BIJU PATNAIK INSTITUTE OF IT &
MANAGEMENT STUDIES, BHUBANESWAR, ODISHA

Sourcing Management

(For IMBA-9TH Semester-Specialization)

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SOURCING MANAGEMENT (SM)

Module – I	**Introduction to Global Sourcing:** Objectives, Process and Trends in Global Sourcing – Supply Management – Strategic Sourcing Plan, Strategy and Model– Environmental and Opportunity Analysis – Global Operational Sourcing Strategy, Negotiation – Nature, Strategy and Planning– Performance Measurement and Evaluation– Risk Management in Sourcing (Concepts) – Nature and Principles of Risk Management, Risk management process, Risk management tool and technique, Managing risk in international business.
Module – II	**Supplier Research and Market Analysis:** Vendor Rating – Objectives, Self certify vendor management, Criteria and Methods of Vendor rating – Supplier Evaluation and Selection (Concepts), Solicitation of Bids and Proposals – Planning and Methods, Contract negotiation, Vendor performance monitoring and controlling.
Module – III	**Analytical Tools in Sourcing, Pricing Analyses:** Analytical Tools in Sourcing (Foreign Exchange Currency Management, Learning Curve, Quantity Discount Models), Integrative Pacific Systems Case (Supplier Scorecard, Sourcing Risk, Supplier Financial Analysis) – Electronic Sourcing – Sustainability and Sourcing, Green Sourcing.

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Module – I

Introduction to Global Sourcing

Sourcing:

1) Beginning, the place where something begins, where it springs into being. For example the beginning of a river or in other words anything that provides inspiration for later work.
2) The buying of components of a product from an outside supplier, often one located abroad.
3) Sourcing means the selection by a firm of its sources of supply raw materials and components in the case of a manufacturer, final products in the case of a retailer. Strategically, a firm may choose to buy in a particular input (or product) from an outside supplier (outsourcing), or produce it for itself as part of a vertically integrated operation (e.g. vertical integration, make-or-buy decision).

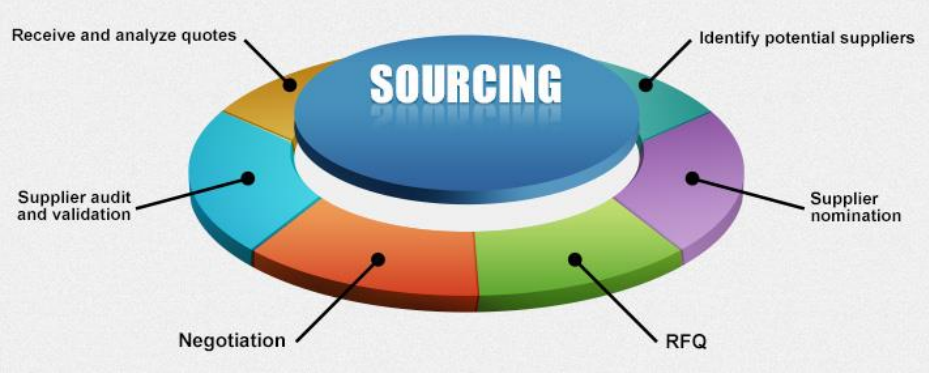


Figure: Sourcing

4) Sourcing is defined as a technical activity with the purpose of identifying existing suitable products and services on the market and qualified suppliers available to provide those products and services.

5) Sourcing also aims at collecting and analyzing information about capabilities within the market to satisfy the organization's requirements, such as obtaining updated cost information, determining the appropriate technology and alternative products, as well as identifying appropriate supplier qualification criteria.

6) Sourcing process, leading to identification and invitation of relevant suppliers, ensures maximized competition, by allowing the most relevant and suitable companies to compete. Sourcing also leads to a better understanding of the market. This knowledge helps to:

- Assist in a make or buy or lease decision
- Determine when to buy

- Establish realistic delivery schedules
- Review sole/single source justifications
- Identify price and non-price evaluation factors
- Identify special terms and conditions for the solicitation and resulting contract that are customary in special markets
- Establish realistic budgets, pricing arrangements and economic ordering quantities.

Introduction to Global Sourcing – Objectives, Process

What is Global Sourcing?

It is the process of sourcing goods and services from the international market across geopolitical boundaries. It aims to exploit global efficiencies such as lower cost skilled labor, cheaper raw materials and other economic factors like tax breaks and low trade tariffs. Examples are call centers in the Philippines, clothing and shoes manufactured in China and Thailand.

Figure: Global Sourcing

Global sourcing has become an economic imperative for many organisations. Increased competition, globalization, and the desire to enter developing markets overseas to drive growth have driven a greatly increased level of international sourcing. However, simply buying internationally is not going to provide the best solution to achieving the goals that will lead to continuing corporate success. A comprehensive global sourcing strategy is required.

Today, it's no longer a question of whether a business should consider global sourcing; it's a matter of 'how'. How to launch, execute, and manage a global supply base to maximise benefits and minimise risks. While cost reduction remains one of the leading factors in driving organisations to turn toward global sourcing, lower cost alone are unlikely to provide a competitive advantage if your competitors are also sourcing internationally.

Global Sourcing – Objectives:

Global sourcing is one component of a company's overall sourcing management strategy (Figure below). It should systematically determine whether a product or service should be made in-house, outsourced, and sourced locally, regionally or globally to support the organisations continued success.

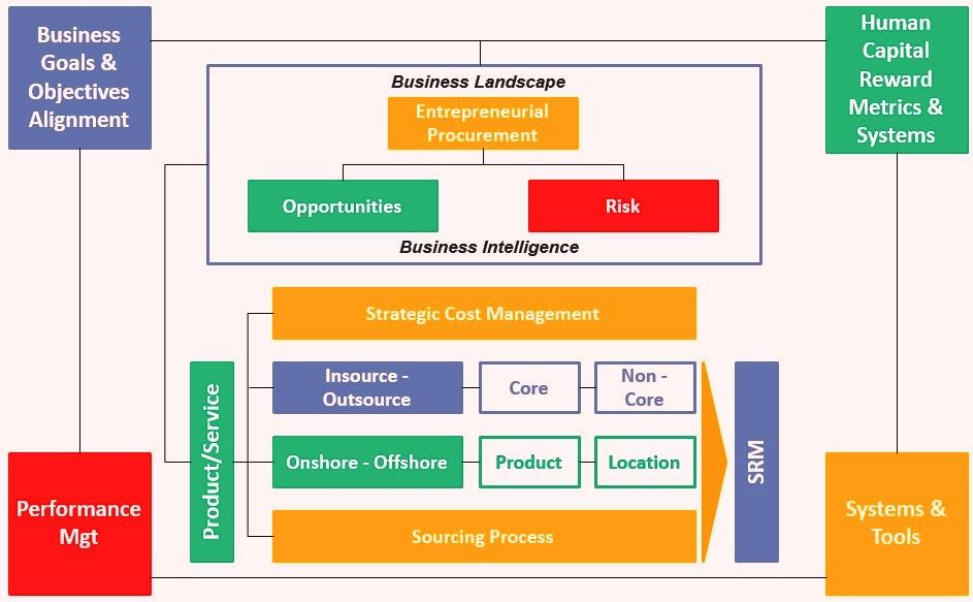


Figure: CPP Sourcing Strategy Framework

In this context, clearly, a more strategic approach is required. One that effectively links global sourcing to the overall goals of the business. Business goals that lead to sustainable Competitive Advantage (CA) include:

- Becoming the lowest cost producer
- Achieving world class quality
- Maintaining constant innovation
- Minimizing time to market

When sourcing goals link directly to the business, global sourcing can make a significant contribution to the sustainable success of the business. To do this procurement needs an evaluation framework (Figure below) by to help them to understand their organisations business strategy, value chain and sources of competitive advantages in order to select appropriate products, locations and suppliers for global sourcing. Once this is understood, procurement can start to develop sourcing strategies that help strengthen existing sources of competitive advantages and secure new ones.

Figure: Global Sourcing Evaluation Framework

Global Sourcing Process:

Many companies find the process of global sourcing, particularly in low-cost countries, extremely difficult due to the increased complexity. A robust process by which to conduct global sourcing is critical.

Figure: Sourcing Process

Commencing with the overall sourcing strategy framework and having reached the decision to source globally, the strategic sourcing process provides the discipline by which to manage supplier selection and to maximise value contribution.

Unfortunately, while many purchasing professionals will be able to show the 'best practice' chevrons for a successful strategic sourcing exercise. They will often admit to not practicing such a robust process on a day to day basis. This lapse of discipline can result in problems later, particularly when sourcing globally as the supply base is often working to different standards of practice and acceptability concerning its local customer base. The key to successful strategic sourcing is a robust and sustainable process supported by strong governance and conducted via suitably skilled people. See examples of good working practice in Table below.

Example of Good practice in Global Sourcing		
1	**Governance**	Ensure governance is in place to support the process and manage conflict.
2	**Process**	A robust sourcing process with involvement of internal customers and stakeholder is essential to ensure buy into outcomes.
3	**Specification**	Clear, well written specifications supported by samples etc. are an essential requirement. No sourcing initiative should even be contemplated unless this requirement has been fulfilled.
4	**Service Expectation**	The creation of a clear Service Level Agreement (SLA) is critical. It is only through the use of an SLA that a company can be completely sure that a supplier fully understands their expectation and how performance will be assessed. It also provides a clear process for regular service reviews, whether face to face or remotely.
5	**Research**	Research of supply markets and individual suppliers is critical to understand what supply.
6	**External Factors**	Keep aware of the external factors that may influence your source country (political, economic, environmental, social, technological etc.). Even public holiday can have serious effects on supply.
7	**References**	The safest method of sourcing is to only use suppliers that have an existing customer base in the west. This often means that the supplier has been developed by a western company to the point where they are more conditioned to meeting western service expectations.
8	**Contracts**	Cultures vary with regards to the significance of contracts.
9	**Supplier Relationship Management**	After the use of a robust selection process this is the secret to any supply contract success. Diligence in contract start up and ongoing communication and performance management against the Service Level Agreement (SLA) will avoid many problems.

Table . Perspectives on Global Outsourcing.

	Firm Level	Context Level	Transaction Level
Past	Resource-based view	Social networks	
Present	Costly contracting	Industrial organization	Transaction-cost economics
	Microeconomics Core competences	Institutional voids	Agency
Future	Real options		
	Relations and learning		

Key Evaluation Dimensions of Global Sourcing:

The key success factors of global sourcing evaluation revolve around three dimensions:

1) Product
2) Location
3) Supplier

These dimensions must be systematically evaluated as part of the strategic sourcing process:

Product: It is important to determine suitable products for global sourcing. The key is to target products that provide high benefit and low risk and that fit well with overall company objectives. Such products have high labour content and low shipping costs. A thorough product positioning review and business risk assessment should be weighed against the advantages taking into account factors such as product life-cycle, lead time, labour content, IP (Industrial Protection) and transportation etc. for example:

- If a product requires 50% labour, it may make sense to source in countries that have low labour cost. If it only has 10% labour content, then it may make more sense to buy closer to home to save on transportation costs.
- Products that are large, bulky or perishable are more difficult to transport.
- Products with large demand variation require holding more inventories, increasing costs and risk of obsolescence.
- Products with long lead time may also increase inventory requirements.
- From a supply chain perspective, you have to make sure that hidden costs don't eat up the savings.

Location: Companies engaged in global sourcing should develop a geographic strategy to determine which countries they will buy from and how volumes will be allocated. By determining the comparative advantage of countries, procurement can determine whether it pays to source a product locally or internationally. In addition to low labour cost, sources of comparative advantage come from factors such as:

- Available talent pool
- Cost of raw materials, capital equipment, and taxation levels, etc
- Logistics infrastructure such as roads and ports
- Political stability

Low wages doesn't always mean low cost. If a country has a comparative disadvantage in any of these or other areas, it will reduce the benefit of low labour cost. Therefore, those countries with the right mix of macro-economic factors, infrastructure, and labor requirements represent the high potential countries for global sourcing. Labour cost must also be balanced against the required level of value added, the level of complexity involved in the production and the available skill levels. Other considerations include the availability of banks, universities, insurance groups, public accountants, customs brokers, etc. to establish a robust local business network.

Supplier: A supplier profile should be developed, using an expanded version of your supplier questionnaire including extras, such as control of export documentation, etc. A thorough knowledge of your suppliers is critical, to aid good communication. Due to the additional complexities of global sourcing it is advisable to allow for longer screening and trial periods with new suppliers to evaluate capabilities. Capabilities can be sub categorized, including:

- Current client-al and references in your market
- Quality assurance
- Employee hiring & training
- Facilities & Security
- Disaster recovery
- Process Capabilities

Part of finding the right supplier is ensuring that the organisation has more than just the right equipment and quality. It also makes sense to know whether the supplier can be a long-term partner with your business. To make such a determination it is vital to get a complete understanding of the underlying financial resources, management team, extended trading relationships and general management practices.

Typical Problems in Global Sourcing:

i. Poor processes and preparation for sourcing globally is more complex and contains greater risk than local sourcing.
   - Often carried in response to local price pressure
   - Little R & A carried out on potential issues and sources
   - A "try it and see" approach

ii. Communication Hurdles:

- Time difference
- Language difficulties, face to face and via teleconference
- Difficulty in understanding documentation provide in English
- Lack of face to face meetings.

iii. Total landed cost:

- Difficulty assessing the full impact of transport, duties and custom clearance etc.
- Additional stockholding required to support longer lead times and additional risk of supply failure
- Additional audit costs
- Start-up cost.

iv. Performance failures: failure to adequately define and manage quality

v. Lack of ongoing communication leads to service decline

vi. Ethical consideration: human rights issues & Environmental issues.

Trends in Global Sourcing:

Global-sourcing strategy generally refers to management of (1) logistics to identify which production units will serve which particular markets and how components will be supplied for production and (2) the interfaces among R&D, manufacturing and marketing on a global basis. The primary objective of global-sourcing strategy is for the firm to exploit both its own and its suppliers' competitive advantages and the comparative locational advantages of various countries in global competition. From a contractual point of view, the global sourcing of intermediate products such as components and services by firms takes place in two ways: (1) from the parents or their foreign subsidiaries on an ''intra-firm'' basis (i.e., insourcing) and (2) from independent suppliers on a ''contractual'' basis (i.e., outsourcing). Similarly, from a locational point of view, multinational firms can procure goods and services either (1) domestically (i.e., onshoring) or (2) from abroad (i.e., offshoring).

Global sourcing has been around for centuries. However, the type of international trade in modern times, primarily for two reasons, one technical and one social. First, trade used to be mostly conducted in raw materials or final products, and seldom in intermediate products such as components or services. Trade in intermediate products started to take off as the global economy evolved and products became more complicated. Second, unlike today, buyer supplier coordination and cooperation were not crucial and communications were normally limited to ordering processes.

In the past 15–20 years, we have observed three waves of global sourcing. The first one, starting in the mid-1980s, was primarily focused on the global sourcing of manufacturing activities. Large manufacturing firms increasingly set up their operations globally and began to use suppliers from many countries to exploit best-in-world sources. As a consequence, supply chains became more global and complex, with manufacturing firms sourcing from suppliers in many countries for raw materials, intermediate and final products.

A second wave started in the early 1990s when firms decided to start eliminating their information technology (IT) departments that had grown substantially. As IT itself had become commoditized and many firms had little interest in developing new information systems in-house, this IT outsourcing wave spawned the growth of specialist providers such as EDS and Accenture. Global sourcing mostly involved labor-intensive and standardized programming activities, which could be easily sourced from

locations like India. The rise of commercial applications for a wide range of firm activities, epitomized in enterprise resource planning systems, also implied that a marketplace had developed where independent suppliers could make competitive offerings.

A third wave, characterized as the offshoring movement, began in recent years. The rise of business-process outsourcing that extends beyond IT services to a range of other services relating to accounting, human-resources management, finance, sales and after-sales assistance such as call centers. India is still a primary source country and has now produced a range of strong local business-process providers such as Infosys and Wipro but competition from elsewhere is also on the rise. It is this third wave of business-process outsourcing that is now generating so much publicity. Many people are concerned that foreign business processes suppliers may be moving up the knowledge chain more rapidly than expected by sourcing firms. Such knowledge transfer could in the long run undermine sourcing firms' ability to differentiate themselves from their foreign suppliers. Indeed, such ''hollowing-out'' concerns have previously been raised about the outsourcing of manufacturing activities before . The recent waves of global sourcing are summarized in Table below.

Table . Recent Waves in Global Sourcing

	First Wave (Since 1980s)	Second Wave (Since Early 1990s)	Third Wave (Since Early 2000s)
Type of Activities Suppliers	Manufacturing China, Central and Eastern Europe, Mexico and others	Information Technology India, Ireland and others	Business Process India, Pakistan, South Africa and others
Type of Firms	Manufacturing	Manufacturing, banks and others	Financial services and services more generally
Primary Motives	Reduction in labor costs	Obtaining enough skilled programers and cost reduction	Reduction in labor costs and round-the-clock service provision

Insourcing:

- Insourcing is a business practice in which work that would otherwise have been contracted out is performed in house.
- Insourcing often involves bringing in specialists to fill temporary needs or training existing personnel to perform tasks that would otherwise have been outsourced.
- An example is the use of in-house engineers to write technical manuals for equipment they have designed, rather than sending the work to an outside technical writing firm. In this example, the engineers might have to take technical writing courses at a local college, university, or trade school before being able to complete the task successfully.
- Other challenges of insourcing include the possible purchase of additional hardware and/or software that is scalable and energy-efficient enough to deliver an adequate return on investment (ROI).
- Insourcing can be viewed as outsourcing as seen from the opposite side. For example, a company based in Japan might open a plant in the United States for the purpose of employing

American workers to manufacture Japanese products. From the Japanese perspective this is outsourcing, but from the American perspective it is insourcing. Nissan, a Japanese automobile manufacturer, has in fact done this.

Outsourcing:

- Outsourcing was first recognized as a business strategy in 1989 and became an integral part of business economics throughout the 1990s.

- Outsourcing is the business practice of hiring a party outside a company to perform services and create goods that traditionally were performed in-house by the company's own employees and staff. Outsourcing is a practice usually undertaken by companies as a cost-cutting measure. As such, it can affect a wide range of jobs, ranging from customer support to manufacturing to the back office.

- The practice of outsourcing is subject to considerable controversy in many countries. Those opposed argue that it has caused the loss of domestic jobs, particularly in the manufacturing sector. Supporters say it creates an incentive for businesses and companies to allocate resources where they are most effective, and that outsourcing helps maintain the nature of free-market economies on a global scale.

Understanding Outsourcing:

Outsourcing can help businesses reduce labor costs significantly. When a company uses outsourcing, it enlists the help of outside organizations not affiliated with the company to complete certain tasks. The outside organizations typically set up different compensation structures with their employees than the outsourcing company, enabling them to complete the work for less money. This ultimately enables the company that chose to outsource to lower its labor costs.

In addition to cost savings, companies can employ an outsourcing strategy to better focus on the core aspects of the business. Outsourcing non-core activities can improve efficiency and productivity because another entity performs these smaller tasks better than the firm itself. This strategy may also lead to faster turnaround times, increased competitiveness within an industry and the cutting of overall operational costs.

Examples of Outsourcing:

Outsourcing's biggest advantages are time and cost savings. A manufacturer of personal computers might buy internal components for its machines from other companies to save on production costs. A law firm might store and back up its files using a cloud-computing service provider, thus giving it access to digital technology without investing large amounts of money to actually own the technology.A small company may decide to outsource bookkeeping duties to an accounting firm, as doing so may be cheaper than retaining an in-house accountant. Other companies find outsourcing the functions of human resource departments, such as payroll and health insurance, as beneficial. When used properly, outsourcing is an effective strategy to reduce expenses, and can even provide a business with a competitive advantage over rivals.

Expected Benefits from Global Outsourcing:

Operational Benefits:

- Reduce operating costs
- Improved service and product quality
- Faster delivery
- Financial restructuring (e.g., reducing assets, moving from fixed to variable costing)

Transformational Benefits:

- Technology or business catalyst-strengthening resources, services and flexibility in technologies and/or business processes to underpin business's strategic direction.
- Business transition to facilitate and support major organizational change
- Business innovation to improve processes, skills and technology, while mediating financial risk to achieve competitive advantage

Strategic Benefits:

- Focus on core competencies
- Strategic agility (e.g. ramp volumes up and down to adapt to business cycles, provide business continuity in times of crisis)
- Strategic sourcing (e.g. offshoring or using offshore competition to get better prices and service, best of breed sourcing)
- Enhance strategic capabilities by partnering with a complementary supplier
- Rapid penetration of new markets
- Operate in new geographies
- Direct profit generation through joint venturing with vendor partner

Onshoring:

Onshoring also known as reshoring refers to the practice of moving manufacturing operations from foreign soil back to the United States. Onshoring may also refer to the practice of outsourcing to domestic contract manufacturers rather than overseas. As the cost benefits of offshoring fade away, more American-based manufacturers are seeing the benefits of domestic production. Domestic manufacturing has several financial and logistical advantages. Onshoring has seen a resurgence in popularity in the manufacturing world for the following reasons:

Negligible cost differences: Shipping costs involved in offshoring and nearshoring processes continue to rise. Labor costs in developing Asian and Central American markets are also rising. This means that the significant savings that incentivized offshoring in the late 20th century have been largely reduced or eliminated.

International Politics: Unstable trade relations have made the cost of doing business in Asia less appealing than it once was. Instead, many companies are creating a blend of local onshoring and nearshoring production techniques to appeal to domestic markets. This localized control also allows

companies to better comply with regulatory demands and quality control requirements.

Non-costed factors: Companies must consider less immediate costs, such as not conforming to material standards, variations in product quality, and potential losses of intellectual property rights. Reshoring manufacturing or using domestic third parties allows companies to operate within one primary set of regulations.

Supply Chain Management: Onshoring operations and using domestic partners often allows companies to operate in the same time zone as the companies they hire. It also reduces language barriers, cultural barriers, and transportation complexities.

Onshoring is an increasingly popular outsourcing method for several industries and project types, such as:

- Automotive production
- Parts manufacturing, including zinc die-cast mold tooling and thermoplastic injection molding
- Complex manufacturing processes that require a lot of communication.

Table. Differences between Onshoring, Reshoring, Nearshoring &Offshoring

Onshoring	Reshoring	Nearshoring	Offshoring
Onshoring is the practice of moving physical manufacturing practices to the United States, whether that means moving physical assets or cancelling existing relationships with foreign contractors in favor of outsourcing to American companies. The services and production tasks are handled inside the company's primary country in order to reduce complexity, control quality and costs, and avoid transportation and regulatory hassles.	Reshoring is the same basic concept as onshoring, and the two terms are often used interchangeable. The only subtle difference is that reshoring refers to a returning of manufacturing operations to the United States, implying that the operation was once moved out of the country. Reshoring occasionally has political overtones, but the return to domestic outsourcing and manufacturing is based on changing economic realities. Foreign outsourcing practices, for many companies, no longer offer the savings they used to offer.	Nearshoring refers to the movement of manufacturing assets or outsources to third-party companies outside of the United States while keeping them close enough to facilitate affordable shipping and related supply chain costs. American companies commonly outsource to Mexico due its convenient proximity and lower labor costs. Nearshoring is often a viable manufacturing or outsourcing model for companies that serve both domestic and nearshore markets.	Offshoring involves outsourcing manufacturing or moving assets outside the primary country of operations and outside its primary market groups. American companies have traditionally offshored manufacturing to Asian or Southeast Asian regions, such as Bangladesh, China, India, Vietnam, Thailand, and many others. Offshoring has traditionally been used in situations where production, materials, and labor costs outweigh travel complexities and shipping costs, but this practice is starting to make less business sense as time goes on.

Offshoring:

Offshoring, the practice of outsourcing operations overseas, usually by companies from industrialized countries to less-developed countries, with the intention of reducing the cost of doing business. Chief among the specific reasons for locating operations outside a corporation's home country are lower labour costs, more lenient environmental regulations, less stringent labour regulations, favorable tax conditions, and proximity to raw materials.

The offshoring of jobs and infrastructure became a significant factor in global economic development in the mid-20th century. Companies initially focused their outsourcing efforts on low-

skilled or unskilled manufacturing jobs and simple assembly tasks (see maquiladora). By the early 21st century, however, the work being exported increasingly included skilled jobs. As communications technologies advanced and educational opportunities increased, many developing countries were able to provide sophisticated labour forces. Corporations around the world began tapping these new workers to staff customer-call centres and to fill jobs in financial management and f (IT). In countries such as India, the Philippines, and Malaysia, a growing pool of university graduates in technology quickly became capable of managing complex tasks that included software engineering, computer chip design, and code writing.

A major factor driving IT offshoring has been the vast disparity in both salaries and cost of living between U.S. technology workers and their counterparts in less-developed countries. In the early 21st century, analysts estimated that the average Indian IT worker earned roughly 13 percent of his American counterpart's salary. Similar factors spurred the growth of offshoring in the financial services industry and brought new jobs in banking, insurance, and securities trading to a global workforce newly qualified to handle the tasks.

Table. Differences between Offshoring & Outsourcing

	Offshoring	Outsourcing
Definition	Offshoring means getting work done in a different country.	Outsourcing refers to contracting work out to an external organization
Risks and criticism	Offshoring is often criticized for transferring jobs to other countries. Other risks include geopolitical risk, language differences and poor communication etc.	Risks of outsourcing include misaligned interests of clients and vendors, increased reliance on third parties, lack of in-house knowledge of critical (though not necessarily core) business operations etc.
Benefits	Benefits of offshoring are usually lower costs, better availability of skilled people, and getting work done faster through a global talent pool.	Usually companies outsource to take advantage of specialized skills, cost efficiencies and labor flexibility.

Global Sourcing Advantages:

- Increased size of potential supply base
- Lower production cost, especially for labor-intensive production and services
- Increased technical expertise, especially for high tech products from specialized locations
- More flexibility to switch between supply sources, whether internal or external
- Sources closer to customer markets, experience in sourcing may be translated into sales
- Achieve scale economics through use of one global supply source
- Source of intermediate products closer to source of raw materials
- Raw materials only available from foreign sources
- Focus on core competencies

Global Sourcing Disadvantages:

- Have to deal with foreign institution such as legal differences
- Have to deal with foreign cultures which could affect communication
- Have to deal with foreign languages which could affects communication
- Need to pay import duties where applicable
- Increase transportation costs and supply chain uncertainty
- Forwards integration by foreign suppliers, patent infractions possible
- Quality problems

- Negative effects on employee commitment and legitimacy at home base
- Reliance on independent suppliers and decreased ability to keep abreast of emerging technical requirements.

Supply Chain Management:

Definition:

1) A supply chain is the alignment of firms that bring products or services to market.
2) Supply Chain Management can be defined as the management of flow of products and services, which begins from the origin of products and ends at the product's consumption. It also comprises movement and storage of raw materials that are involved in work in progress, inventory and fully furnished goods.
3) The main objective of supply chain management is to monitor and relate production, distribution, and shipment of products and services. This can be done by companies with a very good and tight hold over internal inventories, production, distribution, internal productions and sales.
4) Supply chain management is the coordination of production, inventory, location, and transportation among the participants in a supply chain to achieve the best mix of responsiveness and efficiency for the market being served.

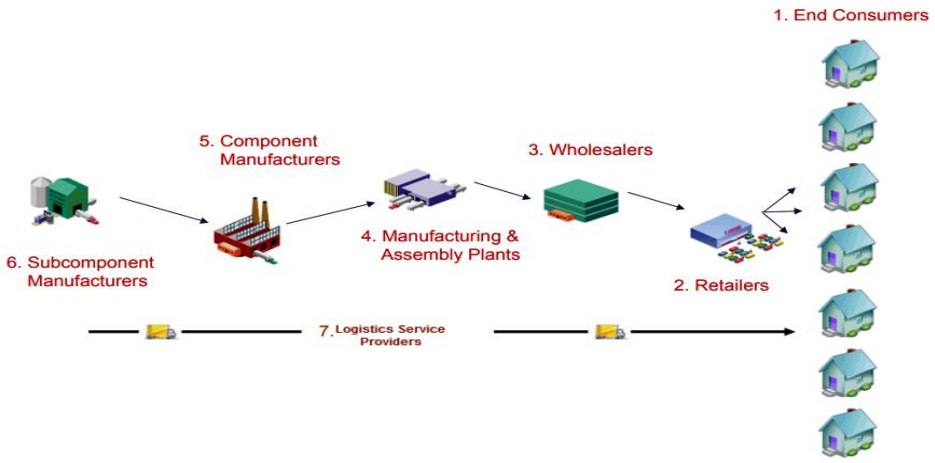


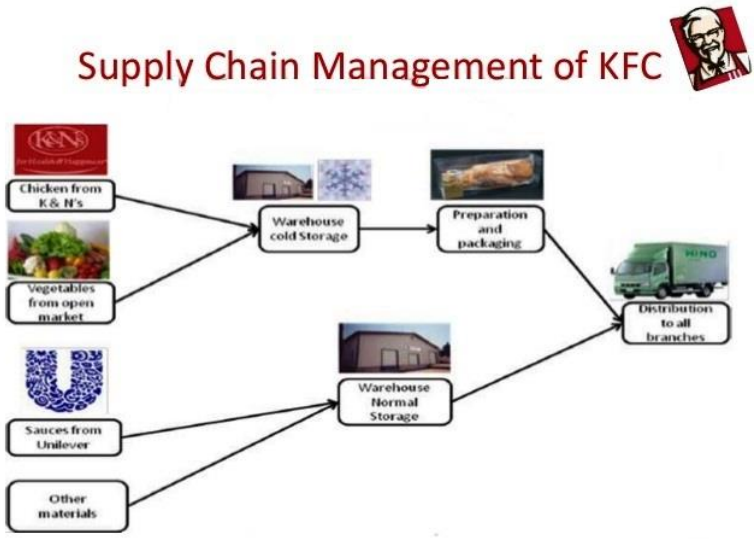
Figure: Supply Chain Management

Goals of Supply Chain Management:

1) Supply chain partners work collaboratively at different levels to maximize resource productivity, construct standardized processes, remove duplicate efforts and minimize inventory levels.
2) Minimization of supply chain expenses is very essential, especially when there are economic uncertainties in companies.
3) Cost efficient and cheap products are necessary, but supply chain managers need to concentrate on value creation for their customers.
4) Exceeding the customers' expectations on a regular basis is the best way to satisfy them.

5) Increased expectations of clients for higher product variety, customized goods, off-season availability of inventory and rapid fulfillment.

6) Supply chain management aims at contributing to the financial success of an enterprise.



Supply Chain Management – Process:

Supply chain management is a process used by companies to ensure that their supply chain is efficient and cost-effective. A supply chain is the collection of steps that a company takes to transform raw materials into a final product. The five basic components of supply chain management are discussed below:

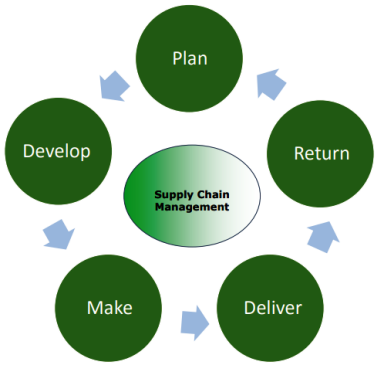


Figure: Supply Chain Management Process

Plan: The initial stage of the supply chain process is the planning stage. We need to develop a plan or strategy in order to address how the products and services will satisfy the demands and necessities of the customers. In this stage, the planning should mainly focus on designing a strategy that yields maximum profit.

Develop (Source): In this stage, we mainly concentrate on building a strong relationship with suppliers of the raw materials required for production. This involves not only identifying dependable suppliers but

also determining different planning methods for shipping, delivery, and payment of the product. So in this stage, the supply chain managers need to construct a set of pricing, delivery and payment processes with suppliers and also create the metrics for controlling and improving the relationships.

Make: The third step in the supply chain management process is the manufacturing or making of products that were demanded by the customer. In this stage, the products are designed, produced, tested, packaged, and synchronized for delivery. This stage is considered as the most metric-intensive unit of the supply chain, where firms can gauge the quality levels, production output and worker productivity.

Deliver: The fourth stage is the delivery stage. Here the products are delivered to the customer at the destined location by the supplier. This stage is basically the logistics phase, where customer orders are accepted and delivery of the goods is planned.

Return: The last and final stage of supply chain management is referred as the return. In the stage, defective or damaged goods are returned to the supplier by the customer. Here, the companies need to deal with customer queries and respond to their complaints etc.

Supply Chain Management – Process Flow:

Supply chain management can be defined as a systematic flow of materials, goods, and related information among suppliers, companies, retailers, and consumers. There are three different types of flow in supply chain management:

1) Material flow
2) Information/Data flow
3) Money flow

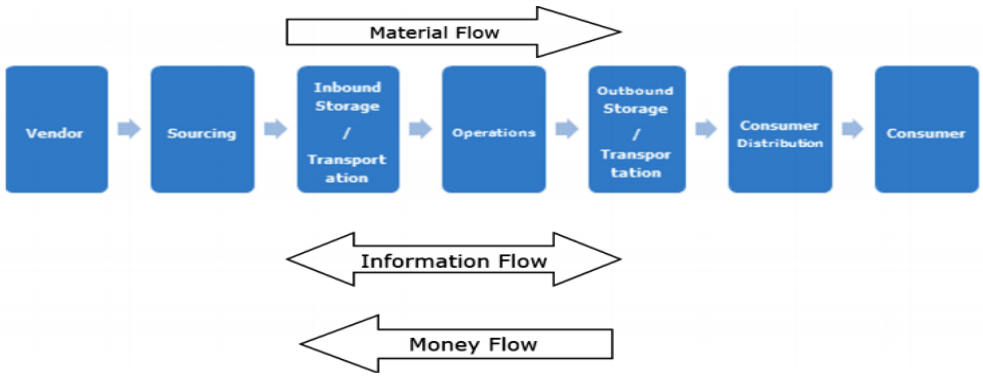


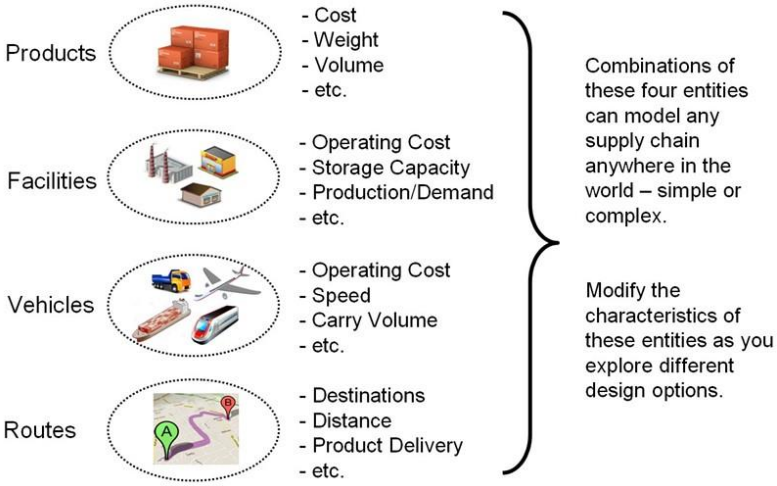
Figure: Supply Chain Management – Process Flow

Supply chain as a Network of Entities:

A supply chain is a network between a company and its suppliers to produce and distribute a specific product to the final buyer. This network includes different activities, people, entities, information, and resources. The supply chain also represents the steps it takes to get the product or service from their

original state to the customer. The entities in the supply chain include PRODUCTS; FACILITIES; VEHICLES; ROUTES .These entities relate to each other and their interactions are what drive supply operations and produce the simulation results.

1. **PRODUCTS:** things in demand at facilities
2. **FACILITIES:** places where products are made, stored or consumed
3. **VEHICLES:** mechanisms to move products between facilities to meet demand
4. **ROUTES:** paths taken by vehicles to move products between facilities.



1. **Suppliers.** These entities provide the materials needed to create the product, whether they're raw materials or individual parts to a finished product. For example, Apple's iPad comes from a variety of suppliers: Samsung manufactures its processor chips, LG produces the touchscreen display, and Toshiba creates the flash memory.
2. **Manufacturers.** This stage of the supply chain entails bringing together all of the parts provided by suppliers to create the finished product. Apple would take each individual part from the suppliers and put them together to create a finished iPad for distribution.
3. **Distributors.** These entities store and sell the finished product, either at a physical storefront or through an online store. Locations like Apple stores and Walmart provide physical locations where consumers can buy an iPad, whereas online distributors ship the iPad directly to a consumer's door.
4. **Customers.** Consumers create demand for products and ultimately influence the quantity of products and the overall supply chain structure.

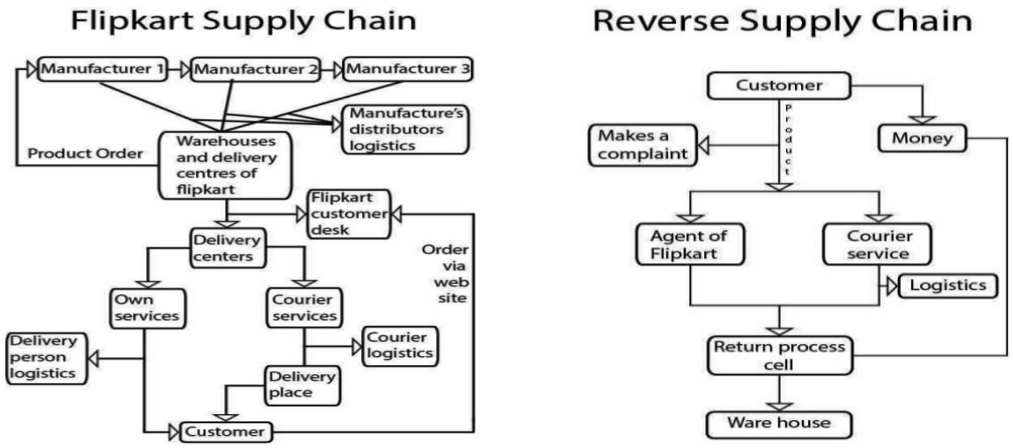


Figure: Flipkart Supply chain & Reverse Supply Chain management

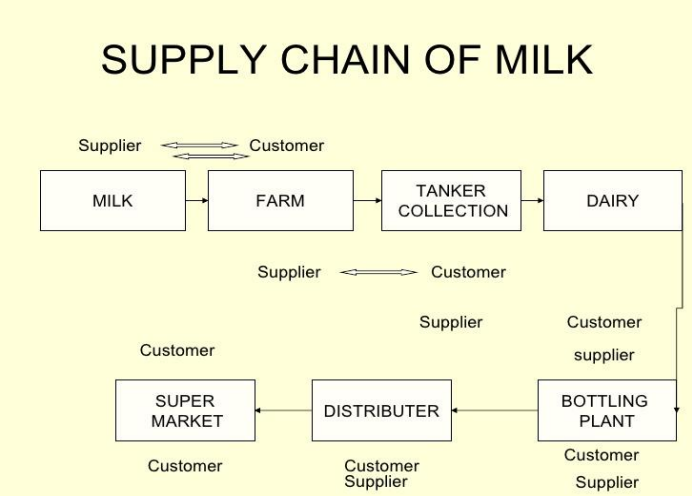
Supply Chain Management–Advantages:

1) Develops better customer relationship and service.
2) Creates better delivery mechanisms for products and services in demand with minimum delay.
3) Improvises productivity and business functions.
4) Minimizes warehouse and transportation costs.
5) Minimizes direct and indirect costs.
6) Assists in achieving shipping of right products to the right place at the right time.
7) Enhances inventory management, supporting the successful execution of just-intime stock models.
8) Assists companies in adapting to the challenges of globalization, economic upheaval, expanding consumer expectations, and related differences.
9) Assists companies in minimizing waste, driving out costs, and achieving efficiencies throughout the supply chain process.

Job responsibilities for a Supply Chain Manager include:

- Overseeing and managing overall supply chain and logistics operations, to maximize efficiency and minimize cost.
- Collaborating with multiple-functional managers to
- plan and execute the development of a
- distribution center operational process to
- enable seamless transfers.
- Managing and monitoring vendors' qualifications and performances to ensure they meet the company's requirements.

Example of Supply Chain Management:



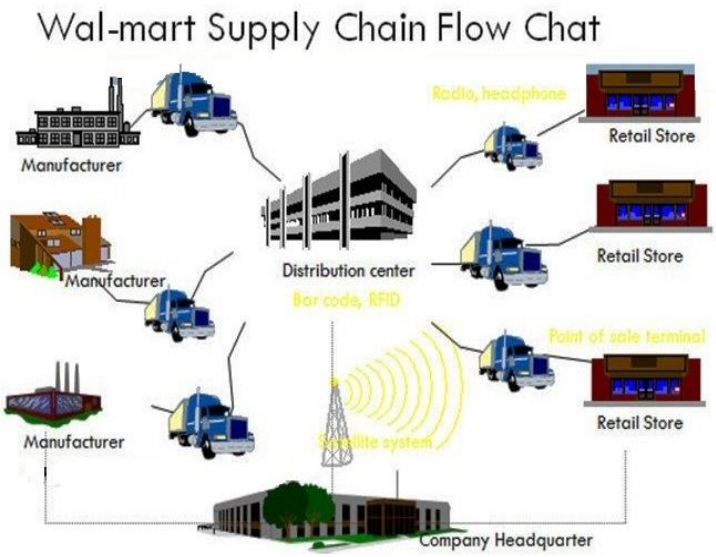


Table. Difference between Supply Chains vs. Value Chain

Basis for Comparison	Supply chain	Value chain
Meaning	The integration of all the activities involved in the procurement, conversion and logistics of the product is known as Supply Chain.	Value Chain is defined as the series of activities, that adds value to the product.
Originated from	Operation Management	Business Management
Concept	Conveyance	Value Addition
Sequence	Product Request - Supply Chain - Customer	Customer Request - Value Chain – Product
Objective	Customer Satisfaction	Gaining competitive advantage

Table. Comparison of Centralized Supply Chain Vs. Decentralized Supply Chain

Centralized Supply Chain	Decentralized Supply Chain
1) Centralize Supply Chain Processes are those that can be managed from a remote location, can serve multiple sites, and drive synergy by serving multiple sites.	**1)** Decentralize supply chain processes can be defined as processes that must be performed in the plant because they involve physical interaction with the material.
2) Systematic and consistent reservation of authority.	**2)** Systematic dispersal of authority.
3) Communication Flow is vertical	**3)** Open and Free
4) Decision Making is Slow	**4)** Comparatively faster
5) Proper coordination and Leadership	**5)** Sharing of burden and responsibility
6) Power of decision making is lies with the top management.	**6)** Multiple persons have the power of decision making
7) Best suited for Small sized organization	**7)** Large sized organization
8) Implemented when inadequate control over the organization	**8)** Considerable control over the organization

Table. Logistics vs. Supply Chain Management

Basis For Comparison	Logistics Management	Supply Chain Management
Meaning	The process of integrating the movement and maintenance of goods in and out the organization is Logistics.	The coordination and management of the supply chain activities are known as Supply Chain Management.
Objective	Customer Satisfaction	Competitive Advantage
Evolution	The concept of Logistics has been evolved earlier.	Supply Chain Management is a modern concept
How many organizations are involved?	Single	Multiple
One in another	Logistics Management is a fraction (activity) of Supply Chain Management.	Supply Chain Management is the new version of Logistics Management.
Technology	Transportation Management System (TMS), Warehouse Management System (WMS)	Customer Relationship Management (CRM), Enterprise Resource Planning (ERP)

Strategic Sourcing Plan:

Strategic sourcing is an institutional procurement process that continuously improves and re-evaluates the purchasing activities of a company. In the services industry, strategic sourcing refers to a service solution, sometimes called a strategic partnership, which is specifically customized to meet the client's individual needs. In a production environment, it is often considered one component of supply chain management. Modern supply chain management professionals have placed emphasis on defining the distinct differences between strategic sourcing and procurement.

Strategic sourcing is the process of developing channels of supply at the lowest total cost, not just the lowest purchase price. It expands upon traditional purchasing activities to embrace all activities within the procurement cycle, from specification to receipt and payment of goods and services.

The steps in a strategic sourcing plan were defined as:

- Assessment of a company's current spending (what is bought, where, at what prices?).
- Assessment of the supply market (who offers what?).

- Total cost analyses (how much does it cost to provide those goods or services?).
- Identification of suitable suppliers.
- Development of a sourcing strategy (where to purchase, considering demand and supply situations, while minimizing risk and costs).
- Negotiation with suppliers (products, service levels, prices, geographical coverage, Payment Terms, etc.).
- Implementation of new supply structure.
- Track results and restart assessment (Continuous cycle)

The sourcing plan is the result of all planning efforts on strategic sourcing. Into this planning, all sourcing events are organized and detailed with tactical and operational information such as the sourcing team responsible for each event, when the sourcing event is supposed to begin and end based on each RFX step (RFI-Request For Information, RFP-Request For Proposal, RFQ-Request For Quotation), the requirements, specifications of all services or materials, and negotiations/cost goals. The objective of the sourcing plan is to manage the timing and quality of all sourcing events in the strategic sourcing program. Many procurement professionals continue to conduct sourcing and RFX activities manually using spreadsheets; however, this creates risk for error and gaps in the sourcing process.

Strategy and Model:

Sourcing Business Models are a systems-based approach to structuring supplier relationships. A sourcing business model is a type of business model that is applied to business relationships where more than one party needs to work with another party to be successful. There are seven sourcing business models that range from the transactional to investment-based. Sourcing business models are targeted for procurement professionals who seek a modern approach to achieve the best fit between buyers and suppliers. All sourcing models, regardless of origin, contain the following eight essential elements:

- Identifying the targeted spend area
- Creating the sourcing team (Touch Point Required)
- Developing a team strategy and communication plan (Touch Point Required)
- Gathering Market Information
- Developing a supplier portfolio (Touch Point Required)
- Develop a Future State
- Negotiate, evaluate, commitment, and agree (Touch Point Required)
- Supplier Relationship Management

The seven models are:

1) **Basic Provider Model**
2) **Approved Provider Model**
3) **Preferred Provider Model**
4) **Performance-Based/Managed Services Model**
5) **Vested outsourcing Business Model/Managed Services Model**
6) **Shared Services Model**
7) **Equity Partnership**

Relationship Models	Sourcing Business Models	Economic Models
Transactional Contract (Market)	Basic Provider Model	Transaction-Based
	Approved Provider Model	
Relational Contract (Hybrid)	Preferred Provider Model	
	Performance Based/Managed Services Model	Output-Based
	Vested Business Model	Outcome-Based
Investment / Vertical Integration (Hierarchy)	Shared Services Model	
	Equity Partnerships	

Basic Provider Model:

A basic transaction provider is a supplier that operates under a simple buy–sell arrangement where buyers typically pay a set "transaction" price for products or services.

Primary purpose: Gain access to goods or services at the lowest cost

- Transaction-based economic model and a transactional relationship model (price per unit, per activity, per hour)
- Competitive mind-set
- Generic or standards with broad supply options

Approved Provider Model:

An approved provider is a supplier that meets a predefined set of qualification characteristics, quality standards, prior proven performance or other selection criteria.

Primary purpose: Leverage volumes, gain pricing discounts and reduced administrative costs with fewer proven suppliers

- Transaction-based economic model and a transactional relationship model
- Master Agreements
- Reduced Competition

Preferred Provider Model:

A preferred provider model uses a transaction-based approach, but the buyer chooses a more strategic relational model with specifically chosen supplier(s).

Primary purpose: To gain access to value-added capabilities at best value or volume discounts through a longer-term contract

- Transaction-based economic model and a relational contract model
- Streamline buying processes and allow for easy repeat business
- May have an exclusive arrangement, but competitors exist
- Shift the procurement lens from price to value

Performance-Based Model:

A performance-based model combines a relational contracting model with an output-based economic model.

Primary purpose: Drive efficiencies and ensure predefined service levels with provider expertise

- Transaction-based with output performance incentives and penalties economic model and a relational contract model
- Longer-term contract with the intent that the supplier invests in improvements to meet predefined service-levels and/or savings targets
- Shifts risk to the supplier also known as "pay for performance" or "painshare/gainshare", managed services agreement with fixed fee.

Vested Business Model:

A Vested business model creates highly collaborative win-win relationships in which both buyers and suppliers are equally committed in each other's success.

Primary purpose: Co-developed, co-managed collaborative solution with expert to generate and optimize value not individually gained

- A Vested model combines an outcome-based economic model with a relational contraction model (WIIFWE (what's-in-it-for-we) Mindset)
- Creates a longer-term relationship (5-15 yrs.) to develop solutions that achieve boundary spanning business outcomes
- Ideal for managing risk
- Creates a highly collaborative environment that drives innovation.

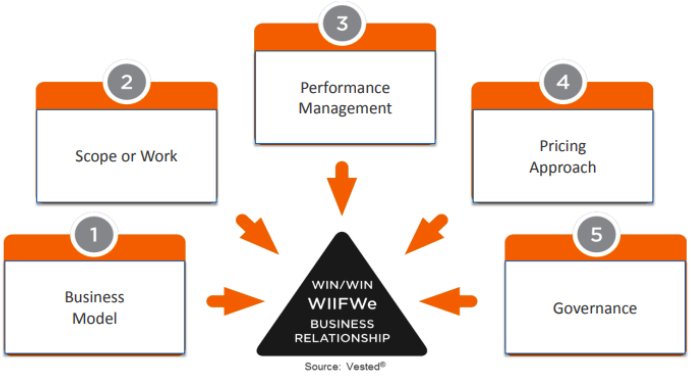


Figure: Five rules of Vested Methodology

Shared Services Model:

A shared services model is one of two investment-based categories and is constructed as an internal organization based on an arm's length outsourcing arrangement.

Primary purpose: Create internal functional business unit or standalone entity that provides goods or services to an overall broader organization

- Processes typically are centralized into organization that charges business units and users for the services they use
- An SSO consolidates services across an organization and places them into a distinct entity

designed to be competitive with "buy" solutions

- A shared services model is like an entity that creates its own internal supplier and outsources to itself.

Figure: Shared Services Model

Equity Partnerships:

Equity partnerships are the second category of investment-based models along the sourcing continuum.

Primary purpose: Legally bind potential business partners through formal structures to effectively meet business objectives

- Organizations creating equity partnerships make a direct investment in building capabilities with a formalized entity
- Typically asset-based with a formal and comprehensive governance framework
- Setting one up can be a costly and complicated process
- There are multiple types of equity partnerships

If an organization decides to invest in an equity partnership, they can take different legal forms:

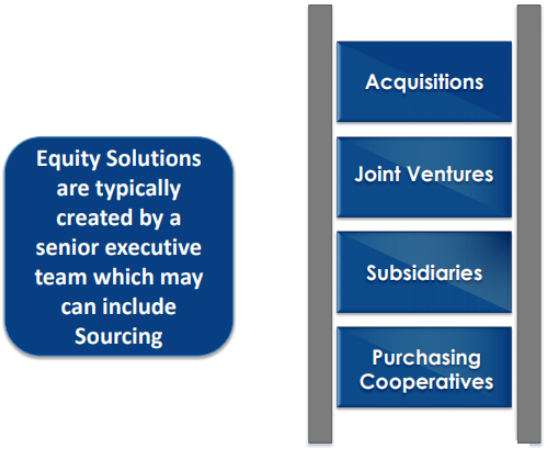


Figure: Equity Partnerships

Architecting Equity Partnerships: Because of this variety of investment-based models, there is no one right way to structure such a model

- Investment-based models can use any of the three economic models: transactional, output or outcome based
- Due to organization financial nature, the stakes typically are high, therefore most investment-based models benefit when following a highly collaborative what's-in-it-for-we (WIIFWE) approach with an outcome-based economic model.

Environmental and Opportunity Analysis

Environmental Analysis:

Definition: Environmental Analysis is described as the process which examines all the components, internal or external that has an influence on the performance of the organization. The internal components indicate the strengths and weakness of the business entity whereas the external components represent the opportunities and threats outside the organization.

Environmental analysis is a strategic tool. It is a process to identify all the external and internal elements, which can affect the organization's performance. The analysis entails assessing the level of threat or opportunity the factors might present. These evaluations are later translated into the decision-making process. The analysis helps align strategies with the firm's environment.

To perform environmental analysis, a constant stream of relevant information is required to find out the best course of action. Strategic Planners use the information gathered from the environmental analysis for forecasting trends for future in advance. The information can also be used to assess operating environment and set up organizational goals.

Steps Involved in Environmental Analysis:

Identifying: First of all, the factors which influence the business entity are to be identified, to improve its position in the market. The identification is performed at various levels, i.e. company level, market level, national level and global level.

Scanning: Scanning implies the process of critically examining the factors that highly influence the business, as all the factors identified in the previous step effects the entity with the same intensity. Once the important factors are identified, strategies can be made for its improvement.

Analyzing: In this step, a careful analysis of all the environmental factors is made to determine their effect on different business levels and on the business as a whole. Different tools available for the analysis include benchmarking, Delphi technique and scenario building.

Forecasting: After identification, examination and analysis, lastly the impact of the variables is to be forecasted.

Environmental analysis is an ongoing process and follows a holistic approach, that continuously scans the forces effecting the business environment and covers 360 degrees of the horizon, rather than a specific segment.

PESTLE Analysis:

Environmental analysis is a strategic tool. It is a process to identify all the external and internal elements, which can affect the organization's performance. The analysis entails assessing the level of threat or opportunity the factors might present. These evaluations are later translated into the decision-

making process. The analysis helps align strategies with the firm's environment. Businesses are greatly influenced by their environment. All the situational factors which determine day to day circumstances impact firms. So, businesses must constantly analyze the trade environment and the market.

Figure: PESTLE Analysis

The most used detailed analysis of the environment is the PESTLE analysis. This is a bird's eye view of the business conduct. Managers and strategy builders use this analysis to find where their market currently. It also helps foresee where the organization will be in the future. The letters in PESTLE, also called PESTEL, denote the following things:

- **Political factors (P)**
- **Economic factors (E)**
- **Social factors(S)**
- **Technological factors (T)**
- **Legal factors (L)**
- **Environmental factor (E)**

Often, managers choose to learn about political, economic, social and technological factors only. In that case, they conduct the PEST analysis. PEST is also an environmental analysis. It is a shorter version of PESTLE analysis. STEP, STEEP, STEEPLE, STEEPLED, STEPJE and LEPEST: All of these are acronyms for the same set of factors. Some of them gauge additional factors like ethical and demographical factors.

P for Political factors: The political factors take the country's current political situation. It also reads the global political condition's effect on the country and business. When conducting this step, ask questions like "What kind of government leadership is impacting decisions of the firm?" Some political factors are:

- Government policies
- Taxes laws and tariff
- Stability of government
- Entry mode regulations

E for Economic factors: Economic factors involve all the determinants of the economy and its state. These are factors that can conclude the direction in which the economy might move. So, businesses analyze this factor based on the environment. It helps to set up strategies in line with changes. Some

economic factors that affecting business below:

- The inflation rate
- The interest rate
- Disposable income of buyers
- Credit accessibility
- Unemployment rates
- The monetary or fiscal policies
- The foreign exchange rate

S for Social factors: Countries vary from each other. Every country has a distinctive mindset. These attitudes have an impact on the businesses. The social factors might ultimately affect the sales of products and services. Some of the social factors you should study are:

- The cultural implications
- The gender and connected demographics
- The social lifestyles
- The domestic structures
- Educational levels
- Distribution of Wealth

T for Technological factors: Technology is advancing continuously. The advancement is greatly influencing businesses. Performing environmental analysis on these factors will help you stay up to date with the changes. Technology alters every minute. This is why companies must stay connected all the time. Firms should integrate when needed. Technological factors will help you know how the consumers react to various trends. Firms can use these factors for their benefit:

- New discoveries
- Rate of technological obsolescence
- Rate of technological advances
- Innovative technological platforms

L for Legal factors: Legislative changes take place from time to time. Many of these changes affect the business environment. If a regulatory body sets up a regulation for industries, for example, that law would impact industries and business in that economy. So, businesses should also analyze the legal developments in respective environments. Some legal factors you need to be aware of:

- Product regulations
- Employment regulations
- Competitive regulations
- Patent infringements
- Health and safety regulations

E for Environmental factors: The location influences business trades. Changes in climatic changes can affect the trade. The consumer reactions to particular offering can also be an issue. This most often affects agri-businesses. Some environmental factors are:

- Geographical location
- The climate and weather
- Waste disposal laws
- Energy consumption regulation
- People's attitude towards the environment

Advantages of Environmental Analysis:

The internal insights provided by the environmental analysis are used to assess employee's performance, customer satisfaction, maintenance cost, etc. to take corrective action wherever required. Further, the external metrics help in responding to the environment in a positive manner and also aligning the strategies according to the objectives of the organization. Environmental analysis helps in the detection of threats at an early stage, that assist the organization in developing strategies for its survival. Add to that, it identifies opportunities, such as prospective customers, new product, segment and technology, to occupy a maximum share of the market than its competitors.

Opportunity Analysis:

The strategic sourcing plan needs to address procurement commodities or categories where potential opportunities for improvement have been identified. Improvements can take the form of lower prices, better quality, reduced inventory, and so on. it is developed through an opportunity analysis, typically an extension of the overall sourcing plan into areas man- aged by commodity or category groups. This analysis should be conducted by a cross-functional strategic sourcing team, preferably before finalizing the plan. The opportunity analysis often uses industry benchmarks to determine where gaps exist between best practices and current practices in our organization.

These benchmarks, developed by spend commodity, category, or industry; take into account our total annual volume (past and projected) which are relevant in scope. From historical experience with price increases within the commodity or with a specific supplier and what earlier cost and price improvements have been made. The opportunity analysis and the benchmarking process are often by- products of the market analysis that takes place prior to the development of the strategic plan. Keep in mind that a significant number of opportunities may have been identified subsequent to the previous strategic sourcing plan, interested only in those opportunities that align with the organization's objectives. Based on the data gathered through opportunity analysis, it should be able to project the degree to which our plan will support the overall organizational plan.

The opportunity analysis will cover several elements:

Determine how and with whom we are spending our funds: Known as spend analysis, this process reviews the organization's detailed spending history as a means to finding common items that can be consolidated by using fewer suppliers. The added volume for the suppliers we do use should provide additional price reduction negotiation opportunities.

Review spending history to find multiple items that are very similar and can be re-specified to a single item. It refer to this as part standardization or value engineering, and, as with spending analysis, it can leverage the larger consolidated spends as a way to generate price reductions. This is an especially

productive area when the organization operates from multiple locations or when a merger or acquisition occurs.

Identify poor supplier performance: Especially in areas that directly support the organization's mission, should review suppliers' history to pinpoint those that are well below expectations. Later it can determine if improvement is possible or if any supplier(s) need to be replaced. In relation to performance, review (and perhaps benchmark) the measurements to assess supplier performance via a "scorecard." Is the supplier still relevant? The supplier metrics provide an accurate picture of how well the supplier is meeting our needs? And, perhaps more important, are it monitoring the supplier for contract compliance and performance to agreed-on service levels?

Improve competition: Do important elements of procurement strategies lack robust competition?

Do suppliers of these items routinely raise prices regardless of market conditions?

Do we have suppliers who believe they are sure to continue to receive our business regardless of business conditions?

Do we have products or services that have not been supply competed for several years?

A "yes" to any of these questions may mean that it need to reformulate supply strategy for achieving the best value from these suppliers as a reward for earning our business.

Investigate outsourcing opportunities: Outsourcing, in general, and Business Process Outsourcing (BPO) specifically, is a well-established, significant component of strategic sourcing. As its title implies, the focus of BPO is on services.

Some of the more commonly outsourced services include information technology (although often assigned to its own category), accounts payable, customer support, legal services, design and engineering, research and data analysis, logistics, security, facilities management, financial services, and procurement itself. The primary objectives of outsourcing are relatively clear: reduced cost through lower wages for labor, an extension of the organization's capabilities, a more specialized workforce, greater spend visibility, up-to-date technology, temporary personnel (and recruiting) and, importantly, the ability to meet variable demand without having to add employees.

In addition to business processes, organizations are also engaged in outsourcing elements of manufacturing. In fact, electronic manufacturing services under subcontracts are likely the earliest example of outsourcing, tracing their roots to the traditional "make-or-buy" practice that would determine if a manufactured part or a manufacturing process could be converted to a purchase.

The outsourcing opportunity analysis should take into account geographical considerations, including the pros and cons of offshoring (outsourcing to companies based in other countries) or nearshoring (outsourcing to companies within the organization's national borders). Some aspects to consider in globalizing sourcing activities are the complexity and costs of currency exchange rates, taxes, transportation, and logistics (including Customs), overcoming cultural and language differences, and the risk factors inherent in the local economy and geopolitical climate.

Capture additional spending: It is not uncommon for organizations to tolerate spending by any number of departments without procurement involvement, sometimes called "maverick spending." Capturing this spending by the sourcing and procurement teams can lead to a number of benefits for the

organization, such as improved pricing through negotiation, better value through competitive bidding, and tighter control of supplier performance.

Improve internal processes: In many cases, opportunity means "work." Organizations sometimes find themselves in the peculiar position of having more cost-saving opportunities than there are staff members to implement them. However, if it can find ways to improve our internal procurement process, it's possible that they can free up resources to engage in cost savings or standardization projects.

Global Operational Sourcing Strategy:

A Good Global Operational Sourcing Strategy Addresses

***Cost*:** the main purpose of product sourcing strategy is to take advantage of lower labor costs in foreign countries. However, the procuring organization will face additional costs that don't factor into domestic transactional costs. These include broker fees, freight charges, taxes called, insurance, duties and bank fees.

Laws: the sourcing specialist together with the supplier should consider what body of law shall be applied to their contractual agreement, i.e., the buyer's country's law, the supplier's country's law or the law applicable through a signed treaty between the 2 countries.

Currency: some buyers may insist on transactions in their own currency for the sake of simplicity. However, a prudent buyer will consider the possibility of using the supplier's currency where the buying country's currency may become stronger in the period between agreement and supply and eventual payment.

Lead time: global purchases have a significantly longer lead time than domestic sources. The reason is that overseas travel is slower, unless air travel is used. In addition, there is time taken in the custom clearance process, which does not apply for domestic sources.

Culture and Language: where the procurement agent is unfamiliar with the culture and language of the supplier, the risks of misunderstanding, miscommunication and offensive/awkward encounters significantly increases.

Transportation: whereas domestic sourcing necessitates the use of a single mode of transportation, global sourcing frequently includes multiple modes of transport, e.g., combining air or water transportation with road transport to bring goods from the supplier to the supplier's port, to your own port and finally to your place of business.

Methods of Payment: in global sourcing, a letter of credit is used for payment, which necessitates the cooperation of the banks of the supplier and buyer.

Case Study : This study explores the process of global sourcing through a case of the Swedish furnishing retailer IKEA from an interaction perspective. With a point of departure in the streams of existing research on global sourcing and the internationalization process of firms through networks, the research is concerning supply network interactions as an influence in the global sourcing process. The

study focusing on IKEA and its development of a supply network for the PAX wardrobe system during the years 2003–2009.

The findings show that the global sourcing process is influenced by interactions and network effects between supply network actors. In particular, it find that relationships between suppliers were identified and set up by IKEA, but cascaded into deeper interactions amongst suppliers at different supply network tiers. The global sourcing research in indicating the importance of interaction amongst supply network actors, showing how the global sourcing strategy of one actor may significantly influence the sourcing strategies of other actors. Global sourcing decisions therefore need to be understood and coordinated across global supply networks.

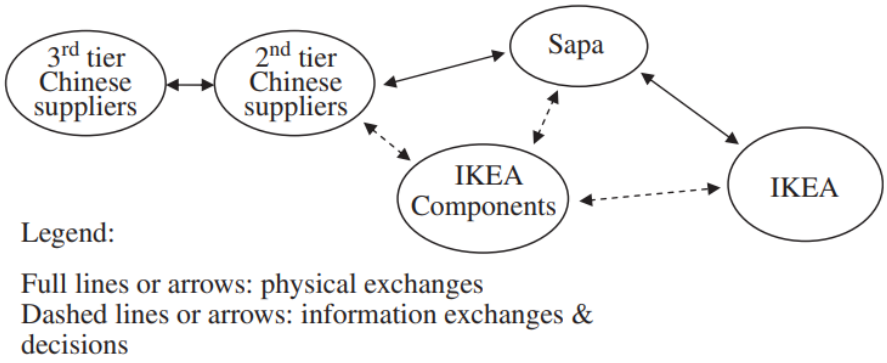


Figure: Interactions in the IKEA-Sapa sourcing process

IKEA's decision to develop global sourcing for the PAX wardrobe system was triggered by a need to secure availability, to cut costs and to develop new customer markets. Spurred on by IKEA, Sapa subsequently initiated its search for international sources. Using an interaction perspective this can be seen as a domino effect or a process of creating 'waves on water', where IKEA's influence on Sapa was an important ingredient in the process of the global supply network development concerning tempered glass for the PAX wardrobe system, but Sapa's increasing global operations also led their suppliers to redesign their supply network and interact in new ways across the global supply network. The IKEA case shows how global sourcing decisions have network-wide ramifications. Thus, interactions amongst supply network actors, and the effects on the global sourcing process, were observed not only in the focal relationship , the relationship between IKEA and Sapa but also between the supply network and IKEA.

Global Sourcing Manager Responsibilities and Duties:

- Develop and administer an efficient global supply chain and monitor inventory for all global products and assist to increase growth.
- Maintain all contracts and evaluate all performance according to contract and ensure efficient flow of all conditions in contract.

- Design and implement an effective sourcing strategy to reduce costs of financial products and manage all sourcing processes.
- Supervise all negotiations and prepare appropriate documents for same.
- Monitor all sourcing strategies and policies and ensure achievement of all business objectives and perform appropriate negotiations with all suppliers.
- Coordinate with vendors on all prices of products and recommend ways to reduce costs of components and finished products and prepare non-disclosure agreement for various sources.
- Collaborate with marketing team and initiate appropriate changes to engineering team and manage all research and development process.
- Manage all communication with global sourcing team and identify all standardized materials.
- Administer all commodity sourcing activities and coordinate with sourcing team to consolidate processes and select appropriate materials.
- Analyze customer requirements and prepare appropriate contracts and negotiate for all purchase materials.
- Develop new suppliers in various low cost regions of world.

Negotiation – Nature, Strategy and Planning

Negotiation is the process of reaching agreements on matters of common interest.

An activity, generally face to face, with two or more players who, facing interest divergence and feeling that they are interdependent, choose to actually look for an arrangement, in order to put an end to this divergence and thus create, maintain or develop a relationship between them.

- Resources allocation activity (bargaining)
- Search for solutions (problem-solving)
- Collective decision method when there are no rules and/or hierarchy

Any negotiation setting will have four components:

- A negotiation set: possible proposals that agents can make.
- A protocol.
- Strategies, one for each agent, which are private.
- A rule that determines when a deal has been struck and what the agreement deal is.

Negotiation usually proceeds in a series of rounds, with every agent making a proposal at every round.

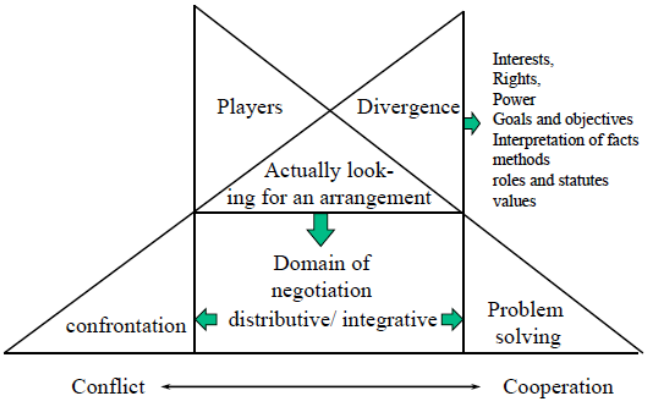


Figure: Negotiation – Nature, Strategy and Planning

There are a number of aspects of negotiation that make it complex.

Multiple issues:

- Number of possible deals is exponential in the number of issues. (Like the number of bundles in a combinatorial auction)
- Hard to compare offers across multiple issues the car salesman problem

Multiple agents:

- One-to-one negotiation
- Many-to-one negotiation
- Many-to-many negotiation

Functions of a Negotiation:

- Trade and economic exchange (trading/dealing)
- Interactive decision making (joint project)
- Conflict resolution (an alternative to « war »)
- Drafting joint rules (institutionalization)

Scope of Negotiation:

- Sales, business, marketing
- Industrial relations (compensation, work conditions, etc.)
- Taxation,
- Lobbying, negotiations business regulations with authorities
- Company takeovers, M&A, joint-ventures, etc.
- The scope of negotiation increases as and when rules and hierarchy play a diminishing role

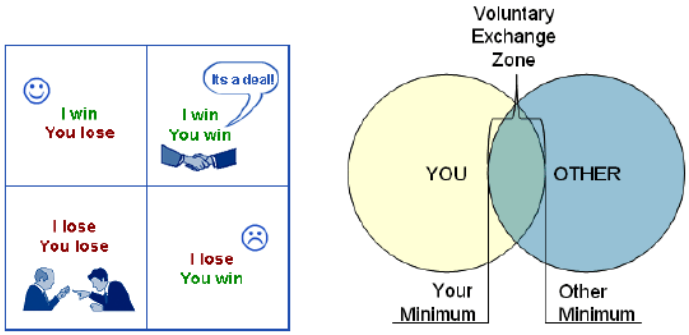


Figure: Negotiation

How Negotiation Planning is developed?

Developing Objectives:

- One can develop objectives for negotiation in a number of ways. One way is by comparing the Request for Proposal (RFP) response of the supplier with whom intend to negotiate to other

proposals have received for the same RFP. Doing so will enable to find gaps in supplier's proposal that may be open to negotiations.

- Objectives should be formulated with the SMART concept in mind, meaning that objectives are specific, measurable, attainable, relevant, and time-bound. It helps very little to enter a negotiation with the objective of "gaining a price reduction." To be specific and measurable, a price reduction objective needs to be stated in terms of an amount, either in dollars or in a percentage.

- To be attainable, a price reduction objective needs to be in alignment with current market trends and the supplier's ability to sustain operations at that pricing. In terms of relevancy, a price reduction objective must apply to the current acquisition and fall within the scope of negotiation. To be time-bound, a price reduction objective needs to refer to the specific period that it covers. By apply this concept to virtually all of negotiation objectives.

Prioritizing Objectives to Match Concessions: In most situations, there may be limited number of concessions available. These are like poker chips: Once they are gone, you will have to fold your cards and move on. Therefore, it's extremely important to ration your concessions so that it don't use up before it achieved those objectives that are critical to negotiation team.

Supplier's Objectives: Another requirement for negotiation planning is to attempt to recognize the supplier's objectives in order to better understand what may be able to gain through an exchange of concessions. If, for example, negotiation team is aware that the supplier is operating well below capacity, it might be able to gain a price reduction by committing to more volume in the earlier stages of the contract.

SWOT Analysis: Some negotiation planners like to begin their approach with a SWOT (strengths, weaknesses, opportunities, and threats) analysis. The analysis, discover the strengths rely on the competitive landscape, for example, that allows you a number of choices in suppliers. The supplier's weaknesses might be the need to obtain a contract right away to avoid a layoff. Market conditions that see prices rising may turn out to be a threat to negotiator ability to negotiate reductions; conversely, falling prices may be a threat to the supplier, compelling concessions in exchange for an immediate contract.

Figure: SWOT Analysis

Agenda/Order of Discussion: One of the most powerful tools, often overlooked, can be control of the agenda. If negotiator can control the order of bargaining during a negotiation, it will have a much better chance of staying on track with negotiation plan concessions.

Staying Organized: During a negotiation, it is critical that negotiation team stay fully organized, for obvious reasons. Everyone on negotiation team attending the negotiation needs to be clear on the order of discussion and the agreed-on objectives.

Tactics: Negotiation is not always a game or a sport. In sports, there is rarely more than one outcome: a winner and a loser. In negotiation, there are situations where both parties win and situations where both parties lose, creating, in effect, three options counting the win/lose. As part of developing negotiation plan, it is important to determine which of the outcomes you would be willing to accept.

Creative Negotiation:

- Seek out creative outcomes
- Understand cultures, especially your own.
- Don't just adjust to cultural differences, exploit them.
- Gather intelligence and know the terrain.
- Design the information flow and process of meetings.
- Invest in personal relationships.
- Seek information and understanding.
- Make no concessions until the end.

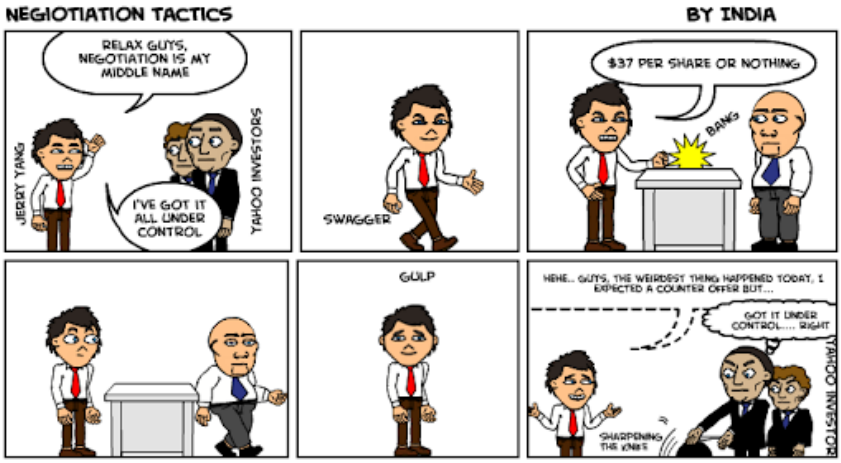


Figure: Creative Negotiation

Cross-Cultural Negotiation:

It is easy to understand that culture plays a huge role in negotiating with companies located in another country. As we develop our negotiation plan, it need to make adjustments according to the nature of the business and social culture in which the supplier is located. Although these adjustments mainly impact our tactical approach, there are some strategic elements that will need to be addressed. Probably the most pronounced differences between cultures lie in the role of the individual, how each individual views issues, and how each communicates in a business environment. In a cross-cultural negotiation, these are important considerations that may determine its outcome.

In cross-cultural negotiation, cultural differences and expectations add challenges to the negotiation process. No longer is it about discussing and reaching an agreement, but it is about being aware that what is appropriate in one culture may not be appropriate in another. The first rule of cross-cultural negotiations is to be aware that cultural differences exist and that they will affect how you communicate and deal with the other party.

More companies than ever are dealing with China. On the China Law blog, there is blog post entitled China Negotiating Strategy: An Expert's Perspective, which lays out a few "rules" for dealing with Chinese businesses. For instance, rule number four tells that normal contract rules in the United States are seen negatively in China, and the author says: "I have always had the sense that the typical Chinese company views the length of the contract as being inversely proportional to the strength of the relationship and though it is important that the contract have all of the critical terms, this is a big incentive to keep it as short as possible."

Japan is another country where Americans frequently do business. Behavioral rules in Japan are much different from those in the United States, and these will influence how you negotiate. For example, according to this blog post about Cross Cultural Etiquette and Manners: Japan: "A Japanese person finds it difficult to use the word "no". He may respond with "yes" to most questions but that does not necessarily mean that he is agreeing; it may really be a "no". This knowledge will help you in carrying out business negotiations with Japanese."

Performance Measurement and Evaluation:

Performance Reviews for Negotiation Success:

Performance reviews play an integral role in the success of any business, helping both employees and management to assess strengths and weaknesses and target areas for growth and skill development. One critical skill that is often overlooked by performance reviews, however, is negotiation. Rather than assessing negotiation, many companies subsume the skill under such headings as "persuasiveness," "emotional intelligence," or overall "effectiveness," while others overlook the rubric altogether. At the same time, many companies are establishing negotiation training or influencing training programs. How can a business assess the success of such programs when they fail to review employee negotiation skills as part of their central performance review process?

Identify Negotiating Styles*:* When businesses fail to properly address and assess negotiation skills, they put themselves, their employees, and their business at a disadvantage. Negotiation takes place continuously throughout professional life, not only when trying to close the biggest deals. One key part of assessing negotiation skills is to determine the negotiating style of each employee. By naming negotiating styles, management is able to quickly sketch out a general model of each employee's negotiation skills and weaknesses. One employee may have a distributive style, working hard to make sure each side receives as much of what they want out of negotiation as possible, while another may be conciliatory, able to close the deals, but often giving too much away. Knowing and naming different types of negotiation styles is the first step towards establishing a long-term review process.

Establish Skill Development Benchmarks: the companies cannot simply institute negotiation as part of the performance review process without preparing their employees. When adding negotiation to the performance review process, employers should start by establishing and explaining negotiation benchmarks for their individual company. What skills are expected of each employee when it comes to negotiating a deal? This can be a great time to perform negotiation training because the process can allow management to mark the level of negotiating skill an employee already possesses, providing a starting point for measuring growth as a negotiator over time.

Creating Great Negotiators: The best negotiators know how to manage differences in ideas and values, make exchanges that increase value for the company overall, and focus on the overall goal of the negotiation without losing sight of the needs and desires of the client. These negotiators come prepared, communicate clearly, and continuously add value for their company through the negotiation process. These skills are within the reach of any employee with the proper training and oversight. For business success, now is the time to embrace negotiation skills as a central part of the performance review process.

Negotiation Success: How to Evaluate & Measure:

1. Implement and Track Proven Negotiation Strategies:

Companies now can evaluate and enhance their employees' negotiation effectiveness by a) setting up a strategic negotiation process, b) training them in it, c) track and assess the extent to which their employees implement these sales and training negotiation strategies, and d) measuring and comparing

their results.

2. Analyse The Leverage Situation:

One primary area to track relates to leverage. Specifically, your success in any deal often will be directly correlated to what negotiator would have done if negotiator had not reached agreement with your counterpart. Thus, one relatively objective way to assess a crucial element of negotiation success is to contrast the terms of r final deal with what initially would have done if you had not negotiated it. The difference will be the relative effect of your negotiation effort.

For example Manoj at ABC Corp. has been requested to get the best deal he can for 100 hotel rooms for ABC's annual conference. Manoj contacts three class hotels and is quoted the following rates: Hotel X Rs. 13,000; Hotel Y Rs. 13,500; and Hotel Z Rs. 14,000.Manoj subsequently negotiate a rate of Rs. 12,000 at Hotel Y. How can you measure John's ability or negotiation success? Compare ABC's best alternative at the beginning of the process with ABC's deal after John has finished his negotiation. This Rs. 1,000 difference is attributable to Manoj's negotiation effort.

3. Evaluate the Outcome Vis-À-Vis Objective Standards:

Another crucial success element to compare is your employees' results relative to objective standards such as market value, efficiency, costs/profits and expert opinions. For example Linda is the hiring partner at a 20-lawyer law firm that has decided to employ a three-year lawyer. So she employs Sally at a Rs. 100,000 annual salary. If most three-year lawyers are given offers at about Rs. 100,000, that salary is market rate, Linda's negotiation effort was average. But if Sally accepted Rs. 90,000, a below market rate, Linda's effort was above average. Linda's partners might also evaluate her effectiveness by:

- Measuring Sally's compensation to the firm's precedent, what it reimburses other similarly experienced lawyers in its firm.
- Asking a human resources expert to rate the relative nature of Sally's compensation package.
- Comparing Sally's compensation with her eventual ability to produce profit.
- Many companies may find resistance to these ways of rating negotiation skills success. Employees become accountable for their negotiation effectiveness. Some will welcome this, but many will oppose.

Risk Management in Sourcing (Concepts):

What is a Risk?

1) A risk is an uncertain event which may occur in the future
2) A risk may prevent or delay the achievement of an organization's or units objectives or goals
3) A risk is not certain – Its likelihood can only be estimated.
4) Risk is the chance of something happening that will have an adverse impact on our objectives.
5) Risk is a measure of the inability to achieve program objectives within defined cost, schedule, and performance constraints.

Categories of Risks:

Financial:

- Reduction in funding
- Failure to safeguard assets
- Poor cash flow management
- Lack of value for money
- Fraud / theft
- Poor budgeting

Operational:

These risks result from failed or inappropriate policies, procedures, systems or activities e.g.

- Failure of an IT system
- Poor quality of services delivered
- Lack of succession planning
- Health & Safety risks
- Staff skill levels
- No process to track contractual commitments

Reputational:

- Organization engages in activities that could threaten it's good name
  - ✓ Through association with other bodies
  - ✓ Staff / members acting in a criminal or unethical way
- Poor stakeholder relations

Governance & Compliance:

- Lack of oversight by Board
- Segregation of duties not defined formally
- Ensuring compliance with funders terms and conditions
- Compliance with applicable legislation
  - ✓ Safeguarding of vulnerable individuals
  - ✓ Taxation Law
  - ✓ Data Protection
  - ✓ Health & Safety Law

Strategic:

- Engages in activity at variance with its stated objectives
- Fails to engage in an activity that would support its stated objectives

Insurable Risk: The risks which can be recovered are called insurable risks. The losses which can be

made good or losses for which company can get compensation from the insurance company are called Insurable Risks. Generally, the natural and physical risks are insurable risks, e.g., businessmen can take a fire insurance policy to get protection from flood, earthquake or from the damage of assets such as the bursting of boiler etc.

Non-insurable Risks: The risks for which no protection is available are called Non-insurable risks. The businessmen cannot get compensation for a change in demand or loss due to negligence or carelessness of employees. Whether the risk is insurable or non-insurable, only the loss can be shared but the risk remains.

Table: Difference between Insurable Risks & Non-Insurable Risks

Insurable Risks	Non-Insurable Risks
§ Insurable workplace health and safety risks	§ Non-insurable workplace health and safety risks
§ Insurable fraud and corruption prevention activities	§ Non-insurable fraud and corruption prevention activities
§ Unauthorised use of resources which represent an insurable risk	§ Unauthorised use of resources which represent a non-insurable risk
§ Reputation and image as an insurable risk	§ Reputation and image as a non-insurable risk
§ Fire prevention measures and security precautions	§ Crisis contingency planning and disaster recovery
§ Property loss and damage	§ Accounting controls that are not cost effective
§ Computer security	§ Loss of key staff and intellectual property
§ Professional negligence	§ Management system inadequacies and poor work quality
§ Other liability exposures	§ Failure or disruption of a major income source or investment
§ Legal liability	

Causes of Business Risk:

Natural Causes: Nature is an independent phenomenon and human beings have no control over it. Natural calamities like earthquake, flood, drought, famine etc. Affect a business a lot and can result in heavy losses. The natural causes are such type of uncertain factors that human beings cannot make any preparation against.

Human Causes: Human causes are related to a chance of loss due to human being or employees of the organization. The dishonesty of employees can bring heavy losses for business e.g., the employees may leak a business secret to a competitor and may commit fraud also bring heavy losses by wastage of resources. The employees may hamper the production by going on strikes, riots etc. This can also lead to heavy loss of business condition. There can be price fluctuations in the market, there can be a change in fashion, taste, preferences, and demands of customers

Economic Causes: Economic causes are related to a chance of loss due to change in the market. There can be a change in the degree of competition. All these have a direct impact on the earnings of the business. Even change in Government policy affects the business a lot. For example, in 1971 when Janata government came to power the Coca-Cola Company and many other foreign companies were sent

back to India

Physical Causes: All the causes which result in damage of assets are considered as a physical cause, for example, change in technology may result in machinery being outdated, use of old technology, mechanical defects may also result in damage of assets such as the bursting of a boiler, accident to employee etc.

Minimization of Risk:

Business has many risks but it can also be avoided by adopting some measures. Management can adopt the technique to minimize the chance of occurring any particular event which form may cause the loss. All the risks cannot be avoided but these can be minimized. So such policies are adopted which reduce the loss. For example, there is a greater risk to send the product by air then by train. So the risk can be reduced by sending the product by train. Similarly, when you introduce a new product, there is a greater risk, so you may refuse to avoid the risk. Though a firm can never escape from a presence of any risk it can still employ methods to avoid them. For instance, the firm can:

1) Avoid itself from entering into a risky transaction
2) Preventive measures can be taken like firefighting
3) Transfer the risk to an insurance company by taking a policy
4) Share risk with other enterprises by making the manufacturers agree to compensate the losses in the case of falling prices.

What is Risk Management?

It is a process to:

1) Identify all relevant risks
2) Assess / rank those risks
3) Address the risks in order of priority
4) Monitor risks & report on their management

Risk Management in Sourcing:

Like life itself, procurement is an inherently risky endeavor. Suppliers can fall short of the mark in quality, quantity, or timeliness. Rogue spending and fraud can erode your profits without being detected until it's too late. Internal processes may not be optimized, resulting in costly errors and exceptions. And at the end of it, you're the one left holding the proverbial bag. As a result, procurement risk management is a key part of effective and strategic sourcing. Managing risk within your supply chain might seem daunting. But with the proper procurement processes in place, the right technological tools at your disposal, and a well-informed, carefully planned risk mitigation strategy, you can take control of your supply chain management, reduce or eliminate dangerous potential risks, and generate both cost savings and measurable value for your business.

Procurement Risk Management Builds a Better Bottom Line:

Whether you're ordering raw materials, processing purchase orders, revising terms through contract management, or onboarding new suppliers as part of a strategic growth initiative, chances are the

choices you make will involve varying degrees of, and possibilities for, exposure to internal and supply chain risk. The potential risks will vary by both vendor and business, but procurement organisations of all sizes understand that both process and supplier risk must be kept to a minimum to support both the health and efficacy of procurement and the ambitions of the company as a whole.

Effective risk management strategies are focused on continuous improvement, and supported by clear, constant communication and collaboration with both your internal staff and stakeholders and the vendors in your global supply chain. By establishing and communicating your expectations and requirements to all parties, you can gain their engagement and help ensure they're focused on meeting your company's requirements for accuracy, efficiency, and orders filled at the greatest speed, best prices, and highest quality available.

Collaborating gives your staff and suppliers the time and resources they need to develop solutions to the common challenges related to capacity, price, and timeframes. In turn, your company:

1) Uses resources more effectively less waste, more profit
2) Enjoys improved production, distribution, and customer service supported by a surprise-free supply chain
3) Gains versatility in pursuing innovation
4) Spends less time correcting exceptions and errors and more time on high-level strategic initiatives
5) Develops rich data for analysis and smarter decision making at all levels
6) As an added benefit, your procurement organisation has a chance to identify your strongest potential partners, and streamline your supply chain to reduce bloat without sacrificing capacity.

Five Critical Supply Risk Mitigation Principles for Your Sourcing Process:

Supply chain risk management (SCRM) is becoming a top priority in procurement, as organizations lose millions because of cost volatility, supply disruption, non-compliance fines and incidents that cause damage to the organizational brand and reputation. Many organizations try to deal with this through point-based supply risk management solutions centered around supply chain visibility, corporate social responsibility or supplier management. But what usually happens is a solution is acquired, key strategic suppliers are vetted once in a "check-the-box" compliance initiative and that's it. Supply chain risk means managing the entire supply chain, not just tier 1 suppliers. All tiers, distributors, carriers, ports, transportation hubs, warehouses a delay or disruption can start anywhere.

Risk management, and what is necessary for ongoing risk management, never gets operationalized, and as new suppliers get added, supply shifts and supply chains change, new risk enters the picture risks that go undetected unless risk management is embedded in all key procurement activities, including sourcing. It is important to remember that:

1. When you are Sourcing, You are Really Changing Your Supply Chain Network:
It's easy to get lost in the mechanics of sourcing new suppliers and not see the broader supply network implications. For example, you may think you are hedging by dual sourcing, but if those suppliers in turn are sole sourcing to the same critical tier 2 or tier 3 (or 4 or 5!) or all reside in the same GEO (think flood plain) as an example supplier, you are also basically sole sourcing without realizing it. Another

example is to consider how elements such as transportation cost, tooling costs (and related capacity) and geography specific risks have cost considerations that factor into the sourcing process.

2. Supplier Risk is Only One Aspect of Supply Chain Risk:

When organizations consider supply risk within the sourcing process, they tend to focus on supplier specific risks rather than the broader supply risks that get "inherited" from the nature of the items being sourced, the countries they originate from or flow through, the modes of transport and handling, the logistical hubs (or any location-specific asset), the sensitivity of the intellectual property of the items and the nature of customer specific requirements passed back to you.

3. Sourcing Criteria Must Be 'Protected' and Risk Must Be Factored In:

If you have created a "balanced scorecard" of sourcing requirements beyond cost (e.g., delivery, quality, flexibility, innovation, sustainability, etc.), congratulations! Now the question becomes to what extent you want to protect those performance metrics that are most important to you. Supply risk management is essentially about protecting supply performance outcomes. Depending on what's most important, that will drive what risk types and mitigation approaches to consider.

4. Need to 'Cost the Risk' and Also Get It in the Contract:

Once you have prioritized your supply (and supplier) KPIs (key performance indicators), and have analyzed the biggest risks that threaten those KPIs, then it must analyze the options for risk mitigation (e.g., complexity reduction, early warning detection, faster recovery time, financial insurance policies, etc.) and then estimate whether you or your supplier (or a third party) has the lowest cost to treat and mitigate those risks so that you can plan for your supplier negotiations and contracting appropriately.

5. Must Design a Monitoring System that is Part of Onboarding

Most procurement professionals understand that savings are not realized during sourcing, but rather, are accrued during the execution process, with automated and failsafed monitoring being the goal to create transparency for all stakeholders. The same, however, goes for risk. Unless you have a means to automate the most important risk monitoring activities, and provide immediate transparency and alerting to key stakeholders, the costs of such monitoring will lead to poor or no monitoring and increased risk. And this will eventually come around to bite you financially.

In other words, risk needs to be ingrained in the sourcing process. With the right process, and platforms, this isn't all that hard to do. Suppliers should be pre-vetted during the identification phase at a basic level to make sure they are financially stable, corporately responsible as far as anyone knows (which can easily be determined by way of reports from third-party CSR (Corporate Social Responsibility) providers) and not on any denied party or watch lists. The risk of natural disaster, political embargo, civil unrest or war in the region should also be identified not just overall, but specifically mapped to critical supplier locations (e.g., supplier plants located near the volcanic 'ring of fire' on pacific coastlines).

Case Study: What Toyota's Latest Supply Risk Event Teaches Us

Toyota's supply chain is much revered for its lean Toyota Production System that it deploys internally and at its suppliers. It does help drive out waste and improve product quality. Yet it's "necessary but not sufficient" in running an end-to-end supply chain. Most recently, Toyota faced the threat of production

line shutdowns in Japan due to a fire at an Aichi Corp. steel plant, which, given the incident occurred which, makes the potential shutdown all the more shocking to hear. Toyota was impacted by Takata-supplied air bags shooting steel shards into passengers upon deployment not good. And of course, the 2011 tsunami that prompted a major supply chain risk initiative to help the supply chain through reduced time to recovery (TTR) from months down to a few weeks.

Toyota defended its overall supply chain design regarding locally sourced materials, with the only cited exception being steel sourced from South Korea. In this most recent case, it'll be interesting to see how well alternative steel supply sources can be tapped in the short term.

Supply Risk Lessons, Courtesy of Toyota/Aichi:

Longer-term, there are some interesting and nuanced lessons to be gleaned from this latest problem:

Toyota learned about part dependencies the hard way back in 1997, when a fire at supplier Aisin Seiki knocked out supply of Toyota brake valves, leading to non-production of 70,000 Camrys. But, in this case, it wasn't just a tier 3 or tier 4 supplier; rather, the supplier was Toyota itself. (Aichi is a Toyota subsidiary.) And since Toyota, like Honda, also operates a trading arm to execute buy-sell arrangements with upstream suppliers, the supply chain network models truly look like networks rather than chains. Once you have an extended supply network model, then you can run much more supply network design scenarios beyond the usual analytics run by supply network design tools (aka where to put the warehouses and whatnot).

For example, just applying a Toyota resourcing 60/20/20 approach may offer some company level hedging, but if they're all in Japan, that wouldn't mitigate country-level risk (i.e., natural hazard risk to that country). In a supply risk mitigation program, you have to model your risk types broadly and robustly (e.g., scenario planning against those risks), before picking any one historical hedging approach. Toyota case, having alternate steel supplier sources that can support the steel requirements met by Aichi will help get those sources ramped up to meet production volumes.

Consider modeling internal supply sources as suppliers. Some companies will look at internal plants (or shared service centers) alongside suppliers. Conducting rigorous make vs. buy analyses is critical on both risk and reward dimensions. For example, a few paper products manufacturers own forests (JK Paper Ltd. Odisha) to have vertically integrated supply chains as a hedge. But if you get too integrated, whether in the physical supply portfolio or in financial portfolio (e.g., keiretsus), it is actually working against the risk mitigation principles that hedging (broadly) are all about.

Work with suppliers (internal ones, too) on more robust design. One way to mitigate sole sourcing is to improve the robustness of design to accommodate supply variation that uneconomically favors a supplier. In other words, design out any "unobtanium" parts and materials that lock you into a supplier unless the feature is a truly customer-differentiating or strategic capability.

Nature and Principles of Risk Management:

Nature of Risk Management:

Business risk is the possibilities a company will have lower than anticipated profits or experience a loss rather than taking a profit. Business risk is influenced by numerous factors, including sales volume, per-unit price, input costs, competition, and the overall economic climate and government regulations.

1. Arises due to Uncertainties: Uncertainties mean when you are not sure of what is going to happen in future. Common examples of uncertainties are: change in demand, government policy, technology etc. Business risk is due to these uncertainties.

2. Essential part of any Business:
A risk is an important characteristic of business. No business can avoid risk although the degree of risk may vary Risk can be reduced but cannot be eliminated.

3. Degree of Risk Depends upon the Nature and Size of Business: The degree of risk depends upon the type of business; for example, a business involved in fashion items bears more risk as compared to the business involved in standardized goods. Similarly, a business operating at large scale bears more risk as compared to small-scale business houses.

4. Profit is the Reward for bearing the Risk: The business earns a profit because they are bearing risk." No risk no gain" larger the risk more is the profit. An entrepreneur bears risk with the expectations of earning a profit.

Principles of Risk Management:

In its purest form, risk management is the identification, classification and prioritization of risks. This is generally done in tandem with efforts to monitor, control and mitigate the risks. Risks themselves can be from factors internal to the project, such as the adoption of a new technology, team members that are new to the project manager, or resource constraints and internal dependencies. Additionally, risks can also be external, such as the health of the financial markets, competitive pressures, legal liabilities or even accidents. The sheer number and type of risks that may (or may not) factor in to a given project gives a good idea of how complex and problematic risk assessment can become. There are specific core principles in regards to risk management. When looking to perform an actual risk assessment, the following target areas should be part of the overall risk management procedure (as defined by the International Standards Organization; ISO):

1) The process should create value
2) It should be an integral part of the organizational process
3) It should factor into the overall decision making process

4) It must explicitly address uncertainty
5) It should be systematic and structured
6) It should be based on the best available information
7) It should be tailored to the project
8) It must take into account human factors
9) It should be transparent and all-inclusive
10) It should be dynamic and adaptable to change
11) It should be continuously monitored and improved upon as the project moves forward

Risk Management Process:

There is a specific procedure that one should follow when it comes to performing a risk assessment. The overall process can be itemized as follows:

- ***Identification*** – Perform a brainstorming session where all conceivable risks are itemized
- ***Planning*** – Once defined, plan for contingencies as part of the overall project plan; implement controls as needed
- ***Derive Safeguards*** – Place specific 'fallbacks' into the overall project plan as contingencies for risks if they arise
- ***Monitor*** – Continuously monitor the project to determine if any defined (or un-expected) risks manifest themselves

Figure: Risk Management Process

Risk Management Cycle:

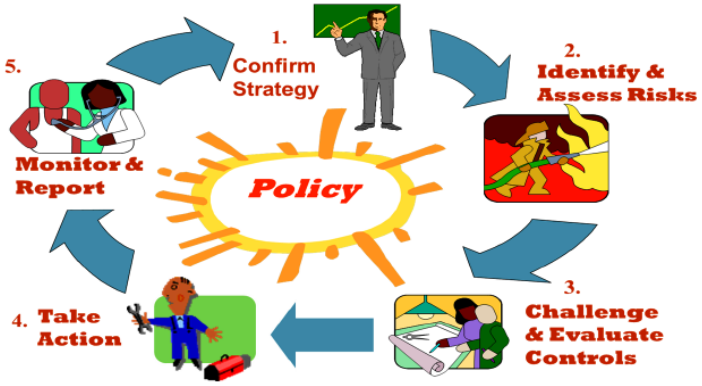
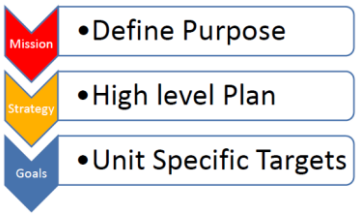


Figure: Risk Management Cycle

Risk Management Cycle – Step 1:



Risk Management Cycle – Step 2:

Risk Identification – what are the threats and uncertainties associated with my organization's or units objectives?

- Separate out the risk into its cause & possible effect
- Be concise & clear
- Do not concentrate on symptoms only
- Assess the risk's
  - ✓ Impact
  - ✓ Likelihood (Guidance on both later!)
- Prioritize the risks

Risk Management Cycle – Step 3:

Challenge & Evaluate Controls

- Control: Policy, action, procedure or process designed to prevent risk or to limit its impact
- Do they work, are they effective?
- Residual Risk only should be measured

Risk Management Cycle – Step 4:

Take Action!

- For serious risks where controls are
  - Weak
  - Absent
- For risks where the Risk Appetite is exceeded
- Examine Cost vs. Benefit
- Types of Action

A) Tolerate
B) Treat
C) Substitute
D) Terminate

(The choice of the above will be decided upon by your risk appetite)

Risk Management Cycle – Step 5:

Monitor & Report

- Use a standard format for capturing risk data e.g. a "Risk Register"
- Review all risks at least annually
- Serious risks to be reviewed more often depending on circumstances
- Report on risk to senior management / Board
- Make Risk Register available to stakeholders to show good governance

Dealing with Risk Management:

Once the risks are identified and the specific risk process has been instantiated, what should the project manager do with the defined risks? There are actually certain techniques to be aware of pertaining to risk. Being aware of what the risks are will dictate how effective each of the individual risk management options might be.

Avoid the Risk – This may seem obvious, but it is an actual technique. There are instances where a perceived risk can be avoided entirely if certain steps are taken. An example of this might be a concern over a vendor supplying a given deliverable at a specific timeframe. It may be decided to perform the actual work for the deliverable in-house thereby eliminating the risk of the external vendor.

Reduce the Risk – While some risks cannot be avoided, they can be reduced. This may be accomplished by fine tuning aspects of the overall project plan or making adjustments to specific areas of scope. Whatever the case, reducing a risk reduces the impact it will have on your project.

Share the Risk – If a certain risk cannot be avoided or reduced, steps can be taken to share the risk in some way. Perhaps a joint venture with a third-party will reduce the downside risk for the organization as a whole. This could reduce the sunk cost and potential losses of the project if sharing of risk results in it being spread out over several different individuals or groups.

Retain the Risk – This is actually a Judgement call. Once all options are exhausted, the team members, sponsor and project manager may just decide to retain the risk and accept the downside potential as is. This decision is usually made by first determining the upside potential of the project. If it is deemed that the project's expected upside far outweighs the sunk cost and downside, than the risk itself may be worth it. Note that in certain cases, insurance can be used to mitigate the downside, although the actual risk retention itself is what is being accepted by the team.

Risk Management Tool and Technique:

Expert knowledge: Expert knowledge relies on the experience of people who have worked on similar sourcing operations in the past. Interviews with individuals, stakeholders, and experts are good methods to use to gather expert knowledge. Interviews with subject matter experts may uncover risks not previously considered.

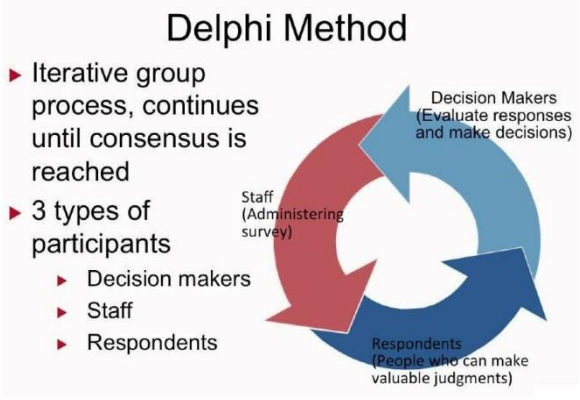
Historical Information: The team member may have compiled a historical database of risks encountered in previous sourcing efforts and contracts. It will be useful if organized the database by contract type and include a list of the problems encountered that can be identified as risks, their sources, and the events that precipitated them. Also include the mitigation plan put in place to deal with the risk and the success of that mitigation plan if it was actually applied to an event. Records of previous contracts can also provide historical information. These records may be kept in a database, or they may be paper files. If team doesn't currently have a process that captures historical risk information, the team should consider developing one.

Brainstorming: Another technique frequently noted is to identify risks and sources of risk by

conducting a brainstorming session. Gather a group of subject matter experts who have an understanding of the nature of risk; include stakeholders as well as those who will not be directly affected the activities as a way of maintaining relative objectivity. This activity will make it possible to create a broad list of potential risk events and their sources. It can be apply to the specific conditions in order to refine the list.

A variation of brainstorming often used is called the Delphi method, a means of leveraging the collective judgment of specialists and/or management (often referred to as "expert judgment"). This process primarily when objective and quantitative data for measurement and decision making do not exist (or possibly even make sense). The technique determine the outcomes such as how long it might take to draft a contract, what penalty limits you should set, or how long negotiations may last. This technique consists of three simple steps:

1) Ask participants to estimate a value for some occurrence, usually anonymously on paper.
2) Consolidate results, and ask participants with responses outside the norm to justify their positions for each participant's benefit and/or reconsideration.
3) Ask all participants to estimate the value of the occurrence.



Simulations: Several analysis tools are commonly available for pro- viding simulations. One that is frequently used is the Monte Carlo simulation. Monte Carlo simulation provides the user with a range of possible outcomes and the probabilities they will occur for any choice of action. A number of software products can help develop models; several of them work with MS Excel. The decision tree diagram is also a useful simulation tool that can depict key interactions among decisions and associated chance events.

Checklists: Through research, it may be able to develop a useful checklist to run through whenever needed during sourcing activities. It can use historical data that applies to similar activities in organization or find related information through a well-directed Web search.

Sourcing Activities: for conducting sourcing activities, go over the list to determine if any apply to current activities and if the sources being considered pose potential risks for this contract. Although checklists can be useful tools, they should not replace close analysis of the conditions it might encounter. It is also unlikely that even the most detailed checklist will include every potential risk in a particular situation.

Managing Risk in International Business:

Business risk comes in a variety of tangible and intangible forms over the course of the business life cycle. Some risks occur during the ordinary course of corporate operations, while others are due to

extraordinary circumstances that are not easily identified. Regardless of a company's business model, industry or level of earnings, business risks must be identified as a strategic aspect of business planning.

Once risks are identified, companies take the appropriate steps to manage them to protect their business assets. The most common types of risk management techniques include avoidance, mitigation, transfer, and acceptance.

Avoidance of Risk: The easiest way for a business to manage its identified risk is to avoid it altogether. In its most common form, avoidance takes place when a business refuses to engage in activities known or perceived to carry a risk of any kind. For instance, a business could forgo purchasing a building for a new retail location, as the risk of the venue not generating enough revenue to cover the cost of the building is high. Similarly, a hospital or small medical practice may avoid performing certain procedures known to carry a high degree of risk to the well-being of patients. Although avoiding risk is a simple method to manage potential threats to a business, the strategy also often results in lost revenue potential.

Risk Mitigation: Businesses can also choose to manage risk through mitigation or reduction. Mitigating business risk is meant to lessen any negative consequence or impact of specific, known risks, and is most often used when those risks are unavoidable. For example, an automaker mitigates the risk of recalling a certain model by performing research and a detailed analysis of the potential costs of such a recall. If the capital required to pay buyers for losses incurred through a faulty vehicle is less than the total cost of the recall, the automaker may choose to not issue a recall. Similarly, software companies mitigate the risk of a new program not functioning correctly by releasing the product in stages. The risk of capital waste can be reduced through this type of strategy, but a degree of risk remains.

Transfer of Risk: In some instances, businesses choose to transfer risk away from the organization. Risk transfer typically takes place by paying a premium to an insurance company in exchange for protection against substantial financial loss. For example, property insurance can be used to protect a company from the costs incurred when a building or other facility is damaged. Similarly, professionals in the financial services industry can purchase errors and omissions insurance to protect them from lawsuits brought by customers or clients claiming they received poor or erroneous advice.

Risk Acceptance: Risk management can also be implemented through the acceptance of risk. Companies retain a certain level of risk brought on by specific projects or expansion if the anticipated profit generated from the activity is far greater than its potential risk. For example, pharmaceutical companies often utilize risk retention or acceptance when developing a new drug. The cost of research and development does not outweigh the potential for revenue generated from the sale of the new drug, so the risk is deemed acceptable.

A Model for Risks and Opportunities in Global Sourcing:

The static and dynamic costs are important. It is also important to evaluate the hidden costs. There are several key factors that have a significant impact on dynamic costs (cost and partly hidden). They are important to evaluate the total risk associated with the economic viability and success of global sourcing decisions:

1) The time difference between the supply of domestic and international deliveries;
2) The need for flexibility;

3) The importance of service levels;
4) The logistical costs;
5) The objective quality and / or complexity of the product;
6) The stability of the country /region/currency of the foreign suppliers.

To compare these factors, it is possible to develop a simplified decision framework for a first assessment of the risk associated with global sourcing decisions. It ranks each factor on a five-point Likert scale (where one indicates low importance / value / cost and five high importance /value /cost). The best way to represent it is with a spider diagram like the one shown in the

The global sourcing may be less beneficial than you think. From the perspective of lean (lean thinking), any transport or escort should be seen as a possible waste. Before accepting them as necessary waste the risks should be carefully evaluated and if necessary remediated. A certain number of initiatives of global sourcing lead to fewer benefits than expected or actually are not economically sustainable - because of hidden costs and dynamic than had not been budgeted in the original calculation. Each case must be examined and global sourcing, according to specific situations, is a decision one way or another. In other words, often the best solution is a mix of local and global sourcing.

An Example of Balanced Sourcing (Case study on ZARA):

A relevant example of the suggested approach is represented by Zara, the Spanish producer and distributor of fashion goods. Someone has said that "Zara is a fashion company, It is a logistic company carrying fashion." But ZARA completely redesigned logistics. In a certain number of cases, it has passed to insourcing from outsourcing. In these cases, it has obtained a very short and under control supply chain.

The advantages that Zara obtained from having a short supply chain for a certain number of products and components are:

- Speed of response to new trends and cost containment
- Reduction of safety stocks
- Cycle constant supply throughout the year, from various internal and external suppliers.

ZARA can vary only tissues and modelli (Modelli Fabrics), with an update twice a week (6-12 months against competitors who then have time to resupply much higher). In the fashion market, it fits the rationalization of the production cycle, but the competitive advantage you get in the arena of time (quick response) and style. The supply chain must be efficient with features such as:

- Agility
- Reducing time to market
- Ability to change quickly according to new applications.

Therefore maintains production capacity in Europe and Asia, despite the costs are significantly lower. In this way, Zara allocates the production of products with uncertain demand for European

producers, leaving the production of items with predictable demand from Asian producers. The result is that approximately 60% of production in Europe (Spain). The "Living Collections " in Zara are manufactured, distributed and sold with the same speed with which change attitudes and behaviours of customers. With local production, Zara is able to supply even twice a week their stores compared to once a week or less of its competitors. The offer is completed, planned daily. It takes less than two weeks for an item designed by the design team of La Coruna arrivals in any of the shops around the world, Zara is thus able to be 12 times faster than the competition. Customers know that Zara renews the offering every week and often visit its stores (11 times per year compared to 4 of the competition). The phenomenon is not related only to Zara. GE has recently organized a survey of UK manufacturing companies. 27% had increased domestic purchases compared with 13% who had reduced them. How extreme situation, the Group Rhodes had increased purchases of iron castings from national companies from 40% to 90%. These are extreme situations. We will continue to buy on a global basis, but at a more mature and careful.

Module – II

Supplier Research and Market Analysis

Supplier Research and Market Analysis:

Supplier Research: is the process of obtaining information for sources specific to the item (product or service) being acquired in order to facilitate competitive practices and supplier selection.

Market analysis: is the process of gathering relevant information from economic indicators and emerging trends within the particular industry and the competitive environment of the product or service we are sourcing.

Supplier research and market analysis, taken together, provide the basis for us to understand what products and services are available, who the most qualified potential suppliers are, and how the market for that particular product or service operates.

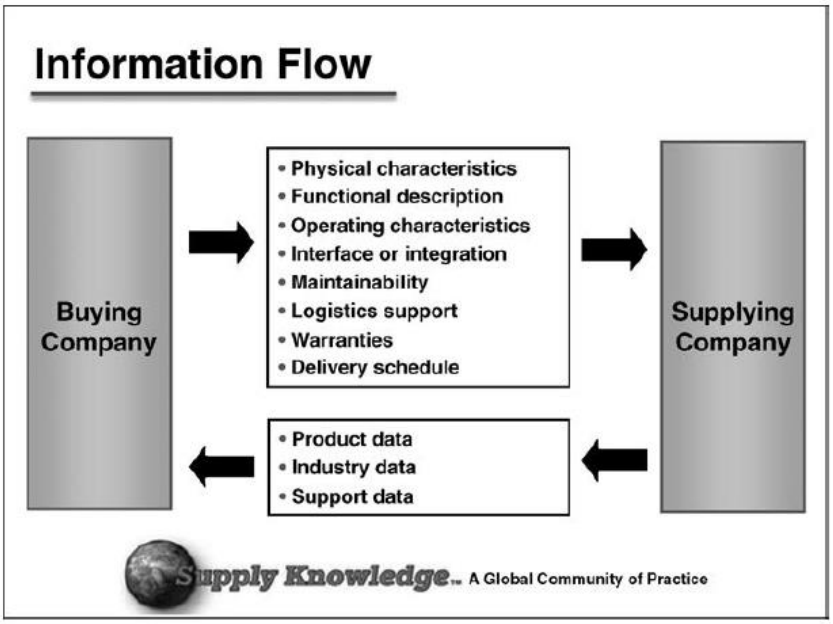


Figure: Information Flow in Supplier Research and Market Analysis

Conducting Supplier Research:

Supplier research is used in sourcing for two main purposes:

1) To identify qualifiable suppliers or contractors that can provide goods or services to our organization. By "qualifiable," we mean suppliers that have been screened and meet the capability, financial, and capacity requirements for the current requirement. These suppliers have not yet been certified or formally approved by the sourcing selection team.

2) To determine an appropriate strategy for solicitation, evaluation and assembling the bidders' list. This strategy is based on both supplier research and market research, which, taken together, establishes the basis for our acquisition and sourcing plan.

Methods and Techniques for Locating Potential Suppliers:

How difficult is it to find supplier sourcing information? Well, not really difficult at all if you know where to look. Let's see where we can find sources. In developing a further understanding of the market, we can leverage a number of sources (apart from the companies themselves) to provide additional insight and information. We can include:

- ***Experts:*** These should include in-house expertise and commodity centers.
- ***Current Suppliers:*** Often they have in-house category information and solutions that may meet your sourcing requirements.
- ***Other Recent Market Research:*** Check files for similar purchases.
- ***Requests for Information:*** These are formal methods for obtaining comparative data.
- ***The Internet:*** Although the Internet is a useful source of information, you must be careful to avoid broad search engines that can provide information overload. Instead, use sites that aggregate catalogs from many similar suppliers. You can use these catalogs for convenient side by side comparisons.
- ***Online Databases:*** Industry web sites and consolidated catalog sites provide useful information.
- ***Source lists from other sections within your organization.***
- ***Product Literature:*** Often you must specifically request such data from the supplier, but sometimes you can find it easily on the supplier's web site.
- ***Trade Shows:*** Although attendance is time consuming and often requires travel, trade shows can be especially valuable when sourcing new products that will be used extensively and potential new sources of supply.
- ***Professional Associations:*** For example, the National Institute for Automotive Service Excellence and the Institute of Electrical and Electronic Engineers (IEEE) maintain product standards.
- ***Market Research Firms:*** Many companies specialize in developing detailed market analysis along with specific commodity research and sell the results.

Conducting Market Analysis:

Market analysis is an important tool for gathering information about pricing and availability trends, inherent risks in a particular industry, and the structure of the market itself: what its drivers and critical barriers are. We can learn what new and existing technology is available and assess its suitability; we can learn who the key suppliers are and what advantages they offer.

Market analysis can become an extensive and time-consuming project, so you will need to adjust the amount of time spent according to the urgency of the requirement. An urgent requirement just may not allow the time required to properly research the market. Review the estimated price of the acquisition, where low-price purchases do not merit extensive research. Be sure to consider the complexity of the requirement, where more or less time must be spent in fact finding and analysis for highly complex

acquisitions.

Analyzing the Market: One of the primary objectives of market analysis is to develop an awareness of the opportunities and threats evolving in the particular market. The outlines the major categories of market analysis:

1) Market size (current and future)
2) Market growth rate
3) Market profitability
4) Industry cost structure
5) Distribution channels
6) Market trends
7) Key success factors

Market Size: We generally relate market size to the total dollar value of aggregated sales. Market share is important when assessing a particular supplier's position within that market. This information is typically available through Department of Labor/Department of Commerce publications, although it is not always as current as we might like it. We can also find information through trade magazines and trade associations as well as research firms specializing in that particular economic market segment.

Market Growth Rate: The rate of growth in any particular market segment will tell you if there will be market capacity available and for how long. This information is usually garnered from the same sites noted earlier, although in some cases you may have to project the information into the future yourself in order to utilize it fully. There are a number of forecasting and statistical techniques available for doing this; most easily used is linear regression analysis, which plots a straight line from the past into some future date using a formula found in most spreadsheet programs.

Market Profitability: If companies in a particular market are profitable, they are more likely to provide a relatively stable source of supply. Many factors influence profit, including the balance of supply and demand, the ease with which new firms can enter the market, the competitive nature of the market, and who (buyer or supplier) holds the most power.

Industry Cost Structure: We can use our knowledge of the market's cost structure to identify current and emerging opportunities for leverage and negotiation planning purposes. In a competitive market with relatively inflexible cost elements, pricing will be able to fluctuate only within a relatively narrow range to maintain profitability (under most circumstances).

Distribution Channels: How are customer orders generated and fulfilled? The more hands a product passes through, the higher its price and the slower its delivery tend to be. A shorter pipeline or supply chain generally ensures faster response times with less inventory and thus less cost.

Market Trends Fluctuations in price and availability are common in all markets. Supply and demand vary and affect prices depending on the complexity of the supply chain. Understanding these fluctuations and being able to forecast them to some extent can result in buying opportunities that lower cost.

Key Success Factors :Advanced technology, higher quality and satisfaction levels, and economies of scale are just some of the factors for success within a given market. First to market and access to distribution resources provide individual companies within the market more opportunity for success.

Determining Changing Marketplace Factors:

One of the most significant determinants of sourcing decisions generates from the nature of changes in the marketplace. Supply and demand continually interact to produce varying pricing profiles. When product is in short supply or production resources come under threat (e.g., oil and the Middle East), prices can rise dramatically, and capacity limits may create supply allocations. Organizations wishing to continually work with the most price-competitive suppliers who stay up to date on the latest technological advances and business methods must maintain an aggressive review process that periodically surveys the market as conditions change.

Economic Conditions: Supply and demand forces continually drive prices up and down. As economic conditions change, demand increases or declines, generating shortages or excesses in supply at any given time. As previously noted, increased supply or decreased demand (or combinations of both) generally lead to reduced prices. What drives these fluctuations can be a mystery. However, the astute procurement professional can take advantage of these conditions by seeking increased competition during periods of abundant supply and declining prices when suppliers are more anxious to seek new business or, conversely, by locking in prices through contracts when facing periods of shortage or inflationary pricing.

Market Complexity: The extent to which an organization's economic strategy can be employed for example, when to lock in prices through extended contracts or when to pay more for higher quality levels depends somewhat significantly on the complexity of the market. Markets with few suppliers and little potential for product substitution tend to offer only limited opportunities for you to use competition to your advantage. However, in markets in which widely competitive forces exist, shortages in one product can be easily offset by substituting another that is, markets with greater complexity provide the buyer with more leverage to gain pricing improvements. Cost reduction efforts can produce the greatest results in industries with broadly diverse alternatives, so the sourcing effort should always begin by determining the nature of the marketplace.

Nature of Competition: The nature of competition in any particular market varies. Are there many technical solutions available, or only one or two? Is the market characterized by geographical limitations with very high transportation costs? If, for example, the product being purchased is covered by a patent or controlled by patented manufacturing technology, competition will be unlikely. Similarly, when start-up costs are high, such as those that occur in the development of proprietary tooling, competition tends to become constricted once the initial sourcing decision is made. It is always wise to understand the

nature of competition in this regard before committing to generating short-term cost reductions since the sourcing effort will likely require major engineering efforts. When dealing with sources of critical supplies or services, the buying organization needs to maintain continual vigilance for potential traps that will unknowingly limit the nature of the competition for that particular product or service. You must also develop strategies for dealing with such risks in the future.

Analysis of Technological Trends: When technological change drives conditions in the marketplace, new sources of supply must always be under consideration. New technology frequently generates new opportunities for capital investment, and emerging businesses tend to spring up everywhere. The buyer should be sensitive to these opportunities but be able to balance them with the need for maintaining long-term relationships that produce value beyond price or the latest fad in technology. With critical supplies and services, one should always monitor the supply base to ensure that existing sources are keeping abreast of technology and adding improvements as necessary. Suppliers that do not constantly upgrade their processes to take advantage of new technology could easily become obsolete. The buyer should consider ways to continually monitor existing suppliers and their technological position relative to their competitor so that ongoing changes do not adversely affect their organization's own competitive position.

Performance: As economic conditions change, so can supplier performance. Suppliers under continual pricing pressures due to emerging global markets, for example, may tend to sacrifice some of the quality that qualified them for your business in the first place. Delivery delays, cuts in services, and quality failures are often the early signs of declining performance due to economic hardship. Companies providing critical supplies and services need to be continually measured against industry performance standards. Initial signs of deteriorating performance should be met with clear improvement projects and, depending on the rapidity of decline, additional sourcing activities.

Vendor Rating – Objectives

What is Vender Rating?

1) A vendor is any person or company that sells goods or services to someone else in the economic production chain.
2) Vendors or suppliers are given standing, status, or title according to their attainment of some level of performance, such as delivery, lead time, quality, price, or some combination of variables.
3) It may take the form of a hierarchical ranking from poor to excellent and whatever rankings the firm chooses to insert in between the two.
4) For some firms, it may come in the form of some sort of award system or as some variation of certification.
5) It is a direct result of the widespread implementation of the just-in-time concept.

Figure: Vendor Rating

Objectives of Vender Rating:

- To help the buyer in future selection
- To provide buyer with the information helpful in subsequent negotiation
- To provide the buyer with the important information which he can act upon any corrective measures.

Vendor rating is usually evaluated in the areas of risk, pricing, quality, delivery, and service. Each area has a number of factors that some firms deem critical to successful vendor performance.

Pricing factors include the following:

- Competitive pricing. The prices paid should be comparable to those of vendors providing similar product and services.
- Price stability. Prices should be reasonably stable over time.
- Price accuracy. There should be a low number of variances from purchase-order prices on invoiced received.
- Advance notice of price changes. The vendor should provide adequate advance notice of price changes.
- Sensitive to costs. The vendor should demonstrate respect for the customer firm's bottom line and show an understanding of its needs.
- The vendor should also exhibit knowledge of the market and share this insight with the buying firm.
- Billing. Are vendor invoices accurate? The average length of time to receive credit memos should be reasonable.

Quality factors include:

- Compliance with purchase order, contract or agreement. The vendor should comply with terms and conditions as stated in these documents.
- Conformity to specifications. The product or service must conform to the specifications identified in the request for proposal, contract and purchase order.
- Reliability. Is the rate of product failure within reasonable limits?
- Reliability of repairs. Is all repair and rework acceptable?
- Durability. Is the time until replacement is necessary reasonable?

- Support. Is quality support available from the vendor? Immediate response to and resolution of the problem is desirable.
- Warranty. The length and provisions of warranty protection offered should be reasonable. Are warranty problems resolved in a timely manner?
- State-of-the-art product/service. Does the vendor offer products and services that are consistent with the industry state-of-the-art?
- Enhancements. The vendor should consistently refresh product life by adding enhancements and continuous process improvement. It should also work with the buying firm in new product development.

Benefits of Vendor Rating:

1) Helping minimize subjectivity in judgment and make it possible to consider all relevant criteria in assessing suppliers.
2) Providing feedback from all areas in one package.
3) Facilitating better communication with vendors.
4) Providing overall control of the vendor base.
5) Requiring specific action to correct identified performance weaknesses.
6) Establishing continuous review standards for vendors, thus ensuring continuous improvement of vendor performance.
7) Building vendor partnerships, especially with suppliers having strategic links.
8) Developing a performance-based culture.

Demerits of Vendor Rating:

1) Inexperience with Products and Services
2) Unfamiliarity With Corporate Operations
3) Resistance Within Company
4) Threat to Security

How the Vendors are rated?

Vendors are rated on the basis of various characteristics:

- Time delivery
- Quality
- Price
- Others actors (such as Supplying useful market information & Meet emergency order).

8 Major Rating Plans are utilized for Vendor Rating:

After the trial orders are executed, it becomes necessary for the buyer to rate the vendors to enable him to determine how he should apportion his requirements among the vendors.In other words, the basic responsibility of the materials manager is not only to locate the sources but also to preserve them

through continuous rating. A vendor's performance in meeting the quality, delivery and price standards set by the buyer has to be assessed in a systematic manner.

Techniques of Vendor Rating:

The purchase organizations watch his enlisted suppliers continuously and take requisite corrective action. Following rating plans are utilized for vendor rating:

(a) Categorical plan
(b) Weighted point plan
(c) Cost ratio method
(d) Eavaston's vendor selection
(e) Forced decision matrix
(f) Service cost ratio
(g) Bell quality rating system

(a) Categorical Plan:

i. The categorical plan is a sample of all vendor rating schemes. It relies heavily on the judgement and experience of the decision maker. The purchaser maintains a list of his suppliers and their products. The vendor performance is reviewed periodically by an evaluation committee comprising of all representatives.

ii. Depending upon the performance, the vendor is given a plus point, neutral or minus. The performance trends over a period of time are built up and the vendor with increasing trend of plus point is chosen. A preponderance of pluses or minuses needs notification to supplier with comments.

iii. On the basis of experience and periodical meetings, a list of factors can be established on the suppliers' performance in each area and each factor is given a grading as 'never', 'seldom', 'usual', 'always', etc. This system, though non-quantitative, provides a means of systematic record keeping on performance criteria.

(b) Weighted Point Plan:

Quality, delivery or service and price are the three most important attributes of a good supplier. Depending upon the importance, a purchaser attaches to a particular attribute he fixes a weightage for it. The total weightages are being 100. The weightages, for example, of the attributes are as follows: Quality — 60%, Delivery — 25% and Price — 15%.The quality rating (Table), delivery (service) rating (Table), price rating (Table) and composite rating (Table) are calculated below.

Table . Quality Rating

	Lots Received	Lots Accepted	Quality Control Rating
Supplier X	90	80	$\frac{80}{90} \times 60 = 53.33$
Supplier Y	100	90	$\frac{90}{100} \times 60 = 54$
Supplier Z	70	60	$\frac{60}{70} \times 60 = 51.42$

Table . Delivery (Service) Rating

	Lots Received	Lots Received According to Promise	Delivery (Service) Rating
Supplier A	90	70	$\frac{70}{90} \times 25 = 19.44$
Supplier B	100	80	$\frac{80}{100} \times 25 = 20$
Supplier C	70	80	$\frac{60}{70} \times 25 = 21.42$

Table . Price Rating

	Lots Received	Price Rating
Supplier A	Rs. 13.50	$\frac{13}{13.50} \times 15 = 14.44$
Supplier B	Rs. 13.00	$\frac{13}{13} \times 15 = 15$
Supplier C	Rs. 14.50	$\frac{13}{14.50} \times 15 = 13.44$

Table . Composite Rating

	Supplier A	Supplier B	Supplier C
Quality	53.33	54	51.42
Delivery	19.44	20	21.44
Price	14.44	15	13.44
Total Rating	87.21	89	86.28

The weighted point plan technique enables a purchaser to evaluate a supplier on quantitative basis. This plan is more objective than categorical plan and the only way the subjectivity can enter is while assigning the weights. Proper records have to be kept. If services of a computer are available, then this plan can be used very successfully. Under this plan, the supplier can be classified as excellent, acceptable, average and unacceptable if their composite rating is over 90%, between 75% and 90%, between 60% to 75% and below 60%.

(c) Cost Ratio Method:

This method relates to identifiable purchasing and receiving costs to the value of shipment received from respective suppliers. The higher the ratio of costs to shipments, the lower the rating applied to the supplier: Quality, delivery, service and price are the usual categories to which costs are allocated, after subdividing each factor into various elements. The respective cost ratios are suitably combined with the vendors' quoted price, to determine the net cost. Here, the vendor performance is reviewed periodically by an evaluation committee comprising of representatives from all departments involved with purchasing.

(d) Eavaston's Vendor Selection:

The suppliers' past performance is utilized in the choice of vendors and the basic steps in this method are as follows: (i) The vendors on the approved list are ranked on the basis of the buyer's subjective evaluation, (ii) The first satisfactory vendor, meeting or exceeding all the standards, (iii) If the applied vendors do not fulfill the minimum standards, then the minimum standard may be relaxed till a vendor is chosen. It presupposes that standards of acceptability for every criterion are formed to fit in order to take decisions.

(e) Forced Decision Matrix:

The attributes of rating like price, quality, service, reliability of the supplier, lead time of supply etc. — are identified first. Then these factors are compared between themselves, like quality and price. If price is considered more important than quality by the evaluation committee, then a weightage of one is given to price and zero to quality. The quality is compared with each of the remaining factors and the relative weightages are recorded in the form of a table or matrix. Similarly, each factor is compared in turn with each of the others and their relative weightages are recorded. Weightages given to the different attributes are added up for each attribute and divided by the total number of comparisons to give the attribute weightage co-efficient for each attribute.

After this, the next step is to compare the suppliers in pairs in respect of each attribute, giving the superior supplier a weightage of one and the other. These results are tabulated and the supplier weightage co-efficient is thus obtained. The above two types of coefficients are combined by multiplying for each attribute and for each supplier. These are then added up to give the total weightage and this is ranked to take the appropriate decisions on the vendors. The weightage can be varied and the matrix can be suitably built for a large number of suppliers and evaluators.

(f) Service Cost Ratio:

There are other intangible aspects of a supplier's services. They can only be measured subjectively. The procedure is as follows:

i. Listing the service factors like R&D, Labour stability, financial stability, flexibility in production for rush orders, etc.
ii. Assigning weights to each factor according to its importance to the purchaser.
iii. Setting an acceptable norm e.g., out of a total of a 100 service points 70 may be an acceptable norm.
iv. Rating suppliers for each service factor.
v. Determining the percentage by which the supplier is over or under the acceptable norm.

vi. Multiplying the percentage obtained in (v) by value of package percent. For sophisticated items the value of package percent may be 10% and for common Bazzar items it may be just 1%.

vii. The percentage figure arrived at in (vi) is minus if the percentage in (v) is over the acceptable norm and is plus if it is below the acceptable norm.

The sample procedure of calculating the service cost ratio is shown in table below.

Table . Service Cost Ratio

Service Factor		Supplier A	Rating Supplier B	Supplier C
1. Financial stability	20			
2. Labour stability	10			
3. R&D	10			
4. Quality of staff	10			
5. Production flexibility for rush orders.	10			
6. Location far and near	10			
7. Precision machinery	10			
8. Inventory holdings	5			
9. Co-operativeness	5			
10. Others	10			
Total poinits	100	90	49	42
Acceptable service rating 70%		$100 - \frac{90}{70} \times 100 = -30\%$		
over acceptable (minus)		$100 - \frac{49}{70} \times 100 = +30\%$		
Under acceptable (Plus)		$100 - \frac{42}{70} \times 100 = +40\%$		
Service Cost Ratio		$-30 \times 10\% = -3\%$	$+30 \times 10\% = +3\%$	$+40 \times 10\% = +4\%$

(g) Bell Quality Rating System:

The bell helicopter company developed a **Lot Quality Index (LQI),** which give an assessment of all lots received against lots rejected, by disposition and category, as the company attaches greater importance to quality. The **LQI is** given by: **$LQ_1 – X/L$,**

Where L = total number of lots received during the period,

$x = (L_1 \times 1.00) + (L_2 \times 2.10) + (L_3 \times 2.90) + (L_4 \times 3.10) + (L_5 \times 3.90)$

L_1 = Number of lots acceptable as received
L_2 = Number of lots rejected by sampling inspection but labelled.
L_3 = Number of lots rejected and dispositioned, rework at supplier's end.
L_4 = Number of lots rejected and dispositioned, returned not usable and
L_5 = Number of lots rejected and dispositioned rework at Bell helicopter company.

The weights 1.00, 2.10 etc. were determined at the company after a careful study of the complexity and number of operations required to have a usable lot from a particular dispositioned lot. It is clear from the above equation, that the best lot quality index figure rates is 1.0, the worst is 3.90. The formula can be

modified easily to suit the needs of a particular firm. The quality rating can be combined with rating for other parameters, to develop suitable vendor rating schemes.

(h) IBM Quality Rating System:

The IBM rating system uses quality costs as the basis for rating suppliers. The formula for the vendor quality rating is:

VGR = Desired cost of inspection / Actual cost of inspection x 100

The cost incurred in inspecting acceptable material is the desired cost, the cost of inspecting rejected material being excluded from it. The actual cost of inspection includes cost incurred in inspecting acceptable as well as rejected material plus cost associated with extra handling of rejected material. Inspection cost is obtained by multiplying the actual time spent on inspection by the standard rate. The material handling cost is found by multiplying the number of documents to process the rejected material by a standard cost.

Advantages:

The IBM quality rating system the following advantages:

- Factors of cost used are well understood by the suppliers,
- All rating factors are brought down to common basic costs and can therefore be combined even if the factors themselves are different.
- Some minor defects are allowed, so long as the quality requirements are clearly met.
- It establishes a long range goal of what a good supplier should supply.
- No complicated weighting factors are required.
- When cent percent inspection is required, it provides for equitable rating.
- When cent percent inspection is required, it considers the inspection cost.
- The same data can be used to find out which suppliers, cost the company more and which items require more inspection time. Based on the information, inspection methods may be improved and attention can be directed towards the costly suppliers.

The IBM system on quality rating is useful, when there are a large number of suppliers vending several products. The inspection information is fed directly into the computer (or accounting machine), which computes the ratings and summarizes the information in various ways, like type of defects, part number, supplier code, final product etc. for further analysis.

Self-Certified Vendor Management:

Vendor:

A vendor is a person or organization that vends or sells contingent labor. Specifically a vendor can be an independent consultant, a consulting company, or staffing company (who can also be called a supplier – because they supply the labor or expertise rather than selling it directly).

Vendor Management:

The term vendor management is used when describing the activities included in researching and sourcing vendors, obtaining quotes with pricing, capabilities, turnaround times, and quality of work, negotiating contracts, managing relationships, assigning jobs, evaluating performance, and ensuring payments are made. It requires a lot of skills, resources, and time.

Though many business owners believe that vendor management is simply about finding the supplier with the cheapest price for a product or service, it's about more than that. It's about streamlining the process for heightened efficiencies and managing vendor relationships to ensure that the agreements made are mutually beneficial for both parties. Typical Vendor Management activities can include:

1) Vendor sourcing, appraisal and negotiations
2) Contract creation and agreement
3) Reporting and KPI(Key Performance Indicator) tracking
4) Arranging and conducting QBRs (Quarterly Business Reviews)
5) Compliance monitoring and security testing
6) Recording escalation processes and key contacts
7) Resolving disputes

Vendor Management Processes:

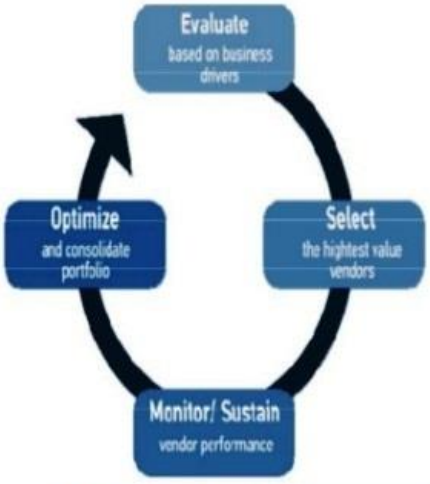
With effective vendor management processes in place, you can properly establish service, quality, cost, and satisfaction goals and choose and manage third-party suppliers that help you achieve those business goals. Vendor management is typically broken down into four steps.

- The first is the establishment of the business goals mentioned above. It's much easier to select and manage vendors when you have clearly defined performance parameters to compare and contrast.

- The second part of the process is to select the best vendors that will be able to match your company's performance characteristics. Every vendor will have its strengths and weaknesses, and choosing the right one is a very critical task to optimizing operational results.

- Third is managing your suppliers. On a daily basis, your vendor managers will need to monitor performance and output, ensure contract terms are being followed, approve or disapprove changes, provide feedback, and develop relationships through effective communication, honesty, and integrity.

- Finally, the fourth aspect of vendor management is meeting your goals on a consistent basis. This requires continuous work in influencing vendors to meet performance objectives to ensure profitability.



Life Cycle Of Vendor Management

Manage and Measure

- Centralize vendor information.
- Track and monitor vendor commitments — contractual or otherwise .
- Establish alerts to ensure commitments are met, issues addressed, and renewals tackled.

Application Area of Vendor management:

Vendor management typically delivers value to a business across several different areas, including:

- ***Cost control,*** either through identification of opportunities for consolidation or through timely renegotiation around renewals

- ***Benefits realization*** - proactive Vendor Management and continuous contact mean that the original terms of a contract can always be kept front of mind. By pushing vendors to deliver, and smoothing the way internally as well, VM helps get businesses towards their goals faster.
- ***Supply chain resilience and continuity*** - by maintaining a constant dialogue with key vendors, your business can assess any ongoing risks to supply and make alternative plans in a timely fashion if required.
- ***Compliance*** - periodic assessment of compliance becomes easier and this ensures that any risk associated with legislation or industry standards is minimized.
- ***Innovation*** - most, if not all, businesses are looking to grow and develop new technologies, and your vendors are no different. By having close relationships with them and managing them well, good vendor management can place your business in pole position to take advantage of advancements in their products or services.

Factors Involved- Certified Vendor Management:

Vendor qualification: The first step of vendor management is determining whether or not a vendor has the expertise and capability to fulfill the business need. There are two types of vendor qualification: pre-qualification (for potential vendors) and re-qualification (assessment of active vendors).

Vendor onboarding: Approved vendors are then on boarded into the organization's database. This stage involves the process of collecting, capturing, and storing all relevant vendor information in a centralized database.

Ordering and delivery: Typically, either a purchase order or a contract initiates the order process. The specifications are listed out clearly in a terms of reference (TOR) or (SOW).
Once order is fulfilled, the received goods/services are subjected to a quality check and the vendor's performance is evaluated.
Vendor payment: After receiving the goods/services, the buyer needs to match the invoice with related purchase order. If everything seems to be in order, the invoice is approved and forwarded to finance for payment processing. In the case of discrepancies, the invoice is rejected back to the vendor.

Vendor offboarding: When a contract ends or a long-term vendor relationship terminates, it is critical to remove the vendor from finance and administrative records. Failure to do so might result in compliance breaches, loss of valuable organization time and costs.

Vendor Certification Procedure:

Supplier / vendor certification is an important component of our total quality management system that assures that a supplier's product is produced, packaged, and shipped under a controlled process that results in consistent conformance to our requirements. The primary objective of the certification process

is to assure consistent high quality as demonstrated by predictable conformance to our requirements. The basic premise is that want to identify suppliers that have adequate process controls in place and they provide legitimate proof that their products are consistently fit for use, authentic, and meet 100% requirements. The procedure are given below;

1) Initiate a Quality audit of the supplier.
2) Liaise with supplier to enhance their understanding of company requirements.
3) Create or review and update the relevant Raw Material Control Test Methods to reflect required testing terminology, requirements and methods.
4) Together with Procurement, present a report to the Management Certification Committee requesting certification of the supplier. The report is composed of typically the following; quality supply history, delivery performance, Project plan, Change Control request, audit information, Supply agreement, a Certificate of Analysis from the vendor, supplier inspection planning requirements, matrix.
5) Produce a Certificate to be presented to the successful vendor

Criteria and Methods of Vendor Rating:

Vendor Rating Methods:

Categorical plan:

This is a very subjective method.

Mangers from concerned department prepare list of factors important from their views.

Each of the major supplier is evaluated against each evaluator's list of factors evaluation is done in the terms of

- Good
- Satisfactory
- poor

Weighted point plan:

The buyer decides on;

- Factor important form evaluation
- Weightages for each factor
- The vendor performance in respect of each factor

Cost ratio plan:

Under this method, the vendor rating is done on the basis of various costs incurred for procuring the materials from various suppliers. The cost ratios are ascertained for the different rating variables such as quality, price, timely delivery etc. The cost ratio is calculated in percentage on the basis of total individual cost and total value of purchase

Example: The total delivery cost is Rs5000 and the total purchases are Rs 1,00,000 then delivery cost ratio will be 5,000 / 1,00,000 x 100 = 10%

Supplier Evaluation and Selection (Concepts):

Once the portfolio analysis is completed, the buyer must then dive into the category and evaluate individual suppliers as to their suitability, narrowing the list down to a critical few. The ultimate result is to make supplier recommendations, so the buyer must first identify current and potential suppliers, determine any information technology requirements and identify opportunities to leverage the commodity expenditures with similar commodities. Most procurement experts will agree that there is no one best way to evaluate and select suppliers, and organisations use a variety of different approaches. Regardless of the approach employed, the overall objective of the evaluation process should be to reduce procurement risk and maximise overall value to the buying organisation. Figure below summarised all the critical steps involved in the supplier evaluation and selection process.

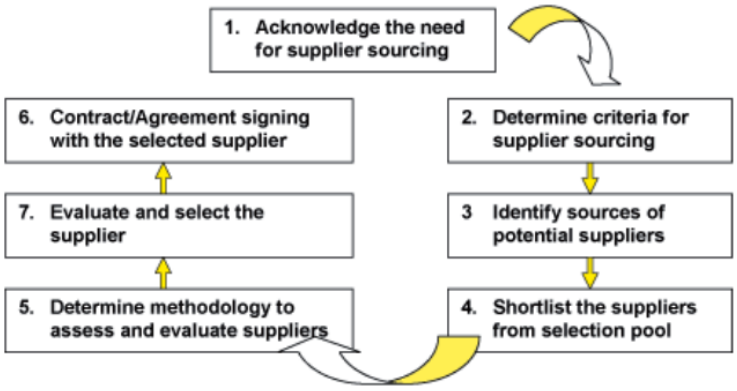


Figure: Supplier evaluation and selection process

There are some of the different criteria that an organisation may use to assess potential suppliers. Although it may not be possible to obtain all the relevant information, whatever data that can be obtained will definitely help the buying organisation assess the potential for a successful match.

1. Process and design capabilities: Suppliers should have up-to-date and capable products, as well as process technologies to produce the material needed. Because different manufacturing and service processes have various strengths and weaknesses, the buying organisation must be aware of these characteristics upfront. When the buying organisation expects suppliers to perform component design and production, it should also assess the supplier's design capability. One way to reduce the time required to develop new products is to use qualified suppliers that are able to perform product design activities.

2. Quality and reliability: Quality levels of the procurement item should be a very important factor in supplier selection. Product quality should consistently meet specified requirements since it can directly affect the quality of the finished goods. Besides reliable quality levels, reliability also refers to other supplier characteristics. For example, is the supplier's delivery lead-time reliable? Otherwise, production may have to be interrupted due to shortage of material.

3. Cost: While unit price of the material is not typically the sole criterion in supplier selection, total cost of ownership is an important factor. Total cost of ownership includes the unit price of the material, payment terms, cash discount, ordering cost, carrying cost, logistics costs, maintenance costs, and other

more qualitative costs that may not be easy to assess.

4. Service: Suppliers must be able to back up their products by providing good services when needed. For example, when product information or warranty service is needed, suppliers must respond on a timely basis.

5. Capacity: The organisation may also need to consider whether the supplier has the capacity to fill orders to meet requirements and the ability to fill large orders if needed.

6. Location: Geographical location is another important factor in supplier selection, as it impacts delivery lead time, transportation, and logistics costs. Some organisations require their suppliers to be located within a certain distance from their facilities.

7. Management capability: Assessing a potential supplier's management capability is a complicated, but important step. The different aspects of management capability include management's commitment to continuous process and quality improvement, its overall professional ability and experience, its ability to maintain positive relationships with its workforce and its willingness to develop a closer working relationship with the buyer.

8. Financial condition and cost structure: An assessment of a potential partner's financial condition usually occurs during the evaluation process. Evaluation teams will typically evaluate the different financial ratios that determine whether a supplier can invest in resources, pay its suppliers and its workforce, and continue to meet its debt and financial obligations. These elements are important in determining whether the supplier will continue to be a reliable source of supply, and that supply will not be disrupted.

9. Planning and control system: Planning and control systems include those systems that release, schedule and control the flow of work within an organisation and also with outside parties. The sophistication of such systems can have a major impact on supply chain performance. For example, how easy to use is a supplier's ordering system, and what is the normal order cycle time? Placing orders with a supplier should be easy, quick and effective. Delivery lead time should be short, so that small lot sizes can be ordered on a more frequent basis to reduce inventory holding costs.

10. Environmental regulation compliance: The 1990s brought about a renewed awareness of the impact that industry has on the environment. As a result, a supplier's ability to comply with environmental regulations is becoming an important criterion for supply chain alliances. This includes, but is not limited to, the proper disposal of hazardous waste.

11. Willingness to share technologies and information: With the current trend that favours outsourcing to exploit suppliers' capabilities and to focus on core competencies, it is vital that organisations seek suppliers that are willing to share their technologies and information. Suppliers can assist in new product

design and development through early supplier involvement to ensure cost-effective design choices, develop alternative conceptual solutions, select the best components and technologies, and help in design assessment. By increasing the involvement of the supplier in the design process, the buyer is free to focus more attention on core competencies.

12. Longer-term relationship potential: In some cases, an organisation may be looking to develop a long-term relationship with a potential supplier. This is particularly true if the supplier is in the 'critical' quadrant, and the category of spend is high volume and critical to the organisation's business. This approach requires that the parties share their mutual goals, establish metrics to guide the relationship and develop a series of ongoing discussions on how issues and conflicts can be resolved in a mutually beneficial manner. These relationships may also involve joint cost-savings projects and new product-development efforts.

13. Supplier selection scorecards: During the selection stage, sometimes organisations need a structured way to evaluate alternative suppliers. This can be particularly hard when the criteria include not just quantitative measures (such as costs and on time delivery rates) but other, more qualitative factors, such as management stability or trustworthiness. A supplier selection scorecard may be used as a decision support tool. The evaluation team will assign a weight to the different categories and develop a numerical score for each supplier in each category, thereby developing a final performance score.

Solicitation of Bids and Proposals – Planning and Methods:

Solicitation:

Solicitation, in simple terms, is the process of requesting bids or proposals from potential suppliers. Once the supplier research and market analysis is complete, and we have identified several suppliers that are well positioned in their markets and appear to have the qualifications we need, the sourcing team can develop a solicitation plan. The plan should establish the method to be used for the solicitation and, when applicable, the type of contract to be used. The process of notifying prospective or qualified bidders on the bid solicitor's wished to receive bids on the specified product or project. Solicitations include invitation-to-bid (ITB), request for proposals (RFP), request for quotations (RFQ), and request for sealed bids, which may be made public through advertising, mailings, or some other method of communication.

Solicitation Planning:

To a large degree, the solicitation plan is driven by the nature of what is being acquired and the makeup of the supply base in the particular market in which we are sourcing. In the process of developing the plan, we must evaluate the nature of the acquisition as a way of narrowing the sourcing possibilities. Keep in mind that there are sourcing and procurement actions that fall outside the requirement for solicitation, such as purchasing card transactions and spot or micro-purchases that may simply be "shopped" by the procurement group.

How to Prepare a Solicitation:

The larger a business is, the more likely it is that the purchase of certain goods or services will require a formal procurement plan. The objective is to ensure the business isn't overspending or paying more for components than the profit the business will realize when selling the finished product. Solicitation is a phase of the procurement process in which the business actively solicits offers from competing suppliers through an invitation to bid or request for proposals. Solicitation documents identify the purchase, purchase requirements and outline a process each supplier must follow when submitting a formal bid or proposal.

1) Draft an informational letter of invitation. The letter provides key information potential suppliers need when determining whether they have an interest in participating in the bidding process. Use a formal voice, clearly define terms and provide thorough explanations and descriptions. Include submission deadlines, a brief description of the purchase need and instructions for preparing, structuring and submitting a bid. Provide details such as how long the bid must remain valid and describe the criteria and method the business will use when evaluating bid offers.

2) Create a schedule of requirements, including quantities, clear technical specifications and product performance requirements. Make sure performance expectations are written tightly with no room for personal interpretation. This is vital to prevent later misunderstandings and disagreements during the contract execution phase of the purchase. Finally, include delivery information, including the delivery date, mode of delivery transport and delivery terms.

3) Insert a sample contract, a copy of the authorized purchase order and sheets listing general and special terms and conditions. Terms can include items such as insurance and bonding requirements as well as non-performance and late performance penalty clauses. Sending a sample contract along with terms and conditions gives suppliers an opportunity to have the contract reviewed by a legal professional prior to signing.

4) Include an offer submission form as a final item in the solicitation. The submission form becomes a legally binding document once the supplier signs and returns bid documents. Use a standard submission form you can get from your attorney or craft a custom form.

Solicitation Methods:

The decision on solicitation process best effective for each procurement activity takes into consideration key parameters such as price, techno-functional requirement and negotiation. The different solicitation methods adopted by procurement professionals which are;

1) **Invitation for Bid (IFB)**
2) **Request for Proposal (RFP)**
3) **Request for Quotation (RFQ)**

Invitation for Bid (IFB): The procurement organization has a clear understanding of the material/service requirements vis-à-vis product/service specifications, quantity/duration, delivery

method, etc. In such a case the primary consideration is on price, and hence the contract/purchase order will be awarded to the lowest price bidder an IFB is used. Under this solicitation process there is no negotiation of prices.

Request for Proposal (RFP): The procurement organization adopts a different solicitation approach when it lacks the clarity and understanding required for satisfying the material/service requirement or when the requirement cannot be met with generally available standard products/services. An RFP is floated to identify the vendors that can provide the products/services as per the material/service requirement. RFP is not only a request for pricing, but it also seeks suggestions and ideas on how the product/service can be delivered. In such a case the consideration of certain other factors, such as technical and functional expertise will also be involved along with price. The response to RFPs can many a times voluminous because of the uniqueness of the enquiry and the detailed response required to meet the material/service requirement. Except in case of construction contracts where an IFB is more commonly used under these conditions. RFP would involve negotiation of pricing and other terms and conditions and so can be considered as part of Negotiated Procurement.

Request for Quotation (RFQ): Purchasing organizations also use RFQs when the consideration is not only price but other factors. But, unlike RFPs where the products/services are not non-standard, RFPs are issued for standard products/services or commodities. RFQs are issued for small as well as large purchases where price is not the only consideration, but factors such as availability, delivery, payment terms, etc are also taken into consideration. This type of solicitation also helps in determining the current market price. RFQ would involve negotiation of pricing and other terms and conditions and so can be considered as part of Negotiated Procurement.

Contract Negotiation:

What Is Contract Negotiation?

Contract negotiations are a process that involves discussing and compromising on contract terms in order to reach a final agreement between two or more parties involved in a transaction. In most contract negotiations, each party tries to negotiate for the best interest of themselves or their business. There is a lot of back and forth communication, but most contract factors boil down to risks and revenues. Contracts that are negotiable can include real estate leases, manufacturer warranties, employment contract, business deals, and financial contracts. The negotiation aspect of a transaction is very important because once the contract is final, all parties are legally bound to the terms of the contract terms and cannot overlook these terms without being liable.

What Is the Best Approach to Contract Negotiations?

In typical contract negotiations, each party involved in the contract must compromise on each in order to get what they really want out of the transaction. The best way to approach contract negotiations is the following:

1. ***Identify the objective for entering the contract****:* Every party to the contract must have a specific idea of what they want to gain from the transaction. Before attempting to negotiate a contract, make a lost of things you will compromise and a list of terms that you will not negotiate or give up.
2. ***Research contract laws****:* Contracts are legally binding agreements, which are regulated by the courts. Before attempting to negotiate a deal, search online or get expert advice to determine whether the terms of the contract you are trying to form is legally allowed.
3. ***Prepare for negotiations****:* Gather all facts, figures, financial statements, and documents for the negotiation process in case you need to show proof of anything that you may need to back up your negotiation points.
4. ***Prepare a backup plan****:* Create a plan for the possibility that the contract fails to form and that both side cannot agree on the terms after negotiation.
5. ***List your priorities****:* It is important to know the difference between what you need out of the transaction and what you want.
6. ***Set a goal****:* Know your bottom line so you can determine when to accept a deal and when to walk away.
7. ***Know the difference between what you need and what you want****:* Review your priorities and ask yourself if the term that you are chasing for is worth negotiating

Contract Negotiation Process:

When it comes to a contract negotiation process, the most difficult part may be to actually forget what you have been told about traditional negotiations processes, strategies & techniques.

Step 1 of Contract Negotiation Process: Prepare, Prepare, Prepare.:

This is the most important step of the whole contract negotiation process. Understand that contract negotiation is not about who's the better negotiator. Below are some other things that you need to prepare during this step: Issue Identification, Issue Information, Classify the Issues, Prepare the meeting agenda, Get ready to Negotiate.

Step 2 of Contract Negotiation Process: Negotiation Meeting:

This is the meeting proper where you (and your team if there's one) will sit down with the supplier. Important here is that this meeting most of the time is not called negotiation meeting – but any time you meet with a supplier to discuss their offer it means you are negotiating.

Step 3 of Contract Negotiation Process: Summarise all points:

This is very important, as you need to get the other party's agreement to all the points that you discussed. You can simply divide this into two categories:

a) Points that you have already agreed; and
b) Points that you or the other side would need to get back to each other.

When Is There an Enforceable Contract?

- Under contract law, there is no enforceable contract until all of the material elements of the transaction have been negotiated and agreed upon by both sides. All the contract terms and conditions must be legal in order for them to be enforceable or that term or condition is void. Some contracts must fall within the statute of limitations, meaning that the contract must be in writing and signed by the parties.

- If the parties have agreed to the terms of the deal and want to move forward with the contract and legal details, they can draft a contract that lists all the terms and both sign the contract as the final agreement.

- Is it when the parties agree on the business terms or when the legal terms are finalized? Under contract law, there is no contract until all of the material elements of the deal have been negotiated and agreed upon. So, a legal dispute over whether and when a contract exists will boil down to whether any of the outstanding legal issues are material elements of the deal.

- Back to Ram the landlord and Krishna the prospective tenant. Let's say that Ram refuses to budge on any of the terms of his standard lease, but Krishna has already given notice at her current apartment because she believed her handshake with Sam created a contract. Whether she has a legal right to force Ram to go through with the agreement or pay her damages depends on whether the attorney fee and insurance provisions are material elements of the deal.

- If the parties have agreed to the business terms of the deal and want to proceed before hammering out the legal details, they can use an escrow account or condition the release of funds on the execution of a written agreement. This avoids the problem of having to chase after money you laid out if the deal never materializes. If the negotiations fall apart, everyone gets back what they put in and moves on.

Vendor Performance Monitoring and Controlling:

Vendor Performance Monitoring:

The term ‘suppliers’ includes contractors for works and services as well as supplies; the term ‘performance monitoring’ means measuring a supplier's ability to comply with, and preferably exceed, their contractual obligations i.e. monitoring post contract. CIPS (CIPS - Leading global excellence in procurement and supply) recognizes this is sometimes referred to as ‘vendor rating’ especially where specific measures are used. CIPS believes that performance monitoring is a fundamental element within contract management and supplier development (the broader subject is covered in a separate CIPS practice document). It can also be argued that monitoring the performance of suppliers can be;

i. An aspect of supplier appraisal (i.e. the process of evaluating potential suppliers) and can be extended to supplier selection criteria during tendering; and

ii. An aspect of the management of approved supplier lists.

There are many contractual relationships with suppliers where it is more important to agree joint goals and jointly measure performance against these goals - rather than the buyer simply monitoring the supplier's performance. This requires transparency and a sharing, as appropriate, of business goals. This type of relationship allows for the supplier to monitor performance provided a suitable process of validation is in place. Relationship management is part of the performance monitoring process. It is a key skill for the buyer and can be summarised as the proactive development of particular relationships with suppliers.

Assessment of Supplier Performance:

There are a number of key themes which might be used to assess supplier performance and which might be used as a yardstick for determining whether good practice is being achieved in specific situations. Some examples of such themes (together with their sub-categories) are as follows:

- Product Quality
- MTBF (Mean Time Between Failure)
- Percentage of incoming rejects (delivery accuracy)
- Warranty claims
- Service Quality (against agreed SLAs)
- Call-out time
- Customer service response time
- Performance against agreed delivery lead times
- Relationship/Account Management
- Accessibility and responsiveness of account management
- Commercial
- Costs are maintained or reduced

Monitoring Performance of the Vendor:

As outlined in the Vendor Management, one of the key performance criteria is a process to monitor the performance of the vendor. To do this, it is necessary to have a vendor management scorecard. Regardless of the size of the business, a vendor management scorecard should address the following criteria:

1) The scorecard should measure the key performance indicators (KPI) that the vendor is bound to. An easy way to develop this list is to use the vendor's contract terms as the list of measured

items. In other words, build on the effort that was used to develop the terms of the contract to create a list of the most important items to measure with the scorecard.

2) The scorecard should be easy to use by all employees that need to interact with this tool. It does not matter how comprehensive the list of performance indicators is if the tool is too cumbersome and user-unfriendly. Although the scorecard will be complete in its definition of what should be measured, if it is not intuitive, nobody will use it – which defeats the purpose of having a scorecard.
3) The scorecard should have a corresponding timeline and set of milestones that are in sync with the performance indicators. That is, performance is a function of both times as well as quality. The two are not mutually exclusive, and the scorecard should be time, as well as quality performance based.
4) The scorecard should not be a surprise that a business suddenly decides to use with a vendor if they find that the vendor is under-performing. Ideally, the vendor has been made aware that their performance will be monitored and measured throughout the term of the contract. The measurement will be based on consistent and regularly scheduled audits or evaluations that are agreed to by both sides. This awareness should be created during the contract negotiation phase of the vendor relationship.
5) The data that is collected and analyzed by the scorecard should be used to follow up with the vendor. What good is accurate data about the vendors' performance if the business does not take action with the vendor based on the conclusions about vendor performance that the scorecard made visible?

Benefits of Vendor Performance Monitoring:

1) ***Avoid supply chain risk and disruptions*** **–** Vendor performance management provides in-depth visibility into the risk a supplier may pose so you can put measures in place to reduce or eliminate that risk as it relates to your supply chain.
2) ***Protect and improve brand/reputation*** **–** A number of corporate brands have been tarnished by the actions of their suppliers. Vendor performance management can help you track supplier performance against these KPIs which will enable you to enact corrective actions early and keep your brand and reputation strong in the eyes of your customers and partners.
3) ***Avoid costs and achieve savings*** **–** There are variety of cost factors tracked using Vendor performance management which affects both hard and soft costs. Lack of timely and accurate vendor information can have huge impact on costs and can prevent you from capturing savings.
4) ***Segment and rank vendors*** –Vendor performance management is useful gives procurement groups visibility into specific groups of suppliers and their overall ability to meet your organizations expectations and requirements.
5) ***Collaborate with suppliers*** **–** When you collaborate closely with suppliers you create new value for your business. The data collected through a vendor performance management solution can help to start these conversations because it provides the supplier with a view of what is important

to your organization. The results are numerous: continuous improvement of the supply base, creation of realistic contracts based on past performance, more communication with suppliers, formation of common goals, and the establishment of trust.

6) ***Improve internal processes*** **–** Creating a Vendor performance management process is a great step towards optimizing your supplier management program. By utilizing a technology-based solution for Vendor performance management, organizations can achieve a standardized and automated approach for creating scorecards, issuing and tracking scorecards for completion, and in-depth reporting and analysis.

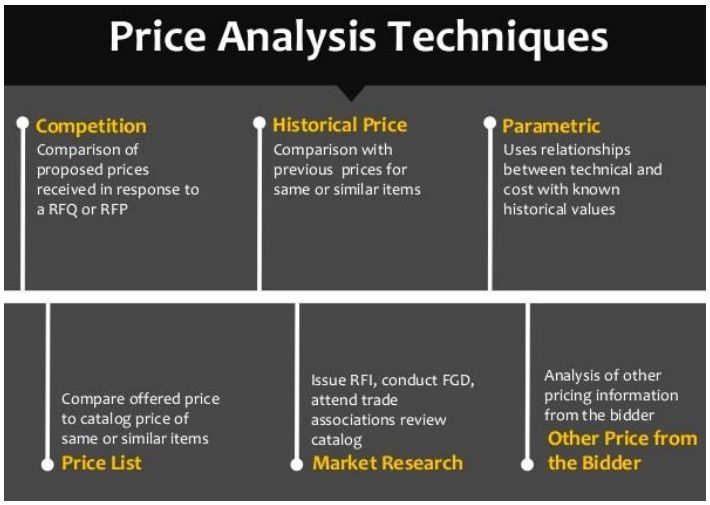
Module – III

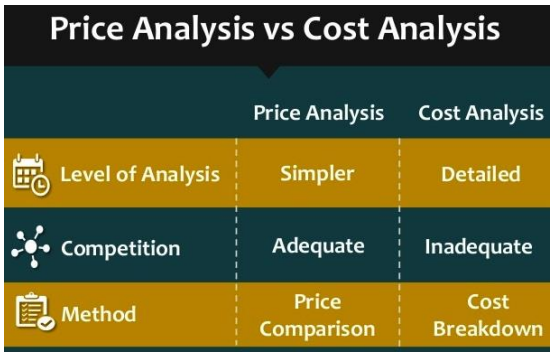
Analytical Tools in Sourcing

Pricing Analyses:

In general business, price analysis is the process of examining and evaluating a proposed price without evaluating its separate cost elements and proposed profit. Price Analysis dates back to 1939 when an Economist by the name of Andrew Court decided to put his efforts towards Price Analysis to better understand the environmental factors that influence this practice. The analysis is dependent on the characteristics of the marketing system in place within a certain country.

Price analysis may also refer to the breakdown of a price to a unit figure, usually per square metre or square foot of accommodation or per hectare or square metre of land. The price with suitable adjustment for various differences, is then applied to the valuation problem.





Cost Analysis Defined Cost analysis is a thorough assessment of the direct and indirect costs leading to

the final price of the goods or service. The Cost Analysis Philosophies includes;

- Reasonable for the goods or service
- Allocated proportionally to each cost component
- Allowed for the goods or service

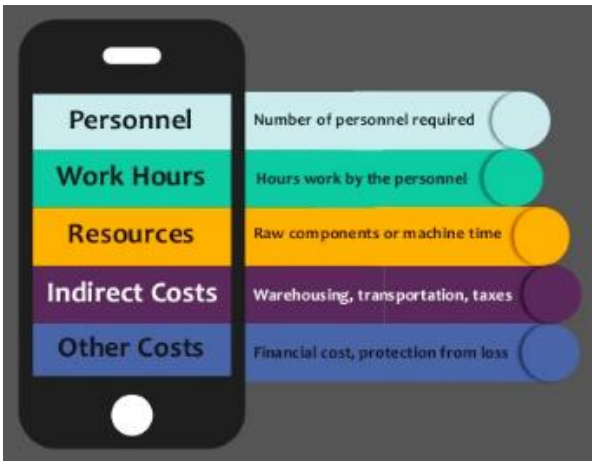
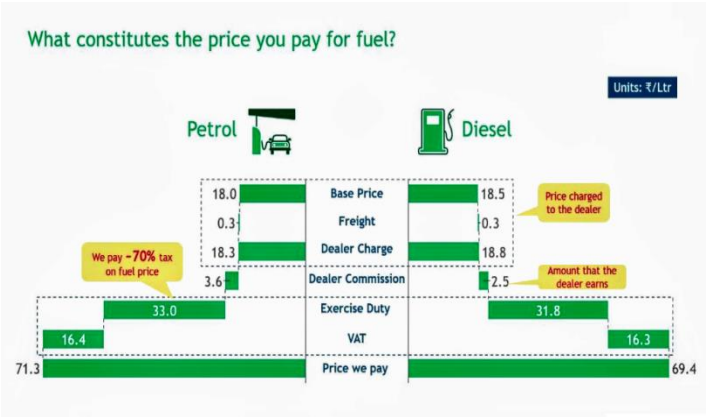
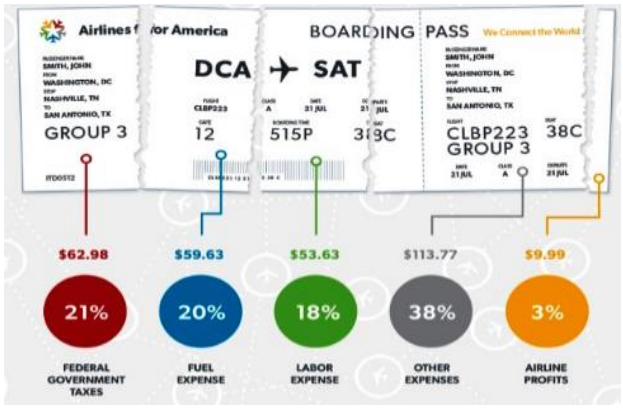


Figure: Common Cost Elements

Example of Pricing Analysis:



Pricing Analysis of Fuel cost in India



Pricing Analysis of Flight Cost in US

Analytical Tools in Sourcing:

Foreign Exchange Currency Management:

Exchange rate considerations are becoming an important facet of international sourcing. Not only can volatile exchange rates impact the supplier selection decision, they can also affect the volume-timing of purchases once the supplier is selected. The best manufacturers have superior suppliers—suppliers which save customers money, improve their quality, aid in design innovation, and reduce inventories. Global sourcing spawns a new set of opportunities and problems for the purchasing manager.

The Importance of Exchange Rates in International Sourcing:

Exchange rates impact the price paid for imported materials when payment is in the supplier's currency and there is a lag between the time the contract is signed and payment is made. Depending on the country of the supplier and the direction of the exchange rate movement, a buyer may be required to pay substantially more or less than the original contract price.

Advantages:

- Trade equity in global world
- Equitransformity in technology
- Proper balance in logistics
- Balanced utilization of resources
- GDP balancing and economy of scale will be maintained

Disadvantages:

- Cost crossing the limit
- Sourcing agency selection
- Proper smoothening of logistics system
- Diversion in supply chain path
- Global risk in procurement and distribution process

Learning Curve:

Introduction:

In any environment if a person is assigned to do the same task, then after a period of time, there is an improvement in his performance. If data points are collected over a period of time, the curve constructed on the graph will show a decrease in effort per unit for repetitive operations. This curve is very important in cost analysis, cost estimation and efficiency studies. This curve is called the ***learning curve***.

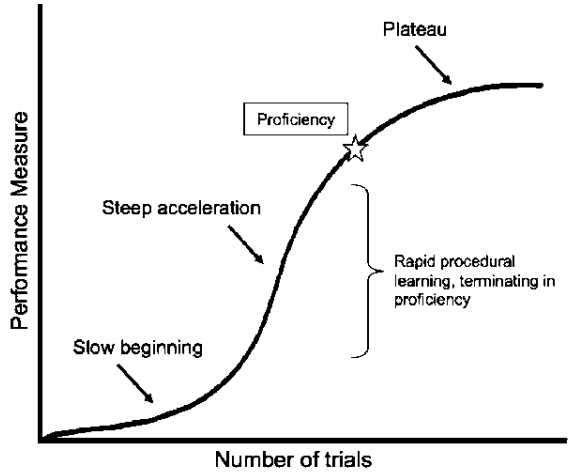


Figure: Learning Curve

The learning curve shows that if a task is performed over and over than less time will be required at each iteration. Historically, it has been reported that whenever there has been instanced of double production, the required labor time has decreased by 10 or 15 percent or more.

Learning curves are also known as experience curve, cost curves, efficiency curves and productivity curves. These curves help demonstrate the cost per unit of output decreases over time with the increase in experience of the workforce. Learning curves and experience curves is extensively used by organization in production planning, cost forecasting and setting delivery schedules.

Learning Curve on Graph:

Learning curve demonstrates that over a period time, there is an increase in productivity but with diminishing rate as production increases. Therefore, if the rate of reduction is 20% than the learning curve is referred as 80% learning curve. Research has shown that as production quantities double over a period of time, the average time decreases by 20% for immediate production unit. Learning curve is relevant in taking following decision:

- Pricing decision based on estimation of future costs.
- Workforce schedule based on future requirements.
- Capital requirement projections
- Set-up of incentive structure

Learning Curve from Single Unit Data:

The data for effort put into production of a single unit is available than that data can be used to plot three useful curves; the unit curve, the cumulative total and cumulative average curve. Unit curve is a curve which is plotted using a set of data available for the effort behind production of a single unit. This curve is generally plotted on log-log paper and then best line can be drawn. Cumulative total curve is a curve which is plotted using cumulative effort total. This produces curve with positive slope. Cumulative average curve is a curve which is plotted using the cumulative effort average for each unit.

Assistance Score Learning Curve:

As the name suggests an assistance score is the number of help, hint, wrong attempts recorded for a given opportunity at the given task. From detailed research and analysis, it has been observed that for the 1st opportunity at an average error of 1.3 times is made.

Error Learning Curve:

Error learning curve depicts the percentage of assistance asked by the respondents on the 1st opportunity.

Predicted Learning Curve:

Predicted learning curve is derived from learning factor analysis, which has the capability in measuring student proficiency, knowledge component difficulty and knowledge component learning rates. This analysis helps in quantifying the learning process.

Criticisms of the Experience Curve:

It has been observed that experience curve should not be viewed in isolation. Learning and experience curve has a strong dependency on individuals under observation. If the attitude of the individual is positive, the resulting curve will resemble learning curve but if the attitude of the individual is negative, the resulting curve will not hold good.

Quantity Discount Models:

To increase sales, many companies offer quantity discounts to their customers. A quantity discount is simply a decreased unit cost for an item when it is purchased in larger quantities. It is not uncommon to have a discount schedule with several discounts for large orders. See example below:

Discount Number	Discount Quantity	Discount	Discount Cost
1	0 to 999	0%	Rs.5.00
2	1000 to 1999	4%	Rs.4.80
3	2000 to over	5%	Rs.4.75

From the above Table, the normal cost for the item in this example is Rs.5. When 1,000 to 1,999 units are ordered at one time, the cost per unit drops to Rs.4.80, and when the quantity ordered at one time is 2,000 units or more, the cost is Rs.4.75 per unit. As always, management must decide when and how much to order. But with quantity discounts, how does a manager make these decisions?

As with previous inventory models discussed so far, the overall objective is to minimize the total cost. Because the unit cost for the third discount in above Table is lowest, it might be tempted to order 2,000 units or more to take advantage of this discount. Placing an order for that many units, however, might not minimize the total inventory cost. As the discount quantity goes up, the item cost goes down, but the carrying cost increases because the order sizes are large. Thus, the major trade-off when considering quantity discounts is between the reduced item cost and the increased carrying cost.

Recall that we computed the total cost (including the total purchase cost) for the EOQ model as follows:
Total Annual Cost = Setup Cost + Holding Cost + Purchase Cost

$$= \frac{D}{Q}s + \frac{Q}{2}H + \mathbf{P\ x\ D}$$

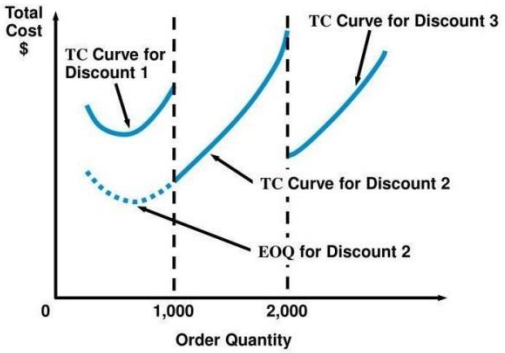
4 Steps to Analyze Quantity Discount Models:

1. **For each discount price,** calculate a Q value, using the EOQ formula. In quantity discount EOQ models, the unit carrying cost, H, is typically expressed as a percentage (I) of the unit purchase cost (P). That is, H = I x P. As a result, the value of Q will be different for each discounted price.

2. **For any discount level,** if the Q computed in step 1 is too low to qualify for the discount, adjust Q upward to the lowest quantity that qualifies for the discount. For example, if Q for discount 2 in the above Table turns out to be 500 units, adjust this value up to 1,000 units.

Quantity Discount Models

Total cost curve for the quantity discount model



the total cost curve for the discounts shown in above figure is broken into three different curves. There are separate cost curves for the first ($0 \leq Q \leq 999$), second ($1,000 \leq Q \leq 1,999$), and third ($Q \geq 2,000$) discounts. Look at the total cost curve for discount 2. The Q for discount 2 is less than the allowable discount range of 1,000 to 1,999 units. However, the total cost at 1,000 units (which is the minimum quantity needed to get this discount) is still less than the lowest total cost for discount 1. Thus, step 2 is needed to ensure that we do not discard any discount level that may indeed produce the minimum total cost. Note that an order quantity compute in step 1 that is greater than the range that would qualify it for a discount may be discarded.

3. **Using the Total Cost Equation,** compute a total cost for every Q determined in steps 1 and 2. If a Q had to be adjusted upward because it was below the allowable quantity range, be sure to use the adjusted Q value.

4. **Select the Q that has the lowest total cost,** as computed in step 3. It will be the order quantity that minimizes the total cost.

Quantity Discount Model Example:

Discount Number	Discount Quantity	Discount	Discount Cost
1	0 to 999	0%	Rs.5.00
2	1000 to 1999	4%	Rs.4.80
3	2000 to over	5%	Rs.4.75

GSB Department Store stocks toy cars. Recently, the store was given a quantity discount schedule for the cars, as shown in the above table. Thus, the normal cost for the cars is Rs.5.00. For orders between 1,000 and 1,999 units, the unit cost is Rs.4.80, and for orders of 2,000 or more units, the unit cost is Rs.4.75. Furthermore, the ordering cost is Rs.49 per order, the annual demand is 5,000 race cars, and the inventory carrying charge as a percentage of cost, I, is 20%, or 0.2. What order quantity will minimize the total cost?

D = 5,000 Units
S = Rs.49 per Order

I = 20% of Cost

H = I x P (Cost)

$$Q = \sqrt{\frac{2DS}{H}}$$

Calculate Q for every discount

$$Q = \sqrt{\frac{2DS}{IP}}$$

$$Q^1 = \sqrt{\frac{2(5000)(49)}{(0.2)(5.00)}} = 700 cars/order$$

$$Q^2 = \sqrt{\frac{2(5000)(49)}{(0.2)(4.8)}} = 714\ cars/order$$

$$Q^3 = \sqrt{\frac{2(5000)(49)}{(0.2)(4.75)}} = 718\ cars/order$$

In the GSB department store example, it was observed that the Q values for discounts 2 and 3 are too low to be eligible for the discounted prices. Therefore, adjusted upwards to 1000 and 2000 respectively. With these adjusted Q values, is found that the lowest total cost of Rs.24, 725 results when it use an order quantity of 1000 units.

Q_1	$\sqrt{\frac{2(5000)(49)}{(0.2)(5.00)}}$	**=714 cars/order**	
Q_2	$\sqrt{\frac{2(5000)(49)}{(0.2)(4.8)}}$	**= ~~714 cars/order~~**	**1,000-Adjusted**
Q_3	$\sqrt{\frac{2(5000)(49)}{(0.2)(4.75)}}$	**= ~~718 cars/order~~**	**2,000-Adjusted**

Discount Number	Unit Price	Order Quantity	Annual Product Cost	Annual Ordering Cost	Annual Holding Cost	Total Cost
1	Rs.5	700	Rs.25,000	Rs.350.00	Rs.350	Rs.25,700.00
2	Rs.4.8	1000	Rs.24,000	Rs.245.00	Rs.480	**Rs.24,725.00**
3	Rs.4.75	2000	Rs.23,750	Rs.122.50	Rs.950	Rs.24,822.50
Choose the price and quantity that gives the lowest total cost **Buy 1000 units at Rs.4.80 per unit.**						

Integrative Pacific Systems Case:

Supplier Scorecard:

A Supplier Scorecard is an evaluation tool used to assess the performance of suppliers. Supplier scorecards can be used to keep track of item quality, delivery, and responsiveness of suppliers across long periods of time. This data is typically used to help in purchasing decisions. A Supplier Scorecard is manually created for each supplier.

The types of scorecards in use typically fall into one of three categories—categorical, weighted point, or cost-based's performance across different categories. For relatively unimportant items, this may be an effective way to evaluate supplier performance. As it relates to supplier scorecards, most supply chain organizations use a weighted point system that includes a variety of performance categories, provides weights for each category, and defines the scales used for scoring within each category. The third type, cost-based systems is used least. It attempts to quantify the total cost of doing business with a supplier over time.

Supplier Scorecard *[date]*

Supplier Name:		**Overall Rating:**	**3.00**
Buying Category:			
Buyer Name:			

Area	Scorecard Criteria	Rating Scale for Expectations 1 = Below, 3 = Meets 5 = Exceeds	Comments	Area Weight	Area Rating	Wtd. Rating
Innovation	Management commitment and responsiveness	3	add comments here			
Application of creative ideas, best practices and technology that results in increased effectiveness for Buyer	Appropriate technical capabilities and skills	3	add comments here	25%	3.00	0.75
	Provides ideas that help buyer's organization achieve desired solutions	3	add comments here			
Quality	Demonstrated compliance with specifications and quality requirements	3	add comments here			
The compliance to buyer's specifications and industry standards	Committed to process performance and continuous improvement	3	add comments here	20%	3.00	0.60
	Maintains industry standard certifications for testing and audits	3	add comments here			
Support	Provides effective and timely communication regarding changes	3	add comments here			
Proactive supplier response to meet the needs for quality, service, cost and technical support	Responds to requests in a timely and effective manner	3	add comments here	20%	3.00	0.60
	Able to access expert resources to find best practice solutions	3	add comments here			
Delivery	On time delivery to meet scheduled materials or service requirements	3	add comments here			
The ability to meet delivery requirements. The ease of doing business to support supply chain needs.	needs (e.g. inventory and transportation)	3	add comments here	20%	3.00	0.60
	Utilizes effective systems to meet procure to pay needs	3	add comments here			
Cost / Contract	Goods or services are price competitive	3	add comments here			
Ability to provide total least cost solutions to buyer's organization	Cost reduction ideas are shared and resourced	3	add comments here	15%	3.00	0.45
	Price changes and contract terms are documented and transparent	3	add comments here			
				100%		3.00

Figure: Example of Scorecard

To access Supplier Scorecard, go to:

Before creating and using a Supplier Scorecard, it is advised that you create the following first:

1) **Supplier**
2) **Scoring Setup:** The supplier scorecard consists of a set evaluation periods, during which the performance of a supplier is evaluated. This period can be weekly, monthly or yearly. The current score is calculated from the score of each evaluation period based on the weighting function.

3) **Supplier Standings:** The supplier standing is used to quickly sort suppliers based on their performance. These are customizable for each supplier. The scorecard standing of a supplier can also be used to restrict suppliers from being included in Request for Quotations or being issued Purchase Orders.

4) **Criteria Setup:** A supplier can be evaluated on several individual evaluation criteria, including (but not limited to) quotation response time, delivered item quality, and delivery timeliness. These criteria are weighed to determine the final period score.

5) **Supplier Scorecard Variables:** The value of each of these variables is calculated over the scoring period for each supplier. Examples of such variables include:

   - The total number of items received from the supplier
   - The total number of accepted items from the supplier
   - The total number of rejected items from the supplier
   - The total number of deliveries from the supplier
   - The total amount (in dollars) received from a supplier

6) **Evaluation Formulas:** The evaluation formula uses the pre-established or custom variables to evaluate an aspect of supplier performance over the scoring period.

7) **Evaluating the Supplier:** An evaluation is generated for each Supplier Scorecard Period which shows that the performance of the supplier over time. Any actions against the supplier are also noted here, including warnings when creating RFQs and POs or preventing these features for this supplier altogether.

How to create Supplier Scorecard:

- Go to the Supplier Scorecard list, click on New.
- Select a Supplier to score.
- Select the evaluating period whether weekly, monthly, or yearly.
- Setup the scoring function (details in next section).
- A supplier scorecard is created for each supplier individually. Only one supplier scorecard can be created for each supplier.

Sourcing Risk:

Time Risk: Murphy's Law can apply. Stuff happens, especially to companies that are relatively new to global sourcing, but to more experienced companies as well. Elements such as input/ ingredient/equipment lead times, technology development lead times, staffing, consumer/ customer testing, capacity start-up, quality issues, and other factors can all impact the time equation. Lead times for investments or developments are often relatively long, and much can change from project inception to market introduction. Time is money in these situations.

Financial Risk: Will the anticipated savings from offshoring actually be realized? By not fully

understanding and anticipating total delivered costs (including overhead costs), or letting potential savings slip away though execution lapses, the answer for too many companies is often No. In addition to those financial risks that come from basic operations, global sourcing carries other financial risks that differ from domestic sourcing. Those include currency fluctuations, cancellation/ delay cost, and supplier solvency/continuity risks.

Supply/Operational Risk: The basic question: Can the supplier really supply the product(s) consistently? The challenges range from scale-up problems to quality and service issues when deliveries of the components/goods begin. Other factors that impact supply/operational risk include the degree of exclusivity to your company, whether it is a sole source/single plant strategy, volume/supplier capacity commitments, rights of first refusal for extra capacity, inventory plans (start-up and ongoing), construction/start-up schedules, and logistics execution.

Regulatory Risk: Regulations can change over time and be harder to meet than expected, leading to delays. Consider both technical regulations (building permits, IT infrastructure integration) and trade regulations (duties, dumping, and political embargoes).

Demand/Market Risk: This risk is tightly aligned with the timing risk. The key question: Will your product really sell by the time you market it? Competitors do not stand still, nor do customer or consumer tastes. Will you miss a window of opportunity, or even worse, hit it and then have it slam shut?

Brand/Environmental Risks: One only has to say "Mattel" to appreciate these risks. Offshoring can lead to quality problems that if not well managed that can damage the company's brands, in addition to extracting a huge financial penalty. Activists in labor and environmental areas can also cause damage to the brand – for example, it turns out that several leading retailers were selling t-shirts made by a company in China that in turn was using a textile producer elsewhere in China that was polluting local rivers. Activists target the retailers.

Intellectual Property Risk: A growing concern in China and elsewhere, as proprietary knowledge regarding design, engineering, materials and other elements can too easily walk out the door – or companies may even find their own offshore suppliers suddenly competing with them with knock-off products.

Risk Category	Examples
Capacity Risk	• Output variability / availability • Lead time variability
Catastrophic Risk	• Natural disasters • War & terrorism
Quality Risk	• Specification non-compliance
Financial Risk	• Foreign exchange rates • Vendor liquidity / viability
Management Risk	• Embezzlement • Fraud
Contractual Risk	• Intellectual property protection
Market Risk	• Increased competitiveness from global competitors

Tools used to Manage Risks:

Given the complexity, uncertainty, and cross-functional interaction required in these risk management scenarios, a structured thought process that manages the risk is essential. This kind of process includes a series of focus areas and several tools that help reinforce those focus areas.

Penetrate and Understand: Think through the seven types of risk, their probability, impact, and potential interdependence. Is there a "devil's advocate" process to subject the project to "what if" analysis of the possible outcomes?

Quantify: To the extent possible, quantify in probability and financial terms different risk scenarios. The reality is that doing this well can easily kill some low-cost country sourcing initiatives with marginal returns.

Plan: Out of the understanding and quantification steps comes the need to create mitigation and contingency plans for technical, physical, financial, and communication implications of these risks. How can serious risks be mitigate, and if something does go wrong, who needs to know and what will be done?

Syndicate: Classic risk management theory includes syndication to multiple parties. In this case, the issue is to understand how your risk is shared by the supplie,r as well as how your joint risk with the supplier might be syndicated elsewhere (such as licensing your unique product for use by non-competing customers of your supplier and use of as many assets as possible versus building new).

Own: Manage supplier investments as if they were your own. If something happens, communicate quickly to avoid wasted investment at the supplier as well as inside. Consider how you will maintain the ability to manage setbacks without dismantling the effort at the supplier. Tracking the history and using it to improve the results at both companies is important.

Portfolio Management: Risk is viewed in two ways: in individual projects and across multiple projects – a portfolio view. Too few companies take this broader portfolio perspective. Project risk falls into three stages: project cancellation, project shortfall, and project obsolescence.However, portfolio risk requires four data views:

- **Aggregate Commitments:** What has the company or business unit committed across all its projects?
- **Competing Commitments**: Do you have two projects or more with parallel commitments that could cancel each other out or delay each other?
- **Sequential Commitments:** Is there a next-generation project that will make the current commitments obsolete before they are paid out?
- **Supplier Project Aggregation**: How many projects does a single supplier have and what does that do to the supplier and your risk profile if you have multiple failures and successes? Does the supplier have the resources to manage many projects and are your priorities clear enough?

These views need to be regularly presented to business management and updated so that as changes in schedules, priority, or feasibility occur, the implications to the rest of the portfolio and to the supplier are communicated and managed, plus any financial implications are called out well ahead of time. Risk is inherent in business, and especially so in global supply chains. By fully analyzing all the major risk categories for global sourcing initiatives, taking mitigating actions, and viewing risk across the entire portfolio of projects and products, companies can greatly reduce their exposure.

Five Easy Steps to Risk Management:

1) **Risk Identification:** Risks can range from the major (a key supplier files for bankruptcy) to the less critical (a member of the project team moves to a new role). Every risk needs to be identified, no matter the size. Create a risk register to keep track of them.
2) **Risk Analysis:** Once identified, each risk is analyzed against two criteria – impact and likelihood (terms are interchangeable). This is usually graded on a numerical scale.
3) **Risk Ranking:** Using a risk matrix, give the risk an overall score by multiplying impact by likelihood. This will provide a way to rank all the risks and identify which are the most critical for your organization or project. Where scores are equal, you may choose to favour impact over likelihood (or vice versa) to rank one above the other.
4) **Risk Mitigation:** Once you know the risks and have a ranking, you need to plan mitigation strategies or contingency plans for each. Make sure that you involve all key stakeholders in this and note roles and responsibilities in the event of these risks occurring.
5) **Risk Monitoring:** No risk register is set in stone. Impacts and likelihood will change over time; new risks will appear and some may even drop off. A Robust monitoring plan is key to making sure your register is up to date and everyone continues to know what to do.

How to minimize the risks of global sourcing:

Sourcing from global suppliers is a widely used strategy for sustaining competitiveness and maintaining profit margins. Businesses need to balance low-cost sourcing with their own quality requirements, as well as risk and cost analyses. Keep the purpose of global sourcing in mind by ensuring costing is realistic and includes all the costs of sourcing, such as planning, transition and implementation costs. If a competitive advantage is to be gained by lowering costs, it is important to ensure there are no hidden costs that will essentially eliminate any realized cost advantage. To stay competitive and successful in sourcing globally, utilize these 5 strategies:

1. Manage product quality: Quality issues also affect downstream supply chains. Poor quality increases the rate of returns from unhappy customers, which results in discounting, recycling or disposal (write-off) of defective products, which increases reverse supply chain costs, which negatively impacts the bottom line. Ideally, the goal is to build an efficient supply chain with quality product throughout.

2. Pay attention to the logistics: Moving goods across borders and long distances is complex and in managing logistics, poor decisions can lead to a cascade of issues. Even assuming transport costs have been factored into your feasibility research, there are many risks to consider and plan for: Loss or theft in transit, including piracy Deterioration or damage Increased lead times due to distances Communication delays due to time zone differences and/or the need for interpretation Complex documentation requirements that may require research or consulting costs, e.g. import restrictions,

permits, licences, quotas, standards, regulations Large international purchases may require formal international purchase agreements, as well as special packaging and shipping and handling procedures. Minimize logistical risks with Demand forecasting that includes extended lead times Transport planning that includes customs/security issues, delivery time frames and work schedules Contingency planning that ensures alternate plans are in place in case of potential risk events, e.g. alternative local suppliers or additional travel routes to avoid potential disaster areas or accidents.

3. Mind your monetary risks: Although the use of foreign suppliers can save costs due to such factors as lower costs of labour and proximity to raw materials, there are also risks that can impact costs: Unanticipated and rising shipping costs Cost of delays or loss of goods in transit Rising costs of transactions, such as documentation fees, contract management fees and third party supplier audit fees Costs related to time zone differences, extra time for storage or transport delays, Costs of managing the supply chain. Monetary risks can be minimized by: Researching suppliers' countries, e.g. monitoring exchange rates, monetary trends and policies Comparing exchange rates of different source countries, Setting fixed costs and quantities of goods or timelines for services, Selecting appropriate currency for contracts, Use of insurance for credit, transport and cargo and use of currency exchange rate insurance.

4. Watch out for cultural differences and language barriers: Cultural differences and language barriers can complicate business communications, causing such issues as shipping delays and incorrect orders. Miscommunication can severely disrupt and frustrate business dealings, making international sourcing a negative experience for all parties involved. Being culturally sensitive can help mitigate this risk: Researching, as part of due diligence, countries' culture, the way organizations are run, core societal values and communication styles Hiring a buyer's agent or a staff person who can speak the local language and is familiar with the culture Keeping track of cultural holidays in suppliers' countries to help with scheduling orders and shipments Using translators familiar with the type of business to ensure translations are accurate Using local legal counsel and agents when negotiating contracts

5. Be aware of laws and compliance Other countries have different standards, laws, regulations and business practices that can impact sourcing from other countries, either by adding costs or requirements that would be considered illegal in one's own country. Questionable practices that can be related to an organization's product can have a negative effect on an organization's brand and reputation.

Minimize this risk with due diligence:

- Research laws, regulations and unwritten business practices in potential suppliers' countries
- Research business reputation and legal record of potential suppliers
- Research domestic laws and regulations to determine liability of conducting business in other countries
- Research export requirements in potential suppliers' countries to determine process and costs
- Detail code of conduct and acceptable business practices as part of the contract.

Supplier Financial Analysis:

Financial analysis can showcase the stability of a supplier, helping to drive better Procurement decisions and mitigate business risk. It also helps to avoid contracts with suppliers who might become bankrupt. This makes financial analysis an essential element of any Procurement professional's tool kit.

But how do you conduct Supplier financial analysis?

What not to do while performing financial analysis:
Financial analysis is industry specific; so is only useful when you benchmark suppliers from the same industry against each other. The financial health of a supplier is dependent on how the industry is doing, so benchmarking suppliers across industries will be counterproductive.

Financial analysis formulas:

The table below provides all the important ratios with formula for conducting financial analysis.

Profitability Ratios	
Ratio	Formula
Gross Profit Margin	Gross Profit / Sales
Operating Profit Margin	Operating Profit / Sales
Net Profit Margin	Net Profit / Sales
Return on Assets	Net Profit / Total Assets
Return on Equity	Net Profit / Shareholders Equity

Liquidity Ratios	
Ratio	Formula
Current Ratio	Current Assets / Current Liability
Quick Ratio	(Current Assets – Inventory) / Current Liability

Leverage Ratios	
Ratio	Formula
Debt-to-Equity Ratio	Total Liablity / Shareholders Equity

Activity / Efficiency Ratios	
Ratio	Formula
Inventory Turns	Cost of Goods Sold / Average Inventory
Days in Inventory	Average Inventory / (Cost of Goods Sold / Days)
Fixed Asset Turnover	Sales / Fixed Assets
Days Sales Outstanding	Ending Account Receivables / Sales / Days
Days Payables Outstanding	Ending Account Payable / Cost of Goods Sold / Days

Interpreting Financial Ratios:

Simply calculating financial ratios is not enough for financial analysis. It is also essential as a procurement professional to be able to interpret them.

i. ***Profitability Ratios:*** These ratios help a procurement professional understand if the supplier can generate sustainable revenue and control costs. If any of the Profitability Ratios are considerably higher than other suppliers, the supplier in question either has great margins or is controlling cost tighter than peer suppliers.

ii. ***Gross Profit Margin:*** If the ratio percentage is greater than zero, the supplier can make a product/service profitably.

iii. ***Operating Profit Margin:*** This ratio provides information on a supplier's business from an operational perspective. Negative Operating Profit Margin indicates that costs for the supplier are rising faster than the amount of revenue they can generate. If this trend continues, the

supplier won't be able to keep the business afloat for long.

iv. ***Net Profit Margin:*** This ratio helps gauge supplier's capability to invest in new product development, research and Development, increase operating capacity, etc.

v. ***Return on Assets:*** How efficiently a supplier uses its assets to generate earnings.

vi. ***Return on Equity:*** This ratio calculates percent profit your supplier makes for every dollar of invested shareholder equity.

Electronic Sourcing:

e-Sourcing Definition:

E-Sourcing refers to internet-enabled applications and decision support tools that facilitate interactions between buyers and suppliers through the use of online negotiations, online auctions, reverse auctions and similar tools. E-Sourcing is especially associated with online auctions, which enable prices reductions by introducing the element of competition. They are visible, clearly structured and make the procurement process transparent.

eSourcing, sometimes referred to as electronic sourcing describes the use of web-based systems to collect and compare information about several suppliers in order to help the buyer select a preferred provider.

The technology is designed to assist organisations generate savings from their supply chains, increase visibility of key business information and reduce the amount of time it takes for procurement professionals to do their day-to-day tasks.

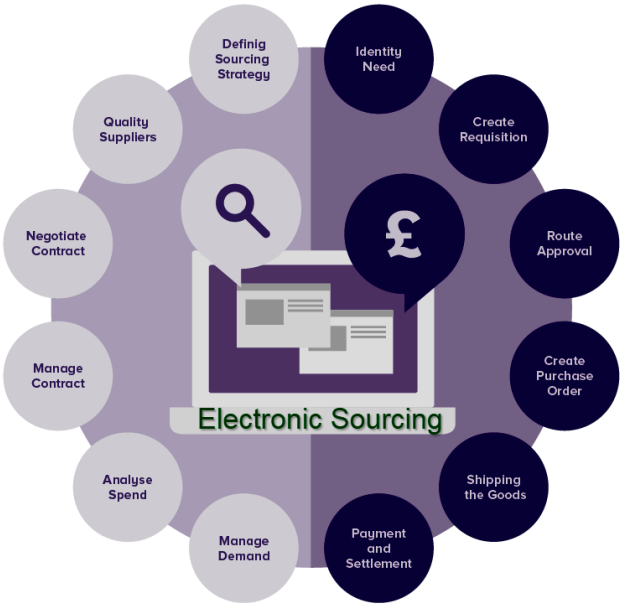


Figure: eSourcing

How does eSourcing work?

Electronic sourcing is a small but important part of the overall eProcurement process. It involves everything from inviting potential suppliers to tender, collecting supplier information, running tender processes and/or holding eAuctions, analyzing and evaluating responses, and finally, awarding them with a contract. The entire process is shown in the figure below;

Figure: Electronic Sourcing Process

Pre-purchase questionnaire: before doing business with any supplier, it is imperative to identify if they're appropriate to do business with. Organisations achieve this with pre-purchase questionnaires (PQQ), which are detailed documents designed to assess the suitability of a supplier. PQQ's are common in the public sector, but in other industries the process can be called request for information (RFI).In the past, procurement teams would have to manually fill out these documents by hand or in software such as Microsoft Word or Excel. With eSourcing, the process is streamlined, as suppliers can upload their answers into the eSourcing software, which is distributed directly to the business. It allows organisations to collect information from more suppliers in a fraction of the time, and ensures consistency of completion

Invitation to tender: invitation to tender (ITT), also known as call for tenders, is a process for generating competing offers from different suppliers. Once they have filled out a PQQ and have been selected to go to the next stage of the sourcing process, suppliers are sent an ITT. The ITT document specifies all the requirements of the organisation, including what good or services are required, as well as outlining a range of information the buyer will require the supplier organisation to submit about its own policies, practices and processes, and how the evaluation process will be managed. Suppliers fill this document out to be taken to the next stage of the procurement process.

Request for quotation: this is a process where price, is the primary factor for choosing a supplier. Buyers send out forms for suppliers, asking all of them the prices of services they can render. Request for quotations (RFQs) can be used prior to a RFI and ITT if a buyer is seeking to understand price ranges in the market.

Evaluation: once the requested evaluation formats have been sent and received, an evaluation process takes place, where the prospective buyers evaluate whether the information they've been provided with makes them a viable supplier or not. In the past, this process involved manually sorting through swathes of paperwork, supplied by the suppliers invited to tender. But eSourcing changes this and provides a sophisticated suite of analytics, dashboards and tools like automated scoring allowing users to automate elements of the evaluation process, and therefore, save precious time.

eAuction: much like RFIs, PQQs and RFQs, eAuctions can be run at any point in the eSourcing process. It can follow a tender, it can be used after a tender process or run as a standalone event for finished goods. Once suppliers have been selected, they are invited to participate in an eAuction – a process where suppliers bid on the right to deliver the contract they've been invited to tender for. Many eSourcing tools offer different eAuction types, each with unique benefits. For more information on eAuctions, including the type available, click this link. Auctions are designed to encourage prospective suppliers to compete with one another and as such, deliver the best possible deal for procurement professionals.

Contract award: once the tendering processes and/or eAuctions have concluded, and a buyer has been selected, a contract is awarded to the winning supplier. Elements of this process can be automated, automatically sending the winning bidder a contract.

Benefits of eSourcing:

eSourcing provides businesses with a wealth of benefits and we've listed some of the most common below:
Reduces costs: By accessing a broader range of suppliers, and leveraging different eAuction strategies, eSourcing presents significant cost savings for procurement teams.

Saves time and boosts efficiency: Electronic sourcing also speeds up the time it takes to award a contract. It does this by reducing the amount of time procurement specialists spend on the tendering process, and therefore, freeing up time to spend on other tasks.

Leverage detailed supplier information: eSourcing improves transparency between buyers and suppliers. A portal is typically used, where suppliers can see all tender opportunities from a supplier, with deadlines, status and other key information.

Bolster compliance: With all procurement-related documents stored in one place, auditing is made simpler, and therefore, so is compliance with regulatory procedures, with a system transparently showing how and why a supplier was selected

Sustainability and Sourcing: (Sustainability of Sourcing):

What is Sustainable Sourcing?

Sustainable Sourcing is the integration of social, ethical and environmental performance factors into the process of selecting suppliers.

Sustainable sourcing is needed as supply chains continue to expand globally into developing countries seeking lower costs and greater production capacity they expose companies to an ever wider array of risks. These risks include not only include risk of supply disruption, cost volatility and compliance with local laws and regulations, but also in brand reputation: Companies must meet the growing expectations of stakeholders (including customers, shareholders, employees, NGOs, trade associations, labor unions, government observers, etc.) to take responsibility for their supplier's environmental, social and ethical

practices. Thus, companies increasingly making responsible sourcing an integral part of their procurement and supply chain management processes to understand and manage these risks in the supply chain.

The ultimate goal of Sustainable Sourcing is to build strong, long-term relationships with suppliers. Improving performance in environmental, social and ethical issues is becoming a major part of the overall process. Working toward this has become an extension of the company's commitment to corporate responsibility and as such becomes a part of the overall business structure and model. Effective supply chain management can foster and build competitive advantage for companies especially in sectors where production is mainly outsourced such as food and clothing.

Building a Business Case for Sustainable Procurement: The following steps are:

1: Develop and integrate into supplier selection process:
Typically the procurement leadership develops a vision that aligns with company responsible business policy, and then adapts their procurement policies to include responsible business in the various processes and criteria for suppliers selection and management.

2: Set and communicate clear expectations for suppliers:
When a company is engaging a supplier, a company must make it clear these new expectations that the suppliers must meet . This is usually codified in a code of conduct, as well as integrated into contracts, and supplier interaction and communications such as RFX templates.

3: Integration into buying practices:
Provide the vision, training and tools for buyers to integrate Sustainable Sourcing into their work and procurement decisions. This may include new software, training in CSR and responsible business, and a complete change management plan. Internal change management programs to convey to the corporate buyers that the impact their buying decisions will have at factory level and promoting cooperation between corporate buyers, supplier sales team and units of production when planning schedules of production.

4: Educate and support suppliers in setting their own business standards:
As part of the process, companies should encourage their suppliers to develop responsible practices on their own. Educate suppliers on the business and community benefits of practicing responsible business: This may include productivity, quality, community support and engagement, improved recruiting, employee turnover and renewal of contracts. Work collaboratively along with suppliers in structuring objectives for their responsible business performance.

5: Ongoing monitoring of supplier CSR performance:
Ongoing monitoring using assessments and audits are essential to maintain their supplier's environmental and social performance and practices. Using multiple sources of data and input from stakeholders is vital for having a balanced and thorough view of performance over time.Companies may be able to greatly accelerate their program and save costs by seeking out related initiatives in their industry sector, whereby they can partner with other companies within the same sector and develop common approaches to assessing and montoring suppliers.

6: Manage stakeholder expectations and reporting on practices:

Transparency is the final step to building and maintaining stakeholder trust. The program should produce supplier performance information that can be adapted to include in an annual CSR reporting.

Moving forward:

Sustainable Sourcing is very vital if implemented well and to move forward , a company will need to:
Check basic facts about the social and environmental legislation in the countries of production of prospective suppliers.

1. Find out about the level of enforcement in these countries to assess production risks.
2. Check whether prospective suppliers qualify for independent certification of conformity with recognized social and environmental standards.
3. Clearly define your expectations to your suppliers. Make clear that compliance with all applicable laws is a minimum.
4. Explore potential risk areas with suppliers and agree on the desired level of performance. If necessary, use a supplier code of conduct as a benchmark for compliance and incorporate supplier requirements into commercial contracts.
5. Raise awareness among your purchasing officers of the impact that their purchasing practices might have on production at factory level.
6. Carry out assessments of suppliers' facilities and practices, including through independent monitoring where appropriate, or by organizing onsite visits and worker interviews.
7. Find out about sectoral initiatives which can help conduct assessments and provide information and training to suppliers on responsible business practices.

Green Sourcing:

What is Green Sourcing?

- Green Sourcing means the purchasing of products and services which take into consideration of the environmental factors.
- Green Sourcing specializes on product sourcing and trading of eco-friendly and fair trade products.
- Green sourcing means acquiring goods and services in the most environmentally friendly way possible. Local producers are greener sources because they ship their products over shorter distances. Both businesses and consumers support green sourcing when they purchase supplies produced locally.
- ***Justification:*** Shipping products by truck, ship and plane becomes more expensive as oil and gasoline prices increase. Businesses and consumers also pay for the waste that packaging and shipping add to the cost of products. Green sourcing reduces these costs by emphasizing local sources for products.
- ***Significance:*** Businesses and consumers who use green sourcing are more financially efficient, and they reduce society's overall need for fossil fuels. When local businesses receive more money, communities become stronger
- ***Benefits:*** Green sourcing is typically cheaper than traditional sourcing methods because shipping

costs are lower for local products. Businesses that adopt green sourcing build a positive reputation in the community for environmental awareness while they reduce their costs.

Green Sourcing Process:

Six steps strategic green sourcing process and the "green" steps that take organization to emphasize in sustainable sourcing:

1-Assess Opportunity: Step one consists of understanding your spend in a given category (materials, logistics, maintenance costs, etc). The five most common areas to consider include: electricity and other energy costs; disposal and recycling; packaging; commodity substitution (alternative materials to replace other materials); and water (or other related resources). Once these costs are identified, they should be incorporated into the spend analysis project in this step.

2-Assess Internal Supply Chain: Step two consists of engaging internal supply chain stakeholders. Make sure you understand the business requirements, product specifications, and internal stakeholder perspectives in your supply chain. What is your industry's most environmentally sound products and services? Ensuring your organization's product specifications within any given category reflect the industry's latest offerings can help you capture significant benefits.

3-Assess Supply Market: Engage new and existing vendors in step three. Be sure to cite green opportunities and possible commodity substitutions and new manufacturing processes within a RFI. You'll want your supply base to include vendors who specialize in more efficient, sustainable products to embrace the benefits of green sourcing.

4-Develop Sourcing Strategy: Step four is the most important because it depends on the quality of the information gathered in the RFI and will help determine the outcome, implementation, and continued success of the sourcing process.

5-Implement the Sourcing Strategy: In step five, bid analysis/evaluation quantifies cost and benefits of sustainability attributes. Clearly identifying and communicating the evaluation criteria is essential to gaining support of diverse stakeholders in the green sourcing process.

6-Institutionalize the Sourcing Strategy: Now that you've selected your vendor(s) and the contracts have been finalized, it's time for the procurement process to begin. Sustainability attributes should be closely tracked and audited during this final step. Be sure to define metrics for the supplier based on performance, delivery, compliance, etc. and consider both your organization's sustainability goals and the results of the sourcing process when setting these metrics.

Sustainability and Green Sourcing Through Procurement:

Green Sourcing has steadily become the buzzword in the corporate world. With increasing demands of having sustainable procurement owing to its implications in economic, social and environmental

perspectives, more and more businesses are realizing the benefits of having a sustainable supply chain. Ideologically, green sourcing as a concept focuses on holistic development and benefits for all parties involved in the procurement process. Although there are some variations where businesses aim at their private profits and revenue growth , still the advantages of a sustainable supply chain can certainly be realized at various interdepartmental levels as well as across suppliers, vendors and companies.

Green Sourcing emphasizes the need to have standard practices of procurement that not only use avenues that are environment friendly but methods of procurement that transcend macroeconomics and corporate social responsibility. Green Sourcing through a sustainable supply chain has a plethora of benefits for the organizations as well as vendors. Every product in procurement needs a company's business goals, company policies and the decision making body to be in complete sync to be able to make the best choices of procurement. This is exactly where Green Sourcing changes the entire dynamics of procurement. Sustainability is of paramount significance in economics. With environmental benefits and convenience of using green sourcing for procurement, businesses have realized the potential rewards for all parties involved. There is still some time before green sourcing becomes a standard practice for businesses all across the globe. Presently, most businesses identify procurement and its requirement to have a sustainable supply chain as one of the most significant aspects in a company's modus operandi. Businesses are yet to completely switch over to green sourcing but there is a bright light at the end of the tunnel. Green sourcing not only promotes having a sustainable supply chain from the perspective of companies ordering the goods and products, but also for suppliers or vendors who themselves have a corporate social responsibility and a need to have optimum impacts on their business by driving revenue growth through sustainable procurement.

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MODULE WISE MCQS QUESTIONS FOR SOURCING MANAGEMENT (4TH SEM MBA)

MODULE-1

1. **Which type of function is best suited to being outsourced?**

   a) High operational performance, high strategic performance
   b) High operational performance, low strategic performance
   c) Low operational performance, low strategic performance
   d) Low operational performance, high strategic performance

2. **What is the terminology used whereby all associated costs of a procurement are taken into** consideration?

   a) Total cost of buying
   b) Total cost of procurement
   c) Total cost of purchasing
   d) Total cost of ownership

3. **A primary aim of a procurement professional must be to achieve …**

   a) value for money
   b) stock control
   c) inventory management
   d) outsourcing

4. **Which of the elements inopportunity analysis of sourcing management is not suitable?**

   a) Determine how and with whom we are spending our funds
   b) Identify poor supplier performance
   c) Reviewspendinghistorytofindmultipleitemsthatareverysimilarandcanberespecifiedtoasing leitem
   d) All of these

5. **Which of the following is a benefit to a business of having an efficient procurement department?**

   a) Improved levels of customer service
   b) Increased levels of staff motivation
   c) Higher sales revenue
   d) Lower unit costs

6. **Strategic alliances in sourcing management are a vital part. This statement is justified mostly by which statement-**
   a) Strategic alliances are one of the more common forms of formal collaboration.
   b) They generally involve some manner of commitment to a long-term relationship between the parties.
   c) Due to this, Cost is increased by enhancing quality
   d) Any how to achieve competitiveness in market of either service or manufacture.

7. **Which of the following would a new fair trade café consider as the most important factor when considering its choice of suppliers?**
   a) Price
   b) Reliability
   c) Flexibility
   d) Ethical values

8. **The business term that involves choosing a supplier, agreeing what to buy at a certain price and by when is called:**
   a) A Logistics
   b) B Supply chain management
   c) C Stock control
   d) D Procurement

9. **Choose the proper ordered sequence of sourcing process-**
   a) Strategic planning- Research.- Solicitation.- Contract administration
   b) Research- Strategic planning- Contract administration-.- Solicitation
   c) Contract administration- Research- Strategic planning- Solicitation
   d) None of the above

10. **Negotiation planning is considered to be the most important organ of sourcing management. Which of the statement is most suitably justifying the above statement-**
    a) It is both collaborative and competitive.
    b) Negotiation is a *process* of reaching agreement through discussion, analysis, and bargaining.
    c) Both a and b
    d) None of the above

11. **What is the role of SMART indicator in negotiation strategy in sourcing?**
    a) It helps to enter a negotiation with the objective of "gaining a price reduction.
    b) It optimizes the risk and no guarantee can be given
    c) It is the boundary specific in sourcing and rigid in execution process
    d) None of the above.

12. Supplier objective is taken into account for-

a. To recognize the supplier's objectives in order to better understand what you may be able to gain through an exchange of concessions.

B. you can determine what the supplier hopes to achieve during initial discussions and through analysis.

C. Cost addition and high loss tolerance

a) Both a and b
b) Both a,b and c
c) Both b and c
d) None of the above

13. SWOT Analysis in Negotiation is considered -

a) As you conduct the analysis, you might discover that your strengths rely on the competitive landscape
b) Forecasting the future
c) Only determine the futuristic risks
d) Holistic aspect of strength , weakness, opportunity and threat to business is determined.

14. Which of the following is a main reason why a supplier may be reluctant to supply a new business with stock?

a) The quality of the supplies may not meet customer expectations
b) The new business may request large volumes of stock
c) The new business may demand reasonable prices
d) High failure rate of new businesses

15. Why-Cross Cultural negotiation is the major challenge in sourcing?

a) As we develop our negotiation plan, we need to make adjustments according to the nature of the business and social culture in which the supplier is located.
b) What is most important universally is that we prepare our negotiation plan to reflect the in-depth research we have conducted. This will help us to better understand the critical factors in the culture in which we are going to operate
c) Both the options
d) None of these

16. Supplier performance evaluation follows some steps in which evaluation is conducted. Which of the following is not a component of the steps?

a) Establishing performance indicators
b) Practical Metrics for Supplier Performance Evaluation
c) Risk determination in whole supply system
d) Classification of suppliers

17. What is RFP (Request for proposal in sourcing)?

a) Response of the supplier with whom you intend to negotiate to other proposals you have received
b) Find gaps in this supplier's proposal
c) E-sourcing controlling
d) None of the above

18. Risk management is definite element to understand in sourcing management. Which statement is the most appropriate one to justify-

a) It is only guiding consideration when selecting suppliers.
b) We consider risk as an evaluation factor in choosing between alternative courses of action
c) more and more stock keeping units
d) Disruption in sustainable procurement

19. Which of the following belongs to objective of global sourcing strategy-

a) A specific amount of cost saving
b) An improvement in customer support through reduced lead times from suppliers and better on-time delivery performance
c) Development of new supplier alliances and partnerships
d) All of the above

20. Which one of the following is the most effective and acceptable methodology for risk management?

a) Delphi Technique
b) Historical Review
c) Simulation Process with decision science implementation
d) Decision for Variables in risk

21. What name is given to purchase of components and services from most appropriate supplier around the world regardless of location?

a) Global sourcing
b) Global location dilemma
c) International trading
d) Globalization

22. From a buyer's standpoint, which of the following is true?

a) Procurement planning should include consideration of potential subcontracts
b) Procurement planning does not include consideration of potential subcontracts since this is the duty of the contractor.
c) Subcontractors are first considered during the Solicitation Process

d) None of the above

23. What are the objectives of purchasing-

a) Maintain continuity in supply
b) Quality standard
c) Avoid duplication
d) All of the above

24. Which sourcing is in action if supply or technical risk is low and value or cost to your company is high?

a) Routine
b) Leverage
c) Critical
d) None of the above

25. What is the advantage of taking proactive approach to sourcing goods-

a) Meet organization requirements
b) Negotiation
c) Equipped to global suppliers
d) All of the above

26. Which sourcing structure is generally appropriate when you need to use bottle neck or critical strategy?

a) Parallel structure
b) Multi sourcing model
c) Single sourcing structure
d) Delegate sourcing

27. Which method of purchasing is the most economical and involves more capital investment-

a) Hand to mouth
b) Bulk
c) Speculative
d) Blanket

28. Requisitions may be received by;

a) Catalog ordering
b) System generation ordering
c) Paper electronic purchase
d) All of the above

29. Which section of request of quotation provides background information such as information about purchasing organisation?

a) Product or service scope
b) Introduction
c) Evaluation process
d) None of the above

30. Request for quotation is defined as;

a) Document that an organization submits to one or more potential suppliers eliciting quotations for a product or service.
b) Document of trade listing
c) Document of detailed procurement of material
d) Documentation of e- sourcing.

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MODULE - 2

1. **Vendor rating is based on productivity of –**
   a) Price of raw material
   b) Lead time of delivery
   c) Quality assurance
   d) All of the above

2. **Which document invites supplier to submit quotation for goods-**
   a) Request for quotation
   b) Request for information
   c) Statement of work
   d) Request for proposal

3. **Which document can be used to solicit goods or services**
   a) Request for proposal
   b) Quotation
   c) Statement of work
   d) E-documentation

4. **Advantage of multiple sourcing adoption-**
   a) Encourage competition
   b) Organizational flexibility
   c) Ease of supply chain system
   d) All of the above

5. **Decentralized sourcing creates-**
   a) Larger order in small space
   b) Control in phase wise manner
   c) Reduce administrative work
   d) All of the above

6. **Which factor affect the way you have chooses suppliers-**
   a) Number of suppliers
   b) Product uniqueness
   c) Geographical position
   d) All of the above.

7. **Essential guideline for statement of work is-**
   a) Definitive in terms of standard
   b) Being specific
   c) Improportion
   d) Both a & b.

8. **Which of the following is a Vendor Rating Technique?**
   a) Service cost ratio
   b) Delphi method
   c) Smoothening method
   d) SPSS tool

9. **Service cost ratio follows some steps. Which is a step for this method-**
   a) Listing the service factors like R&D, Labour stability, financial stability, flexibility in production for rush orders, etc.
   b) Rating suppliers for each service factor.
   c) Setting an acceptable norm e.g., out of a total of a 100 service points 70 may be an acceptable norm.
   d) All of these.

10. **Which is not a Supplier evaluation and selection criteria;**
    a) Supplier score card
    b) Risk processing
    c) Listing and historic data collection
    d) None of the above

11. **Measure of liquidity ratio determines --------- in sourcing**
    a) Indicate an organization's ability to meet short-term financial obligations.
    b) The organization's ability to borrow funds to meet the shortfall in its current time horizon.
    c) Both the options
    d) None of the above

12. **Inventory turnover ratio in sourcing determines-**
    a) The Inventory Turnover Ratio calculates how many times a business's inventory turns over that is, is sold and replaced during the year.
    b) Number indicates that inventory is moving quickly and being minimally stocked.
    c) Both a and b
    d) None of these

13. Supplier reputation is evaluated by

a) Reference check
b) Private agency
c) Government laws
d) Quality with reference.

14. Quality measuring methods are adpoted for suppliers. Which of the followings is not a method for this measurement-

a) Risk triggering and control
b) Six-sigma and ISO certification
c) Statistical tool and methods
d) Lean operations

15. What is the benefit of evaluating engineering expertise?

a) To examine and assess the technology used in its product or service development
b) How well the organization develops and deploys upto date, competitive products or services that will have the longest possible life span in our market
c) Both the choices
d) None of these

16. **In value based supplier selection we follow-**

a) A clearly documented set of evaluation criteria
b) Rigid Benchmarking
c) Both a and b
d) None of the above

17. **Which is the most dominating factor for value based supplier-**

a) Cost
b) Quality
c) Lead-time
d) Service process

18. **Factor of supplier score cards is-**

a) Finding requirements
b) Criteria
c) Weighted and lay outing of scorecard factors
d) All of the above

19. **A stable supply chain is effected by-**

a) Uncertain sourcing
b) Risks in procurement
c) Disruption in logistics
d) All of the above

20. **What specifies the essential activities the vendor needs to complete?**

a) Statement of work
b) Bidding
c) Request for proposal
d) Trademarking

21. **Solicitation of bids is defined as-**

a) The process of requesting bids or proposals from potential suppliers.
b) The process of rejecting proposal
c) Ultimate name of contract
d) None of the above

22. Request for proposal is-

a) Used as a means of preparing the way for the actual contract formation.
b) Used primarily to solicit proposals for services**.**
c) Both the options
d) None of the above

23 . Request for RFP follows the sequence-

a) Introduction-requirement-attachment
b) Attachment-requirement-Introduction
c) Attachment-Introduction-requirement
d) None of the above

24 . **Solicitation follows some methods. The methods are:**

a) Mail or Courier
b) Published Posting
c) Web-Based Portals
d) All of the above.

25. **Crowd sourcing is defined as-**

a) Crowdsourcing is a relatively new and increasingly popular avenue for sourcing and solicitation of relatively simple services
b) Crowd sourcing works through posting a set of requirements on a specialized job board.
c) A mass Source process
d) a and b

26. **Contract negotiations is defined as-**

a) Contract negotiations are a process that involves discussing and compromising on contract terms in order to reach a final agreement between two or more parties involved in a transaction.
b) Contract negotiations are a process that involves discussing and compromising on contract terms in order to reach final agreement with only party.
c) More benefits with compromising loss
d) none of the above

27. **Which of the following is a step for contract negotiation?**

a) Prepare
b) Negotiation Meeting
c) Summaries all points of negotiation
d) All the above

28. **Which of the following is a technique for controlling and monitoring of supplier performance?**

a) Setting key performance indicators
b) Progress review meetings.
c) Regular procurer – supplier meetings
d) All of the above

29. **Economic ordering quantity depends on right supplier. Which of the following cost factor justifies the statement?**

a) Transaction cost
b) Holding and carrying cost
c) Failure cost
d) None of the above

30. Like roots of a tree, _____of organization is hidden from direct view in sourcing point of view.

a) Goodwill
b) Core competence
c) Higher management
d) Capital investment

MODULE-3

1. **Learning curves represent the relationship between-**
   a) Average variable cost and the number of units produced per time period.
   b) Average variable cost and the cumulative number of units produced.
   c) Total cost and technology.
   d) average variable cost and the rate of increase in technology

2. **A concept used to define learning curve in broader aspect-**
   a) Experience curve
   b) Mixed curve
   c) Fixed curve
   d) Discrete curve

3. **As compared to cumulative average time learning model , the learning model which predicts more cumulative total time to produce more units is known as-**
   a) Incremental unit time learning model
   b) Price learning model
   c) Incremental unit average model
   d) None of these

4. **The function which is used to measure decline in per unit cost of different business functions are classified as-**
   a) Mixed curve
   b) Fixed curve
   c) Experience curve
   d) None of the above.

5. **Learning curve is beneficial for**
   a) These curves help demonstrate the cost per unit of output decreases over time with the increase in experience of the workforce
   b) Enhance –process efficiency
   c) Satisfies futuristic requirements
   d) All of these.

6. **Match the box-**

Learning curves	Utility
A. **Assistance Score Learning Curve**	1. The number of help, hint, and wrong attempts recorded for a given opportunity at the given task.
B. **Error Learning Curve**	2. depicts the percentage of assistance asked by the respondents on the 1st opportunity and eliminates error.
C. **Predicted Learning Curve**	3. Capability in measuring student proficiency, knowledge component difficulty and knowledge component learning rates.

a) A-1,B-2,C-3
b) A-2,B-3,C-1
c) A-3,B-1,C-2
d) A-3,B-2,C-1

7. **Why economy of scale concept is adopted for economic discount quantity model?**
   a) More quantity, high inventory loss, high cost
   b) More quantity, less inventory loss, less cost
   c) More quantity, high inventory loss, high cost
   d) None of these

8. **Which is correct regarding EOQ Model?**
   a) Feasible total cost (holding+ carrying) decreases from top value to bottom
   b) Holding cost increases with respect to quantity
   c) Carrying cost is to be fluctuated by nature for stabilization
   d) All of the above

9. **Total cost in Discount quantity model is-**
   a) Carrying cost+ Holding Cost +Inventory cost
   b) Carrying cost +Holding cost
   c) None of these
   d) Both a and b

10. **Economic ordering quantity (EOQ) is defined by which formula-(Sqrt= Square root, D=Quantity demanded, S= Carrying cost, H=Holding cost)**
   a) Sqrt(2*D*S/H)
   b) Sqrt(2*H/D)
   c) Sqrt(2*S/H)
   d) None of the above

11. What is the advantage of E-sourcing?

1. **More competitive supplier quotations**
2. **Transparency in the purchasing process**
3. **Better competitive intelligence**
4. **Reduce cost**

a. 1,2
b. 1,2,3,4
c. 1,2,3
d. 1,4

12. Chose the correct steps for achieving sustainable sourcing?

1. Develop and integrate into supplier selection process
2. Set and communicate clear expectations for suppliers
3. Integration into buying practices
4. Educate and support suppliers in setting their own business standards
5. Ongoing monitoring of supplier CSR performance
6. Manage stakeholder expectations and reporting on practices

a) 1-2-3-4-5-6
b) 1-3-5-4-2-6
c) 1-2-3-5-4-6
d) None of these

13. Risk management in sourcing follow a step wise pattern. Choose the right step sequence-

a) Identification----analysis----mitigation----monitoring
b) Identification----mitigation----analysis-----monitoring
c) Mitigation---- monitoring------ identification-----analysis
d) None of the above

14. Negotiated contract with typical supplier with long term relationship is defined as-

a) Systematic sourcing
b) E-sourcing
c) Both the above
d) None of the above

16. The concepts of the three Ps of sustainability are in sourcing-

a) Environment, Etiquette, Economy
b) People, Planet, Profit
c) People, Procurement, Profit
d) Process, Profit, Production

17. **Why are companies looking to have a green and sustainable sourcing chain?**

a) For sustainability for future generations
b) for potential customers
c) Minimizing loss with optimize the resource
d) All of the above

18. One of the advantages of green sourcing is-

a) Environmental standards meeting
b) Social Sustainability
c) Risk factor mitigation in processing
d) None of the above

19. The order cost per order of an inventory is Rs. 400 with an annual carrying cost of Rs. 10 per unit. The Economic Order Quantity (EOQ) for an annual demand of 2000 units is

a) 400
b) 440
c) 480
d) 500

19. What is the objective of the economic order quantity (EOQ) model for inventory?

a) To minimize order costs or carrying costs, whichever are higher?
b) To minimize order costs or carrying costs and maximize the rate of inventory turnover.
c) To minimize the total cost, order costs and carrying costs over a period of time.
d) To order sufficient quantity to economically meet the next period's demand

20. Supplier financial analysis for procurement is defined by the factor-

a) Industry specific key performance indicators
b) Asset and liability study
c) Risk contingency fund management
d) Both a and b

21. The cost of insurance and taxes are included in

a) Cost of ordering
b) Set up cost
c) Inventory holding cost
d) Cost of shortages

22. Which of the following is true for Inventory control in sourcing?

a) Economic order quantity has minimum total cost per order
b) Inventory carrying costs become constant with quantity per order
c) Ordering cost increases with lo size
d) All of the above

23. The importance of exchange rate in international sourcing is-

a) Trade equity
b) Sourcing agency selection
c) Equipotential utilization of resource
d) Only a and c

24. Which of the following is not an inventory in sourcing?

a) Machines
b) Raw material
c) Finished products
d) Consumable tools

25. The following classes of costs are usually involved in inventory sourcing decisions except

a) Cost of ordering
b) Carrying cost
c) Cost of shortages
d) Machining cost

26. Which of the following factor is given emphasized on supplier financial analysis?

a) Inventory ratio
b) Net cost benefit analysis
c) Quick ratio
d) All of the above

27. Client dealing with controlling procurement from supplier with monitoring by ERP embedded system is an application of-

a) E-sourcing
b) Physical Material Requirement plan
c) Control Boundary
d) None of these

28. Reverse logistic suppliers generates economy of-

a) Circular
b) Rectangular
c) Square
d) None of the above

29. Choose the right sequence of preparing supplier score card?

a) Go to the Supplier Scorecard list-------- Select a Supplier to score------- Setup the scoring function---------- A supplier scorecard is created for each supplier individually
b) Go to the Supplier Scorecard list------- A supplier scorecard is created for each supplier individually---------- Setup the scoring function-------- Select a Supplier to score
c) None of the above
d) Setup the scoring function------ Select a Supplier to score------- Go to the Supplier Scorecard list.

30. ABC analysis is important raw material procurement. Why?

a) Follows 80/20 rule
b) Quality by superiority and inferiority level
c) Ease in Decision by quality circle
d) All of the above

PROBABLE QUESTIONS (MODULE WISE) OF SOURCING MANAGEMENT

(4TH SEMESTER MBA OPERATIONS SPECIALIZATION)

Question (2 Marks) — Module-1

1. What is global sourcing?
2. Define strategic sourcing.
3. Define opportunity analysis in sourcing.
4. Gap analysis in sourcing
5. Define strategic alliance
6. What is joint venture in sourcing?
7. What is Business Process outsourcing?
8. What is the concept of co-sourcing in Sourcing management?
9. Why do we follow negotiation in sourcing management?
10. What is Request for Proposal in negotiation Strategy?
11. What is cross-cultural negotiation?
12. What is supplier performance evaluation?
13. Why do risk analysis is important in sourcing management?
14. What is risk triggering?
15. What is contingency plan in sourcing management?
16. What is risk management technique in international business?

Question (2 Marks) — Module-2

1. Why do we do vendor rating in sourcing management?
2. Highlight some rating plans of vendor in sourcing management
3. What is cost ratio method in vendor rating?
4. What is inventory turnover ratio?
5. What is receivable turnover ratio?
6. Why do we consider quality management process in sourcing management?
7. What is value based factors in sourcing planning and highlight with some examples
8. What is supplier score card?
9. What is contract negotiation process?
10. What is request for proposal?

11. What is solicitation method?
12. What is crowd sourcing?
13. Why do we prefer vendor monitoring and controlling?
14. Mention some tools of performance monitoring in sourcing management.

Questions (2 Marks) Module-3

1. What is green sourcing?
2. What is sustainable sourcing?
3. What is E-sourcing?
4. What is learning curve ? how does it help in sourcing?
5. What is the advantages and disadvantages of quantity discount model.
6. What is sourcing sustainability
7. What do you mean by foreign exchange currency management?
8. How does foreign exchange currency management help in procurement and sourcing?
9. Discuss advantages and disadvantages of foreign exchange currency in brief
10. What is EOQ?
11. How EOQ can be a quantity discount model?
12. What is sourcing risk?

Long Questions-(Probable 16 Marks) Module-1

1. Strategic sourcing is the major key to maximize value based productive system. Illustrate with suitable example.
2. What is Strategic sourcing planning? Explain in details.
3. What is Opportunity analysis in sourcing? Illustrate in details.
4. Global operational sourcing strategy is the major interconnectivity in operation field. Explain with example.
5. What is sourcing risk? Explain steps for its mitigation.
6. What is negotiation in sourcing? Why it is important? Explain its nature with planning strategy.
7. Explain in steps with negotiation strategy development.
8. What is supplier performance evaluation? Why? Explain in detailed processing steps.

9. Managing international business sourcing is a challenge in operational prospective. Is it true? Illustrate your answer with suitable justification.
10. What is risk in international sourcing? Illustrate detailed methods for international business management.
11. Supply chain management is directly proportional to sourcing management. Illustrate.
12. What are the roles that outsourcing and procurement play in the supply chain? Explain the risks and benefits of outsourcing.
13. What is negotiation? Explain the various negotiation strategies and persuasion techniques.

Long Questions-(Probable 16 Marks) **Module-2**

1. Vendor rating is essential for cost cutting process of sourcing. Are you agreeing on it? Illustrate with detailed explanation.
2. What is self-certified vendor management? Why it is? Explain with detailed steps. Explain also factors responsible for it.
3. Explain methodologies for major vendor rating plan. In details.
4. Supplier evaluation and selection are the major ingredients for cost saving and effective
5. What is quality performance? Explain in details
6. What is value based supplier selection? Why it is important?
7. Explain Supplier score card method in details.
8. Explain contract negotiation in details with examples.
9. Elucidate solicitation and bid selection process in sourcing in details. Also explain solicitation methods in details.
10. What is contract negotiation? Explain with detailed process.

Long Questions-(Probable 16 Marks) **Module-3**

1. What is learning curve and explain its utilization in sourcing.
2. What is quantity discount model? Example;

Demand for a product is 25 Tones/day and there are 200
Working days/year=D= 25x200= 5000

Ordering cost is Rs. 48/order=S=48

Carrying cost is Rs.2/unit/Year=H=2

Price Schedule is as follows;

Quantity (Q)	Price (P)
600-…...	8
400-599	9
0-399	10

What is the best quantity that we could order to minimize our total annual cost?

Solve this.(numerical)

3. Discuss the advantages and disadvantages of E Sourcing in details.
4. Sustainability in sourcing is the need of hour. elucidate
5. What is integrative pacific systems in sourcing and explain its components elaborately.
6. Explain sourcing risks and its mitigation strategy
7. Why do we have to do Supplier financial analysis?
8. Green sourcing is the environmental sustainable concept. Why do corporates now a days mandate this?
9. Is there any linkage between foreign exchange management and sourcing? if yes then justify with good illustration
10. Explain supplier score card system in details.