification of need is sufficiently managed. In the old days of procurement (where the function was clerical and reactive in nature), on department could do the identification on behalf of other departments. In a strategic consideration however, which is now being preached, the integrative and participatory approach in needs identification is required.

2. **Procurement Plan Formulation:**

The Procurement and Disposal Unit (PDU) then formulates the entire corporate needs, procurement plans and schedule for the acquisition of the goods, services and works as the identification of the need stage revealed. The procurement plans must be prepared each year and should contain certain information to facilitate approval and subsequent procurement process.

3. **Advertisement for pre-qualification:**

After the procurement plan presentation and approval, implementation follows. The first implementation part of the procurement pan is the advertisement for pre-qualification of providers for a particulars financial year. The pre-qualification tenders have to be made in accordance with the procurement plan. In the prequalification advert, the interested applicants for the provision of works, services and supply of goods are required to submit information to the PDU. The exact expectations from the interested applicants must be clearly stated without any ambiguity and the principles of public procurement must be seen to apply.

4. **Preparation of Bid Documents:**

Bid documents are the same as solicitation documents.. One of the principles that should be followed in public/government tendering is an adequate time spent on preparing bid documents. It's from the accuracy of the bid documents that value for money originates. The bid documents are prepared by the PDU. In addition to bid documents, the Terms of References (T.O.R) for the provision of services have to be prepared by the same committee.

5. **Tender Board advertises tenders:**

Following the established procurement plan and after a thorough preparation of the bid documents which include among others; the approved budget for the contract, instructions to bidders, T.O.R, eligibility requirements, plans and technical specifications and the conditions of the contract, the tender board advertises for tenders.

6. **Procurement and Disposal Unit:**

In between the advertisement and opening of tenders/bids, there is an imbedded process of receiving bids before the deadline set elapses/passes. The bids have to be received in accordance with the instructions given in the advertisement e.g. fully addressed and sealed to be delivered at a designed place or officer. The closure date starts a process of opening the bids as per the established procedures.

7. **Evaluation by the technical Committee:**

After the bids have been transparently opened by the tender board, the technical evaluation committee will start the evaluation process. The evaluation process involves stages like the preliminary evaluation aimed at ascertaining completeness and responsiveness to the bid followed by the technical evaluation and finally the financial evaluation. The law requires that the committee after evaluation write a report with recommendations on the best evaluated bidder to the tender board, which on the basis of these recommendations can accept to award a tender or reject the recommendations with sound reasons for doing so.

8. **Tender Board reviews technical reports**:

Upon confirmation by the Accounting officer of the availability of funds and fulfillment of all the legal requirements, a contract has to be signed together with the local purchase order (LPO) by which the authorized parties (CEO) and the agreement must be duly and securely kept in a contract file. The contract file definitely contains other documents and it is beyond the scope of this article.
The copies of the contract LPO are given to the technical supervision staff.

9. Contract administration and management:

This is a post-award function that rarely receives the close attention it deserves from those responsible. This stage is one of the core ones and its negligence or "careless" management results into shoddy works and services. The stage involves as key activities monitoring and contract performance against established standards and this is done by the User department, any other interested party fro the successful realization of value for money procurement, supervision and evaluation by the technical staff of that relevant district, recording and reporting, certificates of works upon satisfaction o f good works.

10. Payments:

It is a contractual obligation for the providers of works, services and goods to receive payments for the work done. The payment should be done after the "inspection and auditing" of the work done in case of works, when a certificate has been issued by the engineer. After the payments have been made, the transactions have to be recorded for use by relevant organs of the district and external stakeholders.

11. Reports:

The procurements cycle does not end with payment of contractors or suppliers for the work done. It is a requirement that monthly and or quarterly financial reports as well as the supervision and monitoring and evaluation reports are prepared and submitted to relevant organs. It is from such reports that a performance assessment of a particular PDE, over a particular contract within a particular period can be made. The failure to make such reports is a sign of weakness and failure to follow the procurement processes.

The above stages in the Public Procurement Cycle can for convenience and ease of remembering be summarized into three main stages:

1. The Pre-award stages:

These include all the preparatory stages before a contract is awarded and may include: Procurement planning, solicitation planning and the solicitation itself. Procurement planning articulates 5 issues of what to procure, when to procure, where to procure, how to procure and how much to procure. Solicitation planning involves the preparation of the bid documents and the determination of the selection criteria. It also involves advertisement of bids.

2. The award stage:

This is the stage which involves source selection and actual award of a contract. This is one of the most challenging phases as influence and corruption tendencies manifest themselves in their "time colors". The stage involves receiving and evaluation. Preliminary, technical and financial evaluation and the award of the contract.

3. The post-award stages :

These as the name suggests involve the stages that take place after the contract has been awarded. They involve two broad processes of contract administration and close-out or termination as applicable.

SPECIFICATIONS

A specification is a statement of attributes and or requirements of a product/ service. International standards adopted and approved by the authority after consultation with trade associations and professionals, the use of which shall be mandatory in all bidding documents.

To ensure fair competition, the description of the requirements should be worded so as to allow for and encourage the widest possible and necessary market coverage. It is important to provide a clear idea of the items, services or works that are required. Incomplete or over elaborated technical descriptions in procurement requisitions slow down the process and may result in late deliveries or the supply of inadequate, unnecessary or costly items/services or works.

Justification for the need of the statement of requirements:

- To ensure the evaluation criteria is stipulated.
- To avoid additional costs as a result of many parts being delivered. The supplier will always endeavor to supply something which conforms to the specifications/TOR/sow.
- To reduce delays in the procurement process because clear details will have been provided.
- It is a good tool at contract management stage.
- It is a major determinant of cost efficiency of goods and services.
- As a way to reduce risks for instance clauses should be put in the statement of requirements so that risks are guarded against e.g. terms o payment for completed and certified jobs, relation fees.

Components of an ideal specification:

a. Title page (mandatory)
-Table of contents (optional)
-introduction (optional)
b. Scope(mandatory)
- Background (optional)
- Service conditions and environment factors.
c. Performance requirements/measures (mandatory) which is the basis for testing whether the good/item conforms to specifications.

Types of Specifications:

a. Conformance specifications:

These describe the functionality which the product must have for the user or functional aspects that the product must consist of in order to achieve the intended purpose. The supplier may not know in detail or even at all what function the product will play in the buyer's manufacturing plant or organization. It us his task to simply conform to the letter of description provided by the buyer.

b. Detailed technical specification:

This describes the technical properties and characteristics of the product as well as the activities to be performed by the supplier. Technical aspects in terms of the physical characteristics of the product, appearance, issues that make that item different from the rest.

c. Performance specifications:

These state what a product or service should achieve under given conditions. Performance specifications are common in use because of reasons such as:
- The are easier to draft: This is particularly important where the buyer has limited technical knowledge of the product.
- They place more responsibility on the shoulder of the supplier. If the part supplied does not perform its function, the buyer is entitled to re-dress.
- They widen the potential supply base. If the task is to supply something, anything that will perform a particular function, then the expertise of different suppliers could potentially provide a wide range of potential solutions.

Note: 1.A good statement of requirements should have requirements clearly stated.
2. Should be simply written
3. Should be logical.

Common Problems:

1. Over specifying which at times makes the costs prohibitive for any willing provider and procuring entity.
2. Delivery of wrong products - if a provider does not understand the specification.
3. Failure to come up with a simple, clear and accurate statement of requirements.
4. Under specifying where items delivered fail to meet the buyers or users needs.
5. Costs involved in trying to specify on some of the issues e.g. consultancies, telephone costs, site visits obtaining samples.
6. Specifying unreasonable intolerances.

Functions of Specifications:

1. Communicating the requirement in a clear concise and unambiguous way between the suppliers and buyers and also internally with users.
2. Enable more accurate comparison of suppliers' bids on similar basis.
3. Indicates fitness for purpose. This defines quality.
4. Provides evidence in the event of a dispute of what the purchaser required and what the supplier agreed to provide.

Contents of a Purchase order specification:

1. Quality specifications (technical norms and standards that the product should meet).
2. Logistics specifications (quantities and delivery time)
3. maintenance specifications (how the product will be maintained and serviced)
4. Legal and environmental requirements (products, services and production process should be in compliance with legislation)
5. Target budget (supplier solutions and proposals would be with in pre-determined financial limits).

Added value of the buyer:

1. Ensuring unambiguous functional, technical, logistics ad maintenance specifications.
2. Preventing the use of supplier or product brand specifications.
3. Preventing the use of supplier or product brand specifications changes.
4. Ensuring a clear sample inspection procedure.
5. Ensuring clear descriptions of the methods of testing product quality.
6. Ensuring a general coat break-down to help assessment of quotations at a later stage.

Principles of specification writing.

The following principles should be observed by all specification writers:

- If something is not specified, it is unlikely to be provide. Therefore all requirements should be stated in the specification before awarding the purchase order. Suppliers will normally charge as 'extras' requirements added subsequently.
- Every requirement increases the price. All specifications should therefore be subjected to rigorous value analysis. Do not over specify or under specify.
- The shorter the specification the less the time it takes to prepare it . The expenditure in staff time devoted to the preparation of a specification can be high. This expenditure can be significantly lower when the length of a specification is reduced.
- Specification should whenever possible be open and not closed, open specifications are written so that stated requirements can be met by more than one supplier. By making the requirements sufficiently flexible to be met by several suppliers, competition is encouraged and prices reduced.
- Specifications must not conflict with national and international standards, health, safety or environmental laws and regulations. National and international specifications should be incorporated into individual specification and identified by their number and titles.

Writing specifications for Goods:

Dimension	**Explanation**
Performance	Primary operating characteristics
Features	Provided not normally essential to the performance of a product.

Conformance	Degree to which design matches Or agreed standards.
Reliability	Likelihood of failure in a period of time.
Durability	Useful life of product
Serviceability	Speed, ease and cost maintenance.

Writing specification for services

Dimension	Explanation
• Reliability	Consistency of performance and Dependability. It means that the firm persons the service right the first time and also means that the firm honors its promises.
• Responsiveness	The willingness or readiness of employees to provide service. It involves timeliness of service.
• Competence	Possession of the skills and knowledge to perform the service.
• Access	Approachability and ease of contact like physical address telephone contact, parking space.

The role of the purchasing/procurement functions in specification designing:
In some organizations, purchasing has only a minor role in the specification process. The buyer merely receives specifications from users and then sources the product or services specified.

However, even in the most technical and production orientated environments, this approach is misguided and may lead to waste, poor supplier performance and increased cost. Here are four arguments as to why the purchasing function must get involved in the design and specifications stages (Early buyer involvement).

All purchases have a technical and commercial aspect:
Even in highly technical purchases such as specialized drilling equipment for an oil company, commercial issues such as maintenance cover, spares availability, warranty period and user training might well form part of the specifications. These are all issues which the procurement function can address.

Early buyer involvement can help identify potential and real supply problems. If users specify items or materials which are difficult to source or have an unreasonable supply then this makes it more likely that there will be problems with production or perhaps quality. If this is highlighted at the specification stage, then these problems can be avoided or minimized.

Helps in reducing costs and waste. The greatest scope for cost reduction and avoidance is at the design /specification state. By ensuring that items are not over-specified in the first place, it is easier to reduce costs and waste rather than attempt to do so later. For example for many organizations, the cost of disposal of supplier packaging is high. Rather than cope with the problem and try to find cheaper ways of disposing of this packaging. It would make more sense to specify minimal packaging or returnable or recyclable packaging. Quality from the customers' point of view is about more than just technical aspects when purchasing computer hardware for example, the response time of the supplier to maintenance service requests is very important to internal customer satisfaction. There is little point in having technically superior equipment if system failures or breakdowns take long to fix.

TECHNIQUES AND TOOLS FOR QUALITY MANAGEMENT

1. Quality assurance:

This is defined as all those planned and systematic activities implemented within the quality system and demonstrated as needed to provide adequate confidence that an entity will fulfill requirements for quality. In simple terms quality assurance is concerned with deject detection and correction. Quality assurance is concerned with every aspect of quality including design, specifications, supplier assessment, quality culture, motivation, education and training, inspection and feedback so as to ensure that all measures are effective. The objective of the quality assurance function is broadly to ensure that all products are manufactured free from dejects, conform to all specifications and satisfy the customers' requirements through using planned and systematic activities.

2. Quality Management Systems (3rd Party Certifications):

Many purchasing organizations now insist their suppliers and potential suppliers are certified to internationally recognized standards such as ISO (International Standard Organization). However, there are some criticisms of ISO standards. Some argue that it makes buyers lazy as they may not carryout any further investigation of supplier quality once they have established that he supplier follows the standards.

This incorporates the activities and techniques used to maintain the quality of a product, process or service. It includes inspection and monitoring processes, finding and eliminating causes of quality problems. Quality control is divided into the following methods:

- Suppler quality control: This refers to the responsibility of managing income inequality i.e. conformance to requirements of all materials supplied to a company. And this is achieved by such activities as supplier evaluation and approval, supplier quality education, supplier auditing, receiving inspection, non performance material control, supplier quality measurement and rating, supplier feed back concerning improvements and the provision of technical support wherever needed.
- In-process quality control:- This refers to the responsibility for assuring that all products manufactured and processes employed in-house are defect free. This is achieved through product inspection and verification process certification, equipment calibration, quality measurements and reporting, ensuring standards conformance, initiating quality improvements, provision of technical support and reports to production management.

On-line and off-line quality control: - This refers to some of the quality tools that are employed off-line i.e. before production to ensure that quality is built into t he product or process while on-line quality control methods are those tools employed during the production process to ensure that quality can be maintained to a pre-determined level.

Off-line quality tools:
Error proofing – This involves stopping the process whenever a defect occurs, define the cause and prevent the recurring source of the defect e.g. micro-wave ovens are error proofed i.e. they can not operate if the door is open.
Failure mode effects analysis (FMEA) - This involves reducing negative impacts/effects of problems that cannot be 100% prevented.

Robust design - Under this method, feature are built into products at designs stages that account for likely usage and misuse situations for example mobile phones are designed to be able to pick up a specific signal no matter how much interference there may be from other signals in the vicinity.

On-line quality methods include:
Sampling and inspection – Here a sample is taken from a batch of work based upon statistical tables. If the sample is within the quality specification tolerances, then the entire batch is accepted.
Control charting: - Under this method, upper and lower control limits are set for a product or process, samples are taken and the results are plotted on a chart so that upward, downward or unusual movements can be spotted easily and remedial action taken.
Quality circles – These are small groups of operational workers who meet voluntarily to discuss and suggest process improvements or solve problems related to work.
Bench Marking – This is an approach where an organization measures, its performance against industry leaders in the areas of quality control and procedures
.
Costs of Quality or failure to implement quality:

Philip Crossby, the famous American writer on quality once said "Quality is free but it is not a gift" meaning that as organizations improve quality, their overall costs decline as they do not need to inspect as much. Their products are less likely to fail, so warranty claims are less, customer satisfaction is higher and there are fewer cracks and re-work.

The cost of quality is defined by ISO as the cost of ensuring and assuring quality as well as the loss incurred when quality is not achieved. Quality costs can therefore be categorized into prevention costs, inspection costs internal failure and external failure costs.

Quality issues can translate directly into money lost or saved. An important management task in which the buyer has a significant role is to measure the costs of quality so that these can be controlled and improved upon. The three costs associated with quality can be classified as:

- Prevention Cost: This refers to costs incurred in order to make it right the first time.
- Inspection/appraisal costs: This refers to costs incurred in the process of checking whether it is right.
- Failure costs (Internal and External): These are costs of getting it wrong. In terms of the cost objective of Total Quality Management (TQM), increase prevention costs in order to reduce inspection and failure costs and finally total costs of quality.

Examples of prevention costs:

- Cost of training and motivating staff.
- Cost of quality procedures
- Cost of using only quality assured suppliers

Examples of Inspection costs

- Cost of supervision/monitoring
- Cost of salaries of inspectors
- Cost of equipment used to test products coming from unreliable suppliers.

Failure costs:

- High fatalities/accidents.
- Cost of defending court cases filed by customers because of sub-standard products bought.
- Cost of re-work
- Cost of losing customers
- Cost of selling at lower prices because of poor quality

QUANTITY CONTROL

Every organization holds something in stock. Stock can be a nuisance, necessity or a convenience. Retailers and wholesalers view stock as the control future of their businesses: What they sell is what they buy and they aim to sell from stock rather than from future deliveries which have yet to arrive. Organizations such as manufacturers, health care Institutions and other service providers place stock in a subsidiary rather than a central position, but it is still an important element in operational effectiveness and often appears on the balance sheet as the biggest of current assets looking up a lot of cash.

Reasons for carrying or keeping stock:

- The convenience of having things available as and when required without making special arrangements.
- Cost reduction through purchase or production of optimum quantities: protection against the effect of forecast error and inaccurate records.
- Provisions for fluctuations in sales or production
- Reduce stock outs and the associated cost-such as loss of customer good will.

Approaches to stock reduction:

Since carrying or holding stock is expensive and it is accepted that many organization carry too much stock, a continuing drive to reduce stock without reducing service is needed to combat the natural tendency of stock to increase i.e.

- Arranging for items to be delivered just in time instead of piling just in case need arises.
- Devising ways to reduce ordering costs, setup costs and lead times so that he optimum quantities are small.
- Making forecasts more accurate, ensuring that records are right and better planning. Costs associated with obtaining and carrying inventories:

There are three major types of costs:

a. Acquisition costs –

Many of the costs incurred in placing an order are incurred irrespective of the order size e.g. an order are will be the same irrespective of whether 1 or 1000 tonnes are ordered. Ordering costs include

- Preliminary costs such as preparing the requisition, vendor selection and negotiation.
- Placement costs such as order preparation, stationery and postage or mail age.
- Post-placement costs such as follow up, receiving goods materials handling, inspection, certification and payment of invoices. In practice, it is difficult to obtain more than an appropriate idea of ordering costs since they vary with the following:

- Complexity of the order and seniority of the staff involved.
- Whether order preparation is manual or computerized.
- Whether repeat orders cost less than initial orders.

b. Holding Costs – These are sub-divided into two types

- Costs proportional to the value of inventory, insurance costs, losses in value through deterioration, obsolescence and pilferage (petty theft).
- Costs proportional to the physical characteristics of inventory e.g. storage-costs, storage space, stores rates (rent), light, heat and power.

Cost of stock outs – This means costs of being out of inventory. These include:

- Loss of production output, cost of idle time and of fixed overheads spread over a reduced output.
- Cost of action taken to deal with he stock out e.g. buying from stockists at an enhanced price, switching production and obtaining substitute materials.
- Loss of customer good will through the inability to supply or late delivery.

Factors determining right Quantity:

- The demand for the final product into which the bought out materials and components are to be incorporated.
- The inventory policy of the undertaking
- Whether Job, batch assembly or process production methods are applicable.
- Whether demand for the item is independent or dependent.

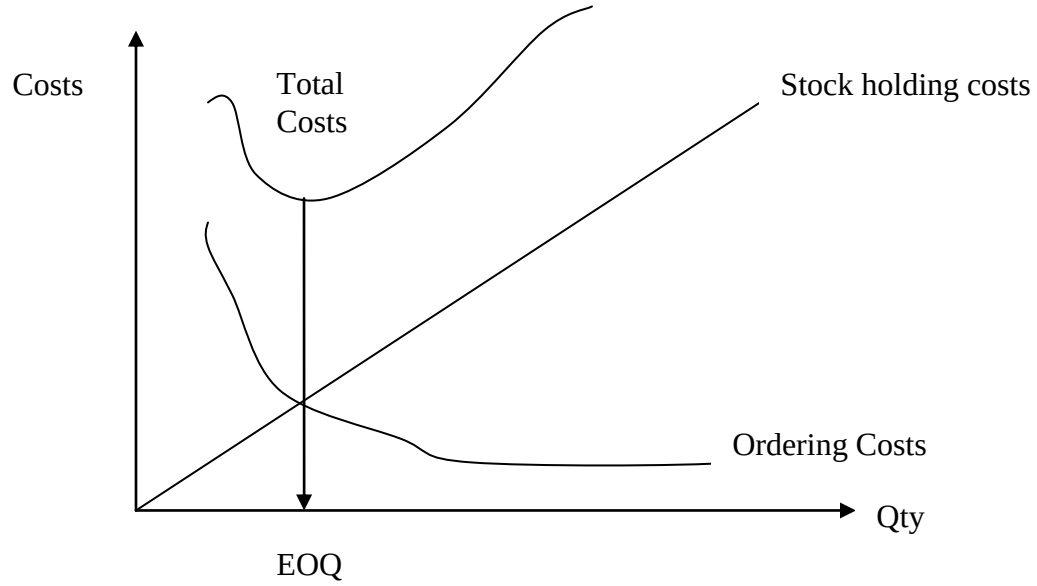
Provisioning for Independent demand:

Independent demand is where the demand of a commodity /product or service. Independent demand is associated with the following systems of stock control and provisioning:

- Fixed order quantities
- Continuous/periodic review systems.

When provisioning for independent demand, the organization will attempt to minimize two sets of costs associated with inventory i.e. holding and ordering costs and they have an inverse relationship with each other. As the operation order will increase but inventory holding costs will decrease and vice-versa. The quantity at which the total of these two costs is minimized or optimized is the Economic Order Quantity known as EOQ.

Economic Order Quantity: The EOQ is the optimal ordering quantity for an item of stock that minimizes total costs – both ordering and holding costs together. EOQ is appropriate in independent demand circumstances only.



Assumptions

- Demand is uniform i.e. certain constant and continuous over time.
- Lead time is constant and certain.
- There is no limit on order size due to either stores capacity or other constraints.
- The cost of placing an order is independent of the size of the order and the delivery charge is also independent of the quantity delivered.
- The cost of holding a unit does not depend on the quantity in the store.
- All prices are constant and certain. There are no bulk purchase discounts.
- Exactly the same quantity is ordered each time that purchase is made.

Fixed order point system:
It is also called re-order point system. It is also called a two-bin system due to the fact that this approach provides a simple no mathematical approach to checking inventory. Under the two-bin system, the stock of a particular item is segregated into two bins and when one bin becomes empty, a requisition is made. In practice, reviews are frequent i.e. on a daily basis.

Calculation of important control levels:
If the normal usage of an item is 120 units per day, and the minimum usage is 60 units per day while the maximum usage is 150 units per day with a lead time period of 25/30 days and EOQ being 5500 units.

(i) Re-order level = max. usage x max. lead time
150 x 30 = 4500 units.

(ii) Safety or buffer stock = Re-order level – average/normal usage rate in Max. lead time.
4500 – (120 x 30) = 900 units

(iii) Minimum level = Re-order level - average use for average lead time.
$$\frac{4500 - (120 \times 30 + 25) = 4500\text{-}3300}{2}$$
= 1200 units.

(iv) Maximum level = Re-order level + EOQ – minimum anticipated

Usage in lead time.

4500 + 5500 – (60 x 25)

= 8500 units.

Periodic review system:

Under this method of inventory control, an item's inventory position is reviewed periodically rather than at a fixed order point. The periods or intervals at which stock levels are reviewed will depend on the importance of the stock item and t he costs of holding that item. A variable quantity will be ordered at each review to bring the stock level beck to maximum. This is also called topping up system.

Maximum stock (M) = W (T + L) + S

Where: M = Pre-determined stock level
W = Average Rate of usage
T = Review Period
L = Lead time
S = Safely stock

Safely stock can be calculated in similar manner as that of fixed order usage.

Example: Average rate of usage = 120 items per day
Review period = 4 weeks (28 days).
Lead time = 25/30 days
Safely stock = 900 units

Calculate the maximum stock

M = W(T+L)+S
M = 120(28+30)+900
= 120(58)+900
= 7860 units.

If at the first review period the stock was 400 units, calculate the stock to be ordered. Stock to be ordered = Max. Stock less Actual stock to be ordered = 7860 – 4000 = 3860.

MODULE 8: SOURCES OF POTENTIAL SUPPLIERS

a. The Internet:

This has become a huge important source of information on suppliers giving all the details on the supplier including the address, the type of goods, terms and conditions and other details that may be required by the buyer. Useful sites, include Yahoo, Google, etc. Caution is needed while using the internet to locate suppliers because information on the site may be stale or incorrect or untrue.

b. Trade directories:

These are publications that list and classify suppliers according to the products they make. This gives additional information such as names of the company, the personnel, financial status and location of their sales offices. Some of the best known general directories include: Thomas register of American manufacturers, the Yellow Pages of the telephone directory also provide a complete source of local suppliers. Directories can also be prepared by Chambers of Commerce (Uganda National Chamber of Commerce).

c. Trade Shows, exhibitions and conventions:

Trade shows are one of the effective ways of gaining exposure to a large number of suppliers at a time. Buyers attending such shows can gather information about potential suppliers while also evaluating latest technological developments. Many contacts between industrial buyers and sellers occur at shows. Exhibitions catalogues and other literature usually provide details of the main supplier in a particular field and so they are always retained for reference purposes by the buyers who attend such exhibitions so as to enable them locate these suppliers if need arises. While at

conventions in additions to displaying products t stimulate buyers' interest, ideas are exchanged between suppliers and potential buyers learn about new products and their supplier at the end of it all.

d. Trade journals:

These provide buyers not only with information regarding new products, substitute materials but also trade gossip which makes buyers informed about changes in the suppliers policies and personnel. Most industries have a group or a council that publishes a trade journal or magazine which routinely presents articles about different companies. These articles often focus on a company's technical or innovative developments of a material, component, product, process or services. Suppliers also use trade journals to advertise their products. These magazines and their adverts compel buyers to give audience and welcome to appropriate sales people. Procurement personnel always rely on these journals and their advertisements to obtain information about new products' suppliers in order to locate them.

e. Information data bases:

Some companies maintain databases of suppliers that are capable of supporting an industry or product line. The use of an automated database or data warehouse can identify suppliers potentially qualified to support a requirement. The database may contain information on current products, the suppliers' future technology, road map, process capability ratios and past performance. Databases of potential supply sources can be obtained from external parties at a cost and these can be especially valuable when searching for foreign supply sources.

f. Sales Representatives:

The usefulness of sales people is dependant on their knowledge of the product or service they are seeking to promote. They are often able to provide useful information regarding suppliers such as details of other items other than those manufactured by their own undertaking. The contacts between sales representatives and buyers can prove to be a valuable source of information to help locate potential suppliers and even when immediate need does not exist, for a supplier's services or products, the buyer can use the information for future reference when the need for such a supplier's services or product arises.

SUPPLIER EVALUATION/APPRAISAL:

When you source you take the risk. This risk can be minimal by careful selection and ongoing monitoring of performance. The evaluation of a supplier's performance is a technique that aims at providing important facts regarding a potential supplier rating or assessment will be required in order to monitor and record objectively the ongoing relationship. Modern progress in procurement methods has seen increasing emphasis placed upon the meaningful evaluation of seller/supplier performance. An adequate and effective system for measuring the merits of a supplier can thus become an available proof of a purchasing operation's honesty and efficiency.

THE PROCESS OF SUPPLIER APRAISAL:

(i) Technical / Quality appraisal: Common methods used in the appraisal of a potential supplier's quality include:

a. References/Reports from other customers: Buyers should seek customer lists from prospective suppliers. In this way the likelihood of being given only positively based references is reduced significantly.

b. Evaluation of Sample products: In a manufacturing and retail sector, buyers can examine samples of suppliers' goods/products. Buyers must ensure that the sample provided does in fact represent a true view of the typical supplier products.

c. Third Party Certification: If the buyer's needs are highly specific or unique, then third party appraisal may not be sufficient. Buyers should remember that ultimately a quality certificate is just a paper. How it was achieved is the important issue. However, having ISO 9000 and other third party quality accreditation is a good signal that the supplier is interested in delivering quality.

c. Supplier visits: This is possibly the best means of really understanding the suppliers' business. Many important factors can only be appraised by a supplier visit. However, supplier visits should be unannounced or made at a very short notice in order to reduce the chance of a 'show' being put up specially for the buyer.

(ii). Financial Appraisal:

When anticipating a long term relationship with a supplier or when purchasing capital equipment, the financial stability of the supplier is critical. A basic appraisal of a suppliers' financial health would include:

a. Profitability: In general, the professional buyer would prefer suppliers whose profits are growing in line with industry norms. This is because very high profits may give cause for concern that the supplier charges high prices while very low profits suggest little funds for investment.

b. Turnover: In general a professional buyer would prefer suppliers whose sales show health increase year after year. This is because too rapid increase may suggest overtrading and less attention to customers' needs. Whole small growth may suggest that the company has trouble in convincing customers to buy its products.

c. Net Assets: Ample reserves allow a supplier not to make losses and a professional buyer would prefer a supplier with ample reserves. This is because too many assets particularly those unrelated to operations e.g. large opulent office buildings in city centers might suggest wastefulness while too few assets might mean that in recessionary times, these companies may have problems paying their debts.

d. Cash Flow: Lack of cash is more likely to cause bankruptcy. In some industries such as construction, cash is more of a problem than profitability. A company may only get paid at the end of a long project while incurring major costs along the way. However, buyers may assist the supplier wit cash flow by negotiating stage payments and pay invoices on time.

(iii). Environmental/Appraisal:

A new appraisal area getting a lot of attention today is that of ethical and environmental sourcing. Many organizations particularly in developed countries are now coming under pressure from consumers, government, religious groups and pressure groups to tale more care when placing contracts with suppliers to ensure that these suppliers have certain minimum standards with respect to employee welfare and ecological environment.

The following headings represent some areas where the buyers will seek assurances from suppliers particularly when sourcing from countries with poor regulatory systems or developing countries

Environmental Standards.

- Does the supplier hold or is seeking ISO14000?
- Does the supplier have a policy on recycling?
- Does the supplier have a policy on reducing packaging?
- Does the supplier have a policy on energy conservation?
- Does the supplier seek evidence of environmental based practice from his suppliers?
- Does the supplier have a policy on sustainability of resources?

Supplier Evaluation criteria

The Evaluation Process: This is a process whereby the procuring entity does an assessment based on the criteria stipulated in the solicitation documents, Terms of Reference (TOR) as to whether the bidder is in conformance with the requirements. This is usually done by a committee or team as per the laws and regulations governing the PDE.

The following criteria are followed:

a. Quality/Cost based evaluation (Preliminary evaluation).

This verifies the suppliers' legality in operation. It looks at:

- Trading license
- Memorandum and articles of association
- Income tax clearance
- VAT clearance
- Certificate of incorporation

The preliminary evaluation is done on pass/fail basis and it is a ticket to the next stage.

b. Technical Evaluation:

This is with reference to compliance with specifications (goods), Scope of Works (SOW) or Bill of Quantity (BOQ) for works and Terms of Reference (TOR) for services. Technical evaluation considers all the statement of requirements for the particular goods and services including the experience of the staff, output/report submission, experience of the firm, bid security, performance guarantee, warranty, insurance etc. Marks are awarded for terms of references (services), for works comparison is made and for specifications compliance assessment is conducted. However, no credit is given for exceeding the specification.

c. Financial evaluation:

Only bids that have passed the technical evaluation stage qualify for financial evaluation. The purpose of financial evaluation is to determine the lowest price responsive, qualified, technically compliant quotation.

At this stage: arithmetic errors are corrected.
All bids are converted to a common currency.
Bids are ranked according to the total price from the lowest to the highest.

PROCUREMENT METHODS:

The Procurement Act spells out a number of methods that may be employed in securing goods or the provision of services. The choice of a particular method is normally guided under part IV of the procurement Act. However, the guiding factor is usually the need to obtain value for money. Every method chosen by an entity must be approved first by the contracts committee to see whether it provides value for money The Act outlines the following methods:

- **Open Domestic Bidding:**

. This is a procuring or disposing method which is open to participants on equal terms through advertisement of the procurement or disposal opportunities.The media for advertisement is national; it is used to obtain the minimum possible competition and value for money. This means that foreign or international bidders are not barred from participating in the bidding process. It is domestic because the advertisements are normally placed in the local media.

- **Restricted Domestic bidding:**

The process of acquiring products or services under the restricted domestic bidding method is guided by regulation (225) to the extent that invitations to bid are addressed to a limited number of potential bidders without advertising the opportunity in a bid notice for the whole public to participate.

This method may be used where:

- The supplies, works or services are available only from a limited number of providers within the country.
- There is insufficient time for an open bidding procedure. This is especially in emergency situations.
- The estimated value of the procurement does not exceed a threshold given in the guidelines. Under this method, the selection of the bidder is done by the contracts committee.
- The display of the best evaluated bidder is done before the bid is confirmed by the Accounting Officer as not subject to administrative review.
- The bid is approved by all relevant agencies including the Attorney general since he is the legal advisor to the government in the law of contract.

Open international bidding method:

This is a mode of procurement of procurement which is open for participation on equal terms by all providers through advertisement of the opportunity which specifically seeks to attract foreign providers. It may be employed instead of open domestic bidding where competition would increase the value for money. This method does not, however, prohibit the domestic bidders from participating and under regulation 114; it shall be open to all bidders and shall be by public advertisement of a bid notice in a publication of wide international circulation. The bids are submitted to the contracts committee and bid opening is in accordance with the procedures set out in the regulations.

Restricted International bidding:

It is used where circumstances do not justify or permit an open bidding method. Under regulation 166, the selection of bidders is done through developing a short list which is sufficient to ensure effective and real completion. The PDE uses information available in the authority's register for providers or in the entity's own list of pre-qualified providers and where a shortlist is developed, a fair and equal opportunity with out barriers to competition is afforded to all bidders.

Quotations/Proposal Procurement:

Under Section 84 of the Act, These are simplified procurement and disposal methods which compare with price quotations obtained from a number of providers. These methods are employed where the value or circumstances do not justify or permit open or restricted bidding procedures.

While quotations are employed in procuring works and supplies proposals are employed in procuring services. The two methods are appropriate

–Where there is insufficient time and where there is an emergency.

-Where the estimated value of he procurement does not exceed what is stated in the procurement guidelines.

Direct/Single sourcing:

- Where the buying organization has sourced from a particular supplier for a relatively longer period, cases of emergency among others.
- Competition may not be necessary or possible where there is insufficient time for other procedures to be employed and so this method becomes appropriate.
- Also where works, services or supplies are available from only one provider, then this method is appropriate.
- Similarly where there is an existing contract which requires to be extended for additional works, services or supplies of a similar nature and no advantage could be obtained by further competition then this method can be used.
- It is also preferable where there is a need to purchase additional works, services or supplies from the original supplier to ensure continuity in technical approach, use of experience acquired or continued professional liability.

Conditions appropriate for the use of tendering and competitive bidding:

- The value of purchase mist justify expense I.e. the dollar value of the specific purchase mist be large enough to justify the expense to both the buyer and the seller that accompanies this method of source selection and pricing – there must be sufficient value in the purchase so as to warrant the expense of tenders.
- The specifications of the item or description of the service to be purchased must be clear to both the buyer and the seller. In addition, the seller must know from actual previous experience the cost of producing the item or rendering the service.
- The market must consist of an adequate number of sellers. If not, there is a risk that and inefficient bid will be received.
- The sellers that make up the market must be technically qualified and actively want the contract and therefore be willing to price competitively to get it.
- The buyer must have a good idea of a "ball park" (rough estimate) price, then the suppliers are likely to exploit him.

Conditions when competitive bidding should not be used:

- In addition to satisfying the above conditions, the following situations should not be present when employing competitive bidding as a method of procurement.
- Situations in which it is impossible to estimate costs with a high degree of certainty.
- Situations in which price is not the only important variable for example quality, schedule and service may well be negotiable variables of equal importance.
- Situations in which the purchasing firm anticipate a need to make changes in the specifications or some other aspect of the purchase contract.
- Situations in which special tooling or setup costs are major factors. The allocation of such costs and title to the special tooling are issues best resolved through negotiation.

OUTSOURCING

Organizations are increasingly operating in increasingly changing and competitive environments and because of this, each organization are required to perform its functions extremely well. In particular, organizations are required to show excellence in five key areas namely:

- Quality
- Cost
- Flexibility
- Dependability and
- Speed.

In other words, to achieve competitive advantage, organizations are judged by the cost they charge for their services, the quality of their products, how flexible and dependable they are and the speed it takes to offer their services. Each organization is required to do more with less. Because of the above dynamics, organizations have been forced to do two things namely:

- Identify the functions where they have a core competence i.e. those functions which they can do better than others.
- Secondly those functions where they do not have a core competence.

The general trend therefore has been to adopt the principle of out sourcing non-core activities. This derives from the concept of focused activities where the rule is to out source anything where the organization has no distinctive competence. Distinctive competence is the basis of competitive advantage put in general terms; distinctive competence is something one can do better than others. In other words, it is what sets organizations apart. The cardinal sin however is to out source something where an organization has a distinctive competence.

Definition of Outsourcing:

Out sourcing is sometimes referred to as sub-contracting or contracting out. White and James (1993) defined outsourcing as "a contractual relationship between an external vendor and an enterprise in which the vendor assumes responsibility for one or more business functions of the enterprise. Zenz (1994) looks at two concepts namely: sub-contracting and out sourcing where he defines each as follows:

1. Sub-contracting is a business practice in which a producer hires another firm to perform part of the manufacturing process or to furnish sub-assemblies that will be incorporated into the end product.

2. Outsourcing on the other hand does not form part of the production process such as cafeteria services, clearing, and transport services among others.

Weele (2005), defines outsourcing in general terms as the transfers of activities that were previously conducted in-house to a third party.

Nevi (2000), offers a wider definition of outsourcing as follows "outsourcing" means that a company diverts itself of resources to fulfill a particular activity to another company to focus more effectively on its own competence. The difference in sub-contracting is the divestment of assets, infrastructure, people and competencies.

A distinction however, has to be made between outsourcing and make or buy decisions. Burt and Dobler (1996) and later on in (2003), in their classic document "World class supply Management "suggest that the distinction between the two is that the decision to outsource may be strategic but in its everyday operational outsource may be strategic but in its everyday operational management, it is similar to a make or buy decision, although at the margin there may be little between the two terms.

Characteristics of Outsourcing:
There are four major characteristics of outsourcing that have been identified namely:

(i) Activities that were initially performed in-house are transferred to an external party or vendor through a contractual relationship.
(ii) Assets and in some cases people go to that external vendor party although this involves a lot of legal implications.
(iii) There will be an extended relationship between parties involved over a long period of time.
(iv) In transferring the activity to the external party, the buyer is exposed to both a cost and risk profile both to which are new to the companies involved.

Candidate functions for Outsourcing:
In the outsourcing exercises, there are common functions that have been sighted as being the major focus of outsourcing. Most of these functions fall within the service sector. It is almost evident from the literature that most organizations that have outsourced have at least included such functions. That is why they are regarded as major candidate functions for outsourcing. The following are some of such functions:

- Catering services
- Security services
- Cleaning services
- Transport and logistics services
- Insurance services
- Health care services
- Human resource/recruitment services
- Estates management services
- Information technology management services.

Reasons for Outsourcing:
For a firm to benefit from outsourcing, it should clearly define the reasons as to why it is outsourcing and the benefits expected. This makes it easy to undertake control and performance measurement.

Cost reduction; This is because its suppliers have the needed skills knowledge and expertise that come form having done the work overtime. It is assumed that the firm can do it at a lower cost. This cost reduction can be passed to the customer in terms of competitive prices, making the firm more competitive than others.

Need to focus on core competences: A firm can outsource non-core activities to enable them devote the time, resources and effort that would otherwise have been spent on these to doing other activities that are core to the survival of the company.

Business simplification: This involves management focusing on those activities that deliver shareholders and customers' value. Thus it retains the activities these activities and outsourcers the rest.

Reduction of Capitalization of fixed assets: In order to flex business volumes and product mix in a business dealing with heavily fluctuating demand, the asset base needs to be kept low. And outsourcing some of the entire asset intensive activities may be a good way of achieving that.

Access to Specialist Resources: Service level can be increased by appreciation that a company is likely no to be good at everything and that specialists and suppliers can add significant value by applying their specialist skills and possibly economies of scale-on behalf of their customers.

Business process changes: If a company realizes the need to change a business process dramatically and yet it is unable to manage the change process internally, either due to lack of skills or the inability to get internal staff to accept changes that are seen as detrimental to their quality of life, security, etc., or when the internal culture and altitude of the employees makes it hard to gain, buy in and support. This can lead to outsourcing where business needs candidate access to specialist services. Out sourcing can provide experience and expertise within a number of days to fill the gaps while recruitment and mobilization for internal resources takes time.

Insufficient Competitive position: The firm may have a sufficient position on key drives like cost, quality, speed and technology compared to its competitors in performing the activities that have been outsourced.

Lack of resources: These resources may be costly to acquire and will also take time. If resources are not available, an external provider would do better without the company having to invest a lot of money to acquire the resources.

Risk avoidance/Reduction in liability: In this case firms want to reduce or avoid the risks that are associated with undertaking a particular activity. They would rather pass those risks onto a professional who can do it better.

Flexibility: Outsourcing can provide an organization with greater flexibility especially in the sourcing of rapidly developing new technologies and fashion goods. By outsourcing to specialist suppliers, who are more responsive through new technologies than large vertically integrated organizations, with a network of specialist suppliers, t he customer organization can rapidly increase or reduce production in response to changing market conditions at a lower cost. Such flexibility can enable an organization control and excel at activities that create competitive advantage.

Performance Improvements; Outsourcing can enable an organization improve its performance in activity. This is because many specialist suppliers can achieve much higher levels of performance in certain activities than can be achieved internally by the outsourcing company. This performance can be in terms of level of service quality, customer care, etc. However, there is need for the outsourcing organization to ensure that it has an effective measurement system in place to assess the performance level of suppliers on a continuous basis.

Patents: In some countries, if a company wants to undertake an activity for which another company has patent rights, trying to acquire that right may take a lot of time and money so they prefer to pass on the activity to a firm that already has the rights to undertake such activity.

Forms of Outsourcing:

	Labor outsourcing	Mixed outsourcing	Complete outsourcing
Contractor provides	Some employees	Some or all of the following: - employees - materials - process and systems - Technology and equipment facilities.	-Employees Materials Technology and equipment facilities management and supervision
Host firm provides	Some employees Materials Process and systems Technology and equipment Management and supervision	Some or all of the above	Program management.

THE OUTSOURCING PROCESS:

Outsourcing is not a one time event; it is a cycle or a process that involves certain stages or phases. The tree major phases of the outsourcing process include:

1. The Strategic Phase:

This is concerned with tree major questions of who, why and sometimes what. Te first question of who relates to the objectives of the firm in other words the reasons as to why the firm is established. Related to the first question, the issue of why relates to the reasons for conducting the outsourcing and these reasons are normally considered after looking at the core functions of the organization and comparing them with the non-core functions. This subsequently leads to the other question of what should be outsourced.

2. The transitional phase:

This is concerned with the question of how and this can only take place after the strategic phase has been successfully completed. It should be remembered that much of the reasons for outsourcing may be clear, the success of the entire outsourcing exercise is dependent on how will the exercise is procedurally carried out. In general terms, the transitional phase includes two fundamental stages i.e. contract negotiation and project execution and transfer.

3. The operational phase:

After successfully accomplishing the transitional phase, that is, negotiating the contract successfully, executing and transferring the project, then the operational phase begins. This stage/phase consists of two broad processes:

a. Managing the relationships:

This is one of the critical stages in outsourcing and that is why it is evident from the literature that most outsourcing contracts have not achieved the intended benefits partly because managing the buyer – supplier relationship has not been done well.

b. Termination of the contract:

This is very important because the way it is handled affects future contracts with the supplier.

Key considerations in outsourcing:

Before an outsourcing decision is made, the arte a number of issues that have to be considered. These issues may include:

- A clear and accurate identification of reasons for outsourcing and the candidate functions for outsourcing.
- A clear market survey to establish the availability of capable providers for the outsource services.

- Establishment of clear performance indicators which are easy to measure doing the process of outsourcing.
- Accurate and clear terms and conditions of the contract.
- Effective and efficient management of the contract over the life time of the contract.
- Inclusion of risk mitigation clauses like the liquidated damage clauses, consequential loss clauses and termination clauses among other clauses.
- Continuous monitoring of the performance of the contract.
- Keeping of accurate contract management documents.

Possible reasons for the failure of outsourced contracts:
The reasons may generally be seen as the opposite of the reasons or conditions for effective outsourcing exercise. However, one may point out the following reasons:

- Failure to understand the outsourcing concept.
- The band wagon effect by many organizations.
- Inaccurate identification of core functions of the organization.
- Lack of planning and strategic foresight in the outsourcing exercise.
- Selection of poor providers
- Lack of foresight in making contract terms and conditions.
- Poor monitoring and supervision of the contract.

Supply Chain Management (SCM) Problems

Supply chain management (SCM) must address the following problems:

- Distribution Network Configuration: Number, location and network missions of suppliers, production facilities, distribution centers, warehouses, cross-docks and customers.
- Distribution Strategy: Including questions of operating control (centralized, decentralized or shared); delivery scheme (e.g., direct shipment, pool point shipping, Cross docking, DSD (direct store delivery), closed loop shipping); mode of transportation (e.g., motor carrier, including truckload, LTL, parcel; railroad; intermodal, including TOFC and COFC; ocean freight; airfreight); replenishment strategy (e.g., pull, push or hybrid); and transportation control (e.g., owner-operated, private carrier, common carrier, contract carrier, or 3PL).
- .
- Information: Integration of and other processes through the supply chain to share valuable information, including demand signals, forecasts, inventory, transportation, and potential collaboration etc.
- Inventory Management: Quantity and location of inventory including raw materials, work-in-progress (WIP) and finished goods.
- Cash-Flow: Arranging the payment terms and the methodologies for exchanging funds across entities within the supply chain. The way supply chain is designed has significant implications on companies working capital, and can have important consequences especially in leveraged and distressed companies. [2].

Supply chain execution is managing and coordinating the movement of materials, information and funds across the supply chain. The flow is bi-directional.

Activities/functions

Supply chain management is a cross-function approach to manage the movement of raw materials into an organization, certain aspects of the internal processing of materials into finished goods, and then the movement of finished goods out of the organization toward the end-consumer. As organizations strive to focus on core competencies and becoming more flexible, they have reduced their ownership of raw materials sources and distribution channels. These functions are increasingly being outsourced to other entities that can perform the activities better or more cost effectively. The effect is to increase the number of organizations involved in satisfying customer demand, while reducing management control of daily logistics operations. Less control and more supply chain partners led to the creation of supply chain management concepts. The purpose of supply chain management is to improve trust and collaboration among supply chain partners, thus improving inventory visibility and improving inventory velocity.

Strategic

- Strategic network optimisation, including the number, location, and size of warehousing, distribution centers, and facilities
- Strategic partnership with suppliers, distributors, and customers, creating communication channels for critical information and operational improvements such as cross docking, direct shipping, and third-party logistics
- Product life cycle management, so that new and existing products can be optimally integrated into the supply chain and capacity management
- Information Technology infrastructure, to support supply chain operations
- Where-to-make and what-to-make-or-buy decisions
- Aligning overall organizational strategy with supply strategy

Tactical

- Sourcing contracts and other purchasing decisions.
- Production decisions, including contracting, scheduling, and planning process definition.
- Inventory decisions, including quantity, location, and quality of inventory.
- Transportation strategy, including frequency, routes, and contracting.
- [Benchmarking] of all operations against competitors and implementation of best practices throughout the enterprise.
- Milestone payments
- Focus on customer demand.

Operational

- Daily production and distribution planning, including all nodes in the supply chain.
- Production scheduling for each manufacturing facility in the supply chain (minute by minute).
- Demand planning and forecasting, coordinating the demand forecast of all customers and sharing the forecast with all suppliers.
- Sourcing planning, including current inventory and forecast demand, in collaboration with all suppliers.
- Inbound operations, including transportation from suppliers and receiving inventory.
- Production operations, including the consumption of materials and flow of finished goods.
- Outbound operations, including all fulfillment activities, warehousing and transportation to customers.
- Order promising, accounting for all constraints in the supply chain, including all suppliers, manufacturing facilities, distribution centers, and other customers.

Supply chain management

Organizations increasingly find that they must rely on effective supply chains, or networks, to successfully compete in the global market and networked economy.[3] In Peter Drucker's (1998) new management paradigms, this concept of business relationships extends beyond traditional enterprise boundaries and seeks to organize entire business processes throughout a value chain of multiple companies.

6. Supply Chain Management 2.0 (SCM 2.0)

Building off of globalization and specialization, SCM 2.0 has been coined to describe both the changes within the supply chain itself as well as the evolution of the processes, methods and tools that manage it in this new "era".

Web 2.0 is defined as a trend in the use of the World Wide Web that is meant to increase creativity, information sharing, and collaboration among users. At its core, the common attribute that Web 2.0 brings is it helps us navigate the vast amount of information available on the web to find what we are looking for. It is the notion of a usable pathway. SCM 2.0 follows this notion into supply chain operations. It is the pathway to SCM results – the combination of the processes, methodologies, tools and delivery options to guide companies to their results quickly as the complexity and

speed of the supply chain increase due to the effects of global competition, rapid price fluctuations, surging oil prices, short product life cycles, expanded specialization, near/far and off shoring, and talent scarcity.

Supply chain business process integration

Successful SCM requires a change from managing individual functions to integrating activities into key supply chain processes. An example scenario: the purchasing department places orders as requirements become appropriate. Marketing, responding to customer demand, communicates with several distributors and retailers as it attempts to satisfy this demand. Shared information between supply chain partners can only be fully leveraged through process integration.

Supply chain business process integration involves collaborative work between buyers and suppliers, joint product development, common systems and shared information. According to Lambert and Cooper (2000) operating an integrated supply chain requires continuous information flow. However, in many companies, management has reached the conclusion that optimizing the product flows cannot be accomplished without implementing a process approach to the business. The key supply chain processes stated by Lambert (2004) [6] are:

- Customer relationship management
- Customer service management
- Demand management
- Order fulfillment
- Manufacturing flow management
- Supplier relationship management
- Product development and commercialization
- Returns management

Much has been written about demand management. Best in Class companies have similar characteristics. They include the following: a) Internal and external collaboration b) Lead time reduction initiatives c) Tighter feedback from customer and market demand d) Customer level forecasting

One could suggest other key critical supply business processes combining these processes stated by Lambert such as:

a. Customer service management
b. Procurement
c. Product development and commercialization
d. Manufacturing flow management/support
e. Physical distribution
f. Outsourcing/partnerships
g. Performance measurement

a) Customer service management process

Customer Relationship Management concerns the relationship between the organization and its customers. Customer service provides the source of customer information. It also provides the customer with real-time information on promising dates and product availability through interfaces with the company's production and distribution operations. Successful organizations use following steps to build customer relationships:

- determine mutually satisfying goals between organization and customers
- establish and maintain customer rapport
- produce positive feelings in the organization and the customers

b) Procurement process

Strategic plans are developed with suppliers to support the manufacturing flow management process and development of new products. In firms where operations extend globally, sourcing should be managed on a global basis. The desired

outcome is a win-win relationship, where both parties benefit, and reduction times in the design cycle and product development are achieved. Also, the purchasing function develops rapid communication systems, such as electronic data interchange (EDI) and Internet linkages to transfer possible requirements more rapidly. Activities related to obtaining products and materials from outside suppliers requires performing resource planning, supply sourcing, negotiation, order placement, inbound transportation, storage, handling and quality assurance, many of which include the responsibility to coordinate with suppliers in scheduling, supply continuity, hedging, and research into new sources or programs.

c) Product development and commercialization

Here, customers and suppliers must be united into the product development process, thus to reduce time to market. As product life cycles shorten, the appropriate products must be developed and successfully launched in ever shorter time-schedules to remain competitive. According to Lambert and Cooper (2000), managers of the product development and commercialization process must:

1. coordinate with customer relationship management to identify customer-articulated needs;
2. select materials and suppliers in conjunction with procurement, and
3. develop production technology in manufacturing flow to manufacture and integrate into the best supply chain flow for the product/market combination.

d) Manufacturing flow management process

The manufacturing process is produced and supplies products to the distribution channels based on past forecasts. Manufacturing processes must be flexible to respond to market changes, and must accommodate mass customization. Orders are processes operating on a just-in-time (JIT) basis in minimum lot sizes. Also, changes in the manufacturing flow process lead to shorter cycle times, meaning improved responsiveness and efficiency of demand to customers. Activities related to planning, scheduling and supporting manufacturing operations, such as work-in-process storage, handling, transportation, and time phasing of components, inventory at manufacturing sites and maximum flexibility in the coordination of geographic and final assemblies postponement of physical distribution operations.

e) Physical distribution

This concerns movement of a finished product/service to customers. In physical distribution, the customer is the final destination of a marketing channel, and the availability of the product/service is a vital part of each channel participant's marketing effort. It is also through the physical distribution process that the time and space of customer service become an integral part of marketing, thus it links a marketing channel with its customers (e.g. links manufacturers, wholesalers, retailers).

f) Outsourcing/partnerships

This is not just outsourcing the procurement of materials and components, but also outsourcing of services that traditionally have been provided in-house. The logic of this trend is that the company will increasingly focus on those activities in the value chain where it has a distinctive advantage and everything else it will outsource. This movement has been particularly evident in logistics where the provision of transport, warehousing and inventory control is increasingly subcontracted to specialists or logistics partners. Also, to manage and control this network of partners and suppliers requires a blend of both central and local involvement. Hence, strategic decisions need to be taken centrally with the monitoring and control of supplier performance and day-to-day liaison with logistics partners being best managed at a local level.

g) Performance measurement

Experts found a strong relationship from the largest arcs of supplier and customer integration to market share and profitability. By taking advantage of supplier capabilities and emphasizing a long-term supply chain perspective in customer relationships can be both correlated with firm performance. As logistics competency becomes a more critical

factor in creating and maintaining competitive advantage, logistics measurement becomes increasingly important because the difference between profitable and unprofitable operations becomes more narrow. A.T. Kearney Consultants (1985) noted that firms engaging in comprehensive performance measurement realized improvements in overall productivity. According to experts internal measures are generally collected and analyzed by the firm including

1. Cost
2. Customer Service
3. Productivity measures
4. Asset measurement, and
5. Quality.

External performance measurement is examined through customer perception measures and "best practice" benchmarking, and includes 1) customer perception measurement, and 2) best practice benchmarking. Components of Supply Chain Management are 1. Standardization 2. Postponement 3. Customization

References

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