**PROCUREMENT AND SUPPLY CHAIN MANAGEMENT**

**FINAL EXAM QUESTION**

**Answer all questions**

1. **Outline the phases and processes of operation research study. What are its limitation.**

O.R is a logical and systematic approach to provide a rational basis for decision making.The phases and processes or O.R study must also be quite logical and systematic.They are as follows:

1.Observe the problem environment-the activities that constitute this phase are visits,conferences,observations ,research etc.This ensures that the scientist gets sufficient information and support to proceed and is better prepared to formulate the problem.

2.Analyze and define the problem-In this phase,not only is the problem defined,but also uses objectives and limitations of the study are stressed in the light of the problem.

3.Develop a model-this phase involves constructing a model,which is a representation of some real or abstract situation.O.R models are basically mathematical models representing systems,process or environment in form of equations relationships or formulae.The proposed model may be field tested and modified in order to work under stated environmental constraints.

4.Select appropriate data input-No model will work appropriately if data input is not appropriate.Hence,taping the right kind of data is a vital step in O.R process.Important activities in this steps are analyzing internal-external data and facts,collecting opinions and using computer data banks.The purpose of this phase is to have sufficient input to operate and test the model.

5.Provide a solution and test reasonableness-This phase of O.R is to get a solution with the help of model and data input.First the solution is used to test the model and to find limitations if any.If the solution is not reasonable or if the model is not behaving properly,updating and modification of the model is considered at this stage.The end result of this phase is solution that is desirable and supports current organizational objective.

**Limitations or O.R**

O.R has certain limitations,however these limitations are mostly related to the problems of model building and the time and money factors involved in its application rather than its practical utility.Some of them are as follows;

1.Magnitude of computations-O.R tries to find out optimal solution taking into account all the factors.In the modern society these factors are enormous and expressing them in quantity and establishing relationships among these require voluminous calculations which can only be handled by machines.

2.Non-Quantifiable factors-O.R provides solution only when all elements related to a problem can be quantified.All relevant variables do not lend themselves to quantification.Factors which can not be quantified,find no place in O.R. Models in O.R do not take into account qualitative fctors or emotionl factors which maybe quite important.

3.Distance between manager and O.R researcher-O.R being specialist’s job requires a mathematician or a stastician,who might not be aware of the business problems.Similarly,a manager fails to understand the complex working of O.R.Thus there is a gap between the two.Managementitself may offer a lot of resistance due to conventional thinking.

4.Money and time costs-When the basic data are subjected to frequent changes,incorporating them into the O.R models is a costly affair.Moreover,a fairly good solution at present may be more desirable than a perfect O.R solutions available after some time.

5.Implementation of decisions is a delicate task.It must take into account the complexities of human relations and behavior.Sometimes resistance is offered only due to psychological factors.

1. **Explain ways in which purchasing and supply performance measurement may enhance productivity of an organization.**

The performance of the purchasing function can be measured using a variety of measurements. A company can decide which of these measurements of effectiveness are relevant to the performance of their purchasing department. The measurements can include:

**a.Cost Saving** If the purchasing department procures an item at a lower price than they did previously, then it is a cost-saving. This can occur when a [new supplier is found,](https://www.thebalancesmb.com/how-to-find-a-supplier-for-the-product-you-want-to-import-1953283) a less costly substitute item is used, a new contract has been signed with the vendor, a cheaper transportation method has been found, or the purchasing department has negotiated a lower price with the existing supplier

**b.Increased Quality**

When an item has improved quality either by using a different supplier or by negotiating with the existing supplier, the improvement will be reflected in a reduction of waste or production resources.

**c.Purchasing Improvements**

Efficiencies in the methods used in the purchasing department will increase effectiveness. These can include the introduction of EDI, e-procurement systems, vendor-managed inventory and pay on receipt processes.

**d.Transportation Improvements**

When a purchasing department negotiates with a carrier or number of carriers to reduce the [cost of transporting items](https://www.thebalancesmb.com/reducing-transportation-costs-2221049) from the vendor to the production facilities, the unit cost of the item will be reduced. This cost-saving can be used as a measurement of effectiveness

1. **Purchasing and supply management differ from each other in their focus and scope. Explain pointing out the difference between the two**

Both supply and procurement/purchasing management are parts of the supply chain world. They both have other chains they link and communicate with and are dependent on each other mutually in the sense - customer demand directs how many units of a product needs to be manufactured and that helps derive the units of raw materials required and other services.

## Purchasing is a subset of procurement. Purchasing generally refers simply to buying goods or services. Purchasing often includes receiving and payment as well . Purchasing is the process of how goods and services are ordered. It can usually be described as the transactional function of procurement for goods or services.

Supply chain management (SCM) is the act of supply chain professional managing in order to ensure it is operating as forcefully as possible. This implies that all suppliers and manufacturers are maintaining the desired quality of production. The SCM’s ultimate goal is to reduce inventory with the assumption that products are available when it is exactly needed. Therefore, when you are talking about supply chain management, you are referring to the range of activities from procurement to customer delivery.

Procurement is the process of getting the goods your company requires, while supply chain management is the extensive infrastructure needed to get you those goods. Supply chain management should ultimately be considered one of many responsibilities faced by a procurement function

1. **Discuss the four principles that might guide a supply chain manager**

The 4 R’s are principles that guide supply chain managers with competition (Beusekom, 2016). If you want to develop a competitive supply chain, it is necessary that you can manage the 4 R’s, which are:  
1. Responsiveness  
2. Reliability  
3. Resilience  
4. Relationships

1. **Responsiveness**Responsiveness is about how fast the supply chain can react on certain things, for example changes in the market. A trend in responsiveness is that customers rather have short lead times, more flexibility and improving customer solutions. When your supply chain can react fast, it is possible to react and adjust faster on customer demands and changes in the market, which leads to achieving a better service level, more customers and a higher market share.
2. **Reliability**Supply chains in the current market try to improve the reliability by re-engineering processes which affect performances, for example delivery reliabilities and service levels in retail shops and distribution centers. Another way to improve the reliability of the supply chain is to reduce process changes.
3. **Resilience**The resilience of the supply chain is about how the supply chain deals with unexpected fluctuations and turbulences in the market. In the current market, the levels of fluctuations and volatility (changes in investments and prices) are high. A big cause for this are the wider businesses, economies and political environments, which results in unexpected shocks and shutdowns (Beusekom, 2016). The resilience of the supply chain focusses on dealing with these unexpected things.
4. **Relationships.**Supply chain management is about the management of relations over complex networks and businesses. An important example of relationships in the supply chain are purchasing together with other businesses. This is done to improve quality, share innovation, reduce costs and integrate planning of production and deliveries (Christopher, 2016).
5. **Explain the circumstances under which the supplier bargaining power may be higher than the buyer’s**.

The Bargaining Power of Suppliers refers to the pressure suppliers can put on companies by raising their prices, lowering their quality, or reducing the availability of their products. This framework is a standard part of [business strategy](https://corporatefinanceinstitute.com/resources/knowledge/strategy/).

**The** [supplier power](https://strategiccfo.com/supplier-power-analysis/) **Porter has studied includes several determining factors.**

**If suppliers are concentrated compared to** [buyers](https://strategiccfo.com/buyer-bargaining-power-one-of-porters-five-forces/) **– there are few suppliers and many buyers – supplier** [bargaining power](https://strategiccfo.com/buyer-bargaining-power-one-of-porters-five-forces/) **is high.**

**Conversely, if buyer switching costs – the cost of switching from one supplier’s** [product](https://strategiccfo.com/product-costs/) **to another supplier’s product – are high, the bargaining power of suppliers is high.**

**If suppliers can easily forward integrate or begin to produce the buyer’s** [product](https://strategiccfo.com/product-life-cycle-stages/) **themselves, then supplier power is high.**

[Supplier power](https://strategiccfo.com/supplier-power/) **is high if the buyer is not** [price](https://strategiccfo.com/price-to-book-value-analysis/) **sensitive and uneducated regarding the product.**

**If the supplier’s product is highly differentiated, then supplier bargaining power is high. The bargaining power of suppliers is high if the buyer does not represent a large portion of the supplier’s sales.**

**If substitute** [products](https://strategiccfo.com/increasing-pricing-on-products/) **are unavailable in the** [marketplace](https://strategiccfo.com/exploit-new-business-opportunities/)**, then supplier power is high**

**6.Highlight five strategic issues in purchasing and supply that may be put in place to ensure value of money without sacrificing the environment.**

Companies implement Purchasing strategies in order to make cost effective purchasing decisions from a group of efficient vendors who will deliver quality goods on time and at mutually agreeable terms.

These purchasing strategies may include such choices as making [procurement savings](https://www.purchasing-procurement-center.com/procurement-savings.html) by using centralized purchasing which is concentrating the entire procurement activities within one principal location.

Other companies may decide to undertake a single source procurement strategy that involves obtaining excellent dedicated service from a single vendor.  These strategies are predominant when sourcing for IT or indirect purchasing such as office supplies and cleaning.

* Other companies may use a procurement strategy of using a core [purchasing cycle.](https://www.purchasing-procurement-center.com/purchasing-cycle.html)  This is where they order from a group of regular vendors and use [outsourcing procurement](https://www.purchasing-procurement-center.com/outsourcing-procurement.html) for their larger and ad hoc purchases.

Still others, particularly when they are seeking labor for short-term projects will use [procurement auctions](https://www.purchasing-procurement-center.com/procurement-auction.html) in order to obtain the best pricing levels.

A company will choose purchasing strategies that promote their procurement best practices of minimizing costs, maximizing quality and ensuring that quality products are delivered on time

Regardless of the size of the company, there is a core group of purchasing strategies that most of them implement.  These are:

* **Supplier Optimization**

The company chooses an optimum mix of vendors who can provide the best prices and terms.  This process usually means that the less able suppliers who cannot provide a quality service at the terms and prices required are discarded.  This is by far the most common of the various purchasing strategies.

* **TQM**

Total Quality Methods, requires the vendors to provide an ever increasing quality service with zero errors. The supplier ensures [purchasing best practices](https://www.purchasing-procurement-center.com/purchasing-best-practices.html) using a number of tools such as six sigma.

* **Risk Management**

As more companies obtain their supplies from countries such as China and India, they are more concerned with the risk management of this supply chain. Whilst these countries can supply products at very advantageous prices, these advantages can be soon negated by a natural or human disaster

* **[Global Sourcing](https://www.purchasing-procurement-center.com/global-strategic-sourcing.html)**
* Large multinational companies see the world as one large market and source from many vendors, regardless of their country of origin.
* [**Vendor Development**](https://www.purchasing-procurement-center.com/vendor-management.html)

Some companies believe that they are working hand-in-hand with their vendors.  They therefore spend some time in developing processes that assist these vendors.  There may also be the situation where a company is dependent upon just one supplier for their products.  If this supplier is unable to perform to the required standards, the purchaser may assist the vendor in improving their service or implement processes to improve their procurement cycle

**7.What is the difference between a purchase order and purchase requisition.Prepare a standard purchase requisition form with all the entries filled.**

A purchase requisition is a document that the department of the company sends to the financial department of that same company. Basically it’s the equivalent of asking for permission to purchase specific goods. So in effect, it is not an order.

For example, the IT department of a company could be in need for more or new computers. So they send the purchase requisition to the financial department. Now, the financial department could grant approval and then the procurement process can continue further by creating a purchase order and sending it to the selected vendor.

A purchase requisition usually contains the following information:

1. Location or department of the buyer
2. Vendor name and information
3. Description and quantity of the supplies
4. Price

Once the financial department approves the purchase, a purchase order or PO is sent to the vendor. This is a legally-binding (for both sides) document that includes the following information:

1. PO number
2. Buyer information
3. Vendor information
4. Delivery address
5. Description and quantity of goods
6. Price
7. Invoice information
8. Other terms of payment

The main difference between purchase orders and purchase requisitions is in their nature. A purchase requisition is a document with which one department asks for permission from another for something (to buy certain goods) and the purchase order is a document they use to actually buy these goods from the vendor

REQUISITION FORM DATE

Name of the organization: Address:

Telephone: Fax:

Email:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| date | item | Catalog,item description | quantity | unit | Price per unit | Total |
|  |  |  |  |  |  |  |

Requested by:

Signature:

Date:

#### 8.Identify and briefly explain some important documents that purchasing departments should have a record of.

Below are some of the purchasing documents.

1. **Request for Proposal (RFP)** – RFP is a formal document which is used by the buyer to clearly specify their purchasing needs and the supporting requirements which will enable prospective sellers to understand the needs of the buyer. For example, if the buyer wishes to get an ERP system implemented in their organization, they will look for capable technical partners who can fully implement the ERP for them. In such case, the buyer will prepare a document which will detail out their requirements of the ERP system. This document is referred as an RFP. Based on the RFP, the prospective technical implementation agencies will provide a detailed proposal explaining their solution, implementation timeline, pricing etc.
2. **Request for Quotation (RFQ)** - RFP is a formal document which is used to specify clearly the requirements of certain purchases and requesting for a price quotation. RFQ is used for standard purchases such as hardware, off-the-shelve software product, laptops or any other equipment. RFQ is relatively very small document vis-à-vis a RFP, only providing the specification of the items to be purchased and requesting for a quotation. The seller will submit a price quotation and other terms in response to a RFQ.
3. **Request for Information (RFI)** – RFI is used to seek information on various aspects from the prospective bidders. RFI can seek information about bidders such as their financial statements for last ten years, details of their processes in the organization, certifications they hold, list of their clients, client references, and detail of their past accomplishments, case studies and many more. RFI is primarily used to filter out from a huge list of bidders and select a list of potential suppliers with whom finally a RFP or RFQ with actual requirements can be shared.
4. **Invitation for Bid (IFB)**– Invitation for bid a formal document which is used for inviting potential bidders to come and participate in the bidding process.
5. **Request for Bid (RFB)**– RFB is used to solicit financial bids for specified purchases from a selected pool of suppliers.
6. **Purchase Order (PO) -** A purchase order can be raised favouring a supplier for regular purchases. Generally an organization will have a list of selected and preferred suppliers with a master agreement. For example, an organization has 2 selected suppliers for laptops and other electronic hardware with negotiated rates for the year. In such cases, there is no need for fresh bidding. The buyer can simply raise a purchase order favouring the supplier for the quantity of items to be purchased. PO is referred as a unilateral contract which is raised by buyer. It becomes binding to the seller once the seller accepts it.
7. **Contract or Agreement**– Contract or agreement is a mutual agreement between the buyer and the seller. A legal binding contract will have an offer, an acceptance and sufficient consideration for the both the buyer and seller. The contract once finalized will include the detailed statement of work (SOW) and other terms and conditions.
8. **Seller Proposal** – Seller proposal is a detailed offer from the seller in response to the buyer’s request for proposal or buyer’s request for quotation. The proposal will include various sections such as understanding of the buyer’s needs, proposed technical solutions, proposed implementation plan, pricing, warranty etc.

9.**Delivery note**-It is sent by supplier to the buyer.it is used by the buyer to check goods without having to make use of the invoice. One copy of the note is left with the seller and the other two copies are sent with goods to the buyer. If the buyer is satisfied with the goods, he sign both copies of the delivery note, keeps the original and the copy is return to the seller. It is usually made in triplicate

**9.Identify and explain some of the attributes to look for when choosing a supplier.**

Finding and selecting the best supplier is an essential first step to managing product quality and limiting product defects in your orders

**1. Accountability for quality issues**

Admitting to a mistake can be difficult. But when your goods are on the line, working with a quality supplier that takes responsibility for their half of a deal can make a world of difference. That’s why accountability for quality issues tops the list of characteristics of a good supplier

**2. Production capabilities**

A quality supplier should be able to **consistently manufacture a product that meets your requirements** , you can learn a lot about a supplier by verifying areas such as:

* Raw materials and finished product inventory
* [Incoming quality control](https://www.intouch-quality.com/blog/dont-neglect-incoming-quality-control-parts-materials/), in-process quality control and pre-shipment quality control procedures
* R&D capabilities (important if you plan to develop new products)
* Machine and equipment maintenance and calibration
* Certifications or licensing (e.g. business license, export license)

## **3. Expertise in your product type and target market**

* A supplier is more likely to be familiar with common quality issues related to your product if they have experience manufacturing a similar product. They’re more likely to be able to identify and fix problems proactively before those problems affect a large portion of the order

**4. Culture fit: the best suppliers are willing to work with you**

Some suppliers might be more inclined toward developing new products. Others might prioritize reducing their environmental footprint. **The key is to find a supplier whose goals align with yours.**

**5. Ease of communication**

Language and cultural barriers can present real challenges for importers looking for suppliers overseas. You’ll benefit greatly from working with a supplier that’s easy to communicate with. Effective communication can prevent a variety of problems ranging from production delays to product nonconformities.

The best suppliers are open and direct. They know you may have made promises to your own customers. And they know it doesn’t help to keep you in the dark about a bad situation.

## If there’s a change to the status quo, they tell you upfront. If they need clarification about requirements, they ask for it

## **6. Cooperation with third-party QC**

Third-party inspection has become a standard requirement for most importers manufacturing in Asia. A quality supplier will comply with an importer’s request to have an outside inspector verify the goods before shipment.

A supplier’s [resistance to third-party quality control](https://www.intouch-quality.com/blog/what-to-do-when-factories-resist-third-party-inspection/) is usually cause for concern. Some suppliers will try to ship the goods quickly before you have a chance to raise concerns. Such a supplier may be trying to hide an issue from the you.

**7. Ethical compliance**

Ethical sourcing has made its way into the spotlight. As larger brands have made headlines in recent years for social compliance violations in their supply chain, countries have taken steps to outlaw goods made with [forced labor](https://www.intouch-quality.com/blog/the-us-ban-on-imports-made-with-forced-labor/).

Many importers don’t want to work with a factory that treats their workers unfairly or maintains unsafe working conditions. By choosing to work only with the best suppliers that meet [popular social compliance standards](https://www.intouch-quality.com/blog/9-requirements-of-an-sa8000-social-compliance-audit/),

**8. Regulatory compliance**

Aside from ethical compliance, importers need to ensure their supplier complies with laws in both their manufacturing country and their target market. Failing to ensure regulatory compliance can otherwise lead to legal consequences for you and your business

**10. A proactive attitude towards continuous improvement**

It’s also one of the most valuable if you’re serious about maintaining a long-term, high-volume relationship with a supplier.At the very least, a quality-conscious supplier should have an established quality management system (QMS) that complies with ISO 900

**10.What is inventory management.What is the importance of keeping an inventory in an organization. Identify the different types of inventory.**

Inventory management includes aspects such as controlling and overseeing purchases — from suppliers as well as customers — maintaining the storage of stock, controlling the amount of product for sale, and order fulfillment.

**Importance of keeping inventory**

**Customer Service**

An updated records inventory ensures speed and accuracy when dealing with and responding to clients. For example, when clients call in or inquire on inventory-related issues, company representatives can quickly find and issue answers. Knowing which records are available and where to find them helps customer service reps handle inquiries promptly and fill orders efficiently, which gives clients a better impression of the organization. If customers face delays and have to wait for products, services or answers, it portrays the company as incompetent and may lead customers to find alternative companies or cancel orders.

**Expense Control**

Companies with up-to-date records inventory can better control their expenses. For example, a company can buy from specific manufacturers and suppliers at quality discounts based on the suppliers that offer the best deals on specific products. To attract and maintain regular clients, manufacturers and suppliers offer attractive discounts for companies that buy their products in bulk. Updated records also help indicate goods that need restocking and ensure the company avoids overbuying.

**Saves Time**

An accurate records inventory saves the inventory department staff members time. The employees are, therefore, able to have more time to focus on other activities that enhance their company’s overall performance. For example, the workers can direct their time to innovate better ways to organize the inventory. Indexing and retrieval systems are some specific areas they can look into. In addition, the staff can also enlighten other workers in the company on how to access stock information quickly when they need to. Inventory workers can also get the opportunity to explore other skills, such as data analysis, market research and marketing based on predictions from prior records.

**Identifying Issues Promptly**

An accurate records inventory enables a company to identify problems affecting its performance, such as product loss through damages, theft or unknown causes. Keeping an eye on the inventory records helps a company save money by spotting issues as soon as they appear rather than at the end of the year during annual stocktaking. Whether they are mistakes by the salespeople or procedures skipped in the warehouse or the field, an accurate records inventory helps identify these problems by using checks and balances to reconcile sales.

**Types of inventory**

#### Raw Material Inventory:

Raw materials are the basic materials that a manufacturing company buys from its suppliers and that are used by the former to convert them into the final products by applying a set of manufacturing processes

#### Work in Progress (WIP) Inventory

Work in progress inventory can also be called semi-finished goods. They are the raw materials that have been taken out of the raw materials store and are now undergoing the process of their conversion into the final products. These are the partly processed raw materials lying on the production floor. And they have also not reached the stage where they have been converted into the final product

#### Finished Goods Inventory:

Finished goods are indeed the final products obtained after the application of the manufacturing processes on the raw materials and the semi-finished goods discussed above in the article. They are saleable and their sale contributes fully to the revenue from the core operations of the company.

**References**

1.Module 4 handout

2.Procument principles and management 11th edition

3.Global logistics text book