



Unit 5

Purchasing Toolkit

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Understand the Categories of Cost

Unit 5

Purchasing Toolkit

Analyzing the Price

As someone who is already working in procurement or thinking about it, you have probably thought about the price of what you buy a lot. This won't be the case for everyone in your organization, however. Sometimes when someone needs something, they just need it, and the price is not a huge consideration for the individual. However, it certainly will be a concern for you as you move forward and look after the organization's interests. When analyzing price, there can be a lot of factors to consider.

General Economic Issues

Economists sometimes speak about three types of competition: **pure, imperfect, and monopoly**.



You can imagine that **pure competition** is at one end of a scale, where the forces of supply and demand alone are determining price. The price is not influenced by buyers or sellers. At the other end of the scale is the classic monopoly. In a **monopoly**, one seller has control over a particular commodity and is free to maximize their profit, even regulating production and forcing a supply-demand relationship that favors them as a seller. In between pure competition and monopoly is referred to as **imperfect competition**. This is where markets either have very few sellers (called an **oligopoly**), or there are many sellers in operation. Industries like automobile production, steel, and oil are examples of oligopolies.

About Oligopolies

In an **oligopoly**, there are usually just a small number of companies involved and they will collaborate to control the market and trade. For example, in 2008, there were just four cell phone companies controlling 90% of the cell phone market in the United States (Verizon, AT&T, Sprint, and T-Mobile). If these companies strike a formal agreement to collude on pricing, we would call them a **cartel**. While cartels are illegal in many places and most instances, OPEC (Organization of Petroleum Exporting Companies) is a legal cartel that was intended to stabilize pricing and availability of oil around the world.

In contrast to an oligopoly is the second form of imperfect competition called **monopolistic competition**. In this scenario, there are many sellers producing many products. Most products sold here are differentiated by their brand, minor features, and/or quality. This is a very common situation for products sold in the United States. (In the marketplace, of course, nothing is so easily separated, a lot of overlap exists, and there are many arrangements made between individual buyers and sellers.)

More about Oligopolies

It's worth noting that oligopolistic industries often keep their prices firm for long periods of time, and in doing so appear non-competitive. However, they will often put emphasis into other areas of the company (like customer service) as a way to gain a competitive advantage without bringing about a lot of notice. They might also do things like extend payment terms, pay for shipping, or warehouse customers' inventory, although these indirect forms of price reduction are not typically advertised.

It is important to recall that oligopoly is not characteristic of any particular industry. Most companies and their industries function somewhere within that scope of imperfect competition, where buyers have a lot of freedom to negotiate price and service with their supplies (within the limits of the law regarding price concessions, and any trade laws, of course). Thousands of factories around the world employ millions of people making products without influence from government or agencies or other companies. These factories, as well as companies that provide services, exercise almost complete control over their pricing.

While true oligopolistic power is rare, it does come up, and so it is important to be aware of it.

Variable-Margin Pricing

Most companies design their offerings as a line of products rather than just a single product. This allows them to vary how much profit they want on each product. For example, they might offer a high-margin introductory product that will offset the losses or lower profit margin of other items.

Understanding variable-margin pricing is essential as buyers try to get the right price. A seller will use average profit margins because it is advantageous, but a buyer will realize when prices are set too high, especially when they review low-cost and efficiently produced items. A buyer and seller have to understand how this works since prices in the competitive segment of the economy are determined mainly by competition and the weighing of supply and demand, rather than cost plus a percentage for profit. Analyzing the price of something is a process of comparison to determine if you are comparing the same things, and basing your price on what makes sense in the market.

Six Categories of Cost

You already understand that price is equal to cost plus profit. However, there are many types of costs that you need to consider.

Variable Manufacturing Costs

These are items that vary along with the production quantity of a product. They include direct labor, materials, and overhead (e.g. utilities that can vary with machine and equipment use). For example, if a cutting blade costs \$20 and lasts for 500 cuts, each cut costs 4 cents. When 10 cuts are required to manufacture one item, then the variable cost for cutting would be 40 cents. Variable costs can be discounted when large purchases are anticipated and savings are anticipated (for example, by getting a discount on higher amounts of materials). Conversely, variable costs can increase if there are higher error rates and more re-cutting is required, or additional employees are required on a shift. In other words, variable costs are fixed per unit, but can vary as activity levels change.

Fixed Manufacturing Costs

These do not vary with changes in volume (although they will change over time). These are things you must pay for simply to be in business, like buildings, equipment, and insurance. These costs stay consistent regardless of how much production takes place. If you operate a commercial space and your warehouse is leased for \$500 a month, you will still pay \$500 a month regardless of what is actually on the shelves or sold. However, you need the shelves to store the things that you manufacture.

Semi-Variable or Mixed Manufacturing Costs

It can be really difficult to classify all your production costs as completely fixed or completely variable, and that's where this classification sits. Costs like maintenance, utilities, and shipping are like a fixed cost because they cannot be tied to a specific item, but it is possible to separate out certain elements and that remaining piece does vary.

For example, let's say your plant is producing 5000 widgets per month, and your average utility bill is \$1000 per month. If you increase your production to 8000 widgets a month, your utilities might increase by \$200 to \$1200. The \$200 increase is disproportionate to the production increase because a certain amount of the utility bill is fixed whether you are operating or not. Above the fixed amount, though, the utilities cost can vary in a consistent way with your production volume.

Total Production Costs

This is the total of variable, fixed, and semi-variable costs. As the volume of production increases, total costs will rise, but the cost to produce each single unit decreases.

Direct Costs

These are costs we can trace or connect to a specific project or production element. Two of the largest direct costs are typically labor and materials. Direct costs are always traceable, and even salaries can be traced to a product or service, regardless of the volume or whether they are paid a fixed or hourly wage.

Indirect Costs (Overhead)

Indirect costs are either not possible to trace or difficult to trace to a single activity. For example, the price of an office printer is fixed, but the amount of energy it consumes varies from day to day, depending on how much printing your office and order desk staff are doing, so it would be too challenging to calculate to be of value. The price of operating the printer, then, is classified as overhead, or an indirect cost.

How Much?

List three examples of each cost type.

Variable Costs

Fixed Costs

Semi-Variable or Mixed

Direct Costs

Indirect Costs

ANALYZING COSTS

Cost vs. Price Analysis

Cost analysis starts when price analysis becomes impractical, as can happen when the procurement manager cannot determine if a price is fair or reasonable. Cost analysis is helpful when you are purchasing non-standard items and services.

In **price analysis**, you are looking at comparisons. **Cost analysis** is an evaluation of actual and anticipated costs. This kind of calculation takes experience and knowledge so that the procurement manager can project a reasonable estimated contract cost. These estimates will serve as the basis for contract negotiation so that the buyer and seller can come to agreement on the contract price.

Estimates can be conducted in different ways. You may need input from your engineering, design, human resources, accounting, and operations areas. When you analyze your supplier's costs, you'll need to understand their business and the dynamics behind it, including labor, material costs, overhead, and shipping. This should all be provided to you in the supplier's proposal as a cost breakdown, and should include three principle elements: direct costs, indirect costs, and projected profit.

The Scope of Costs

As the procurement manager, you have to remain aware of how widely costs can vary among manufacturers. Some have high costs, and others are low. Quality is not always tied to cost, so you must do your research to find the right supplier.

Some of the important factors that influence cost include:

- Management and leadership capacity
- Amount and quality of subcontracting (and whether the supplier can meet the targets you agree on)
- Plant capacity, sustainability, and efficiency

Because these factors change continually, you can have one supplier that requires a high cost on one item, but can produce others at a low cost. These factors make it essential that you obtain competing bids, and when appropriate, that you leverage competition to keep your supplies at the lowest cost possible, while still getting the desired quality and meeting your timeframes.

Sources for Cost Data

There are three primary sources of cost data that you need to become familiar with.

Potential Suppliers

You should get in the habit of asking for a cost breakdown each time you request a quote. This is the only proper time to do it, rather than waiting until after negotiations have started. Suppliers won't complain that this breakdown is too onerous when you make it clear that it is a part of their bid. They will, however, resist doing so after they have dedicated a lot of time and effort to prepare the bid you asked for.

Supply Partners

As your relationships with suppliers grow to be more relationship than transaction based, you will both be willing to share information like forecasts and scheduling, as well as how the new products fit into existing product lines, processes, and so on. The supply partner who has a relationship with your company is much more likely to share all kinds of details than a potential partner who does not trust you.

Cost Models

If you cannot obtain the information you need from some suppliers (and this does happen, though it is becoming less common), you can create a cost model. You can also create a cost model when the cost data the supplier provides you with seems unrealistic or the prices seem out of line with what you expected. Creating a cost model can also be extremely helpful for you during negotiations when you are able to improve the pricing proposed by a potential supplier.

Creating cost models will typically require the expertise of accounting, engineering, and design staff (although this depends on whether you are costing products or services, and in what quantity). While this kind of exercise may not be available to small companies, it is becoming more common among larger companies that have strong technical expertise available.

Additional Costs

In addition to what's mentioned here, you also have to be ready to evaluate direct labor costs. There are many factors to consider here, such as:

- Allowances to rework products
- Losses due to scrap and defects
- Geographic variations in wages from one country to another, and even across regions within the same country
- Skill variation and the amount of training required
- A learning curve as people get more familiar with new products
- Variations in tool costs
- Transportation and delivery factors

Evaluating Suppliers

If your purchasing needs are simple, then the process of choosing your supplier is also simple. Low-value items or uncomplicated purchases typically only require confirming basic information, and then you go ahead and place an order. Additional steps are necessary, however, when the purchase involves more complex decisions, essential items, and high-value items.

Here are three questions to ask yourself that will help you evaluate your potential suppliers:

- Does the supplier provide a product (or perhaps have a future product) that is important to our success?

- Does the supplier provide us with a product or service that is strategic?
- Are there short-term alternatives available (maybe through an existing supplier) that we can use while continuing to scrutinize the potential supplier?

If the answer is “yes” to these questions, you will need to take time to conduct a thorough evaluation of the potential supplier, which we will cover in the next section.

Remember that if a supplier you want to work with (perhaps because of an existing relationship) does not pass the competency audits to become a supplier now, they can always improve their processes and positioning to apply again at a later date. This is part of the collaboration and mutual trust that develops, but no matter what, we cannot select a supplier based on liking them. If they don't pass the selection process, then you know that they cannot meet your needs and you need to source your purchases from somewhere else.

Evaluation Checklist

Necessary Steps

Your analysis will probably include several steps, starting with straightforward surveys and a review of the potential supplier's financial situation. Next, we perform more in-depth activities, including third-party evaluation, evaluation interviews, a plant visit, and selected but comprehensive capability analyses. Normally surveys and financial information are reviewed first, and those suppliers who do not meet the basic standards are eliminated from further consideration.

Supplier Surveys

This survey does not have to be a long one, but it needs to be thorough. The answers you get here will provide you with sufficient knowledge about whether you will proceed to the next steps of the process. You could consider it as part of a pre-qualification process.

The survey should include the following items:

- A list of principal officers in the company and their titles/qualifications
- Bank and credit references
- Five years' history of profit and loss
- Number of employees
- Current space occupied and plans for expansion (including sources of funding)
- Current defect/return rates for products
- Frequency of inspections
- Quality control methods
- A list of tools, equipment, and testing processes used

Financial Analysis

Beyond the survey asking for basic financial information, this analysis is done in some detail so that you can determine what the financial stability of the company is like, and whether they are capable of meeting their obligations. Financial stability is essential for a supplier to ensure continuity and reliability for both delivery and

quality.

Third-Party Analysis

You can now hire a third-party firm to undertake any of the analysis you are not comfortable with (or competent at). However, you have to ensure that the analysis is conducted by a company with no vested interest in the outcome of the assessment.

Evaluation Interview

For an extremely important purchase, an interview is frequently held as part of the process. This is often arranged at the supplier's location. This might be inconvenient if you are scrutinizing global suppliers, but most likely it is also worth your while. An in-person meeting can go a long way in ensuring that your potential supplier understands the complexities of your purchase. As you eliminate potential vendors who cannot keep up with you, you get closer to the right one.

Facility Visits

In-person meetings aren't only about relationships and conversations. When the sourcing team visits the facility and witnesses it at work, they also get an understanding of the company's technological, production, and distribution capabilities. Depending on the scope of the visit, the company may send representatives from supply management, as well as finance, operations, quality assurance, marketing, and industrial relations. Each participant will need to meet with the supplier and perhaps observe work conducted by their counterpart.

Quality Capability Analysis

If the potential supplier's capacity is less than your requirements, then you can eliminate this supplier. An obvious exception is found when no supplier currently possesses the capability, and you are working together to create it. Your analysis here should also include a look at upper management and their philosophy toward quality, and the quality management department if there is one.

Capacity Capability Analysis

Ensuring continuity of supply is one of the most fundamental tasks of the procurement manager. Your work probably goes unnoticed much of the time, but everyone knows your name if supplies don't arrive on time or in the right quantity. In addition, some suppliers have a disconnect with their salespeople, where the salesperson will make all kinds of assurances, not realizing that their company cannot deliver on what they just promised.

One way to overcome this capacity problem is to be very clear about what you need, do your research, and develop an excellent working relationship with your supplier. Of course, you could also work with more than one supplier, and have each of them provide you with some amount of product, but the duplication of effort would have to be really worthwhile.

Management Capability Analysis

A thorough analysis of this area might require several visits to the supplier. A shortcut, if you will, is to evaluate

the sales representative you are working with, the facility, the staff room, and even the condition of the parking lot and common areas in the building. If things look poorly maintained, then the supplier is sending a negative message to you about their ability to perform. A well-managed company looks to maintain costs, meet the needs of their employees, and reduce labor issues, all while balancing their image.

Service Capability Analysis

The word “service” means different things to different people, so it’s important to define what it means to you and make that clear to your prospective supplier. Questions to ask include:

- Can they handle special orders or circumstances to meet your needs?
- Are they competent at filling backorders?
- Do they keep enough inventory of spare parts if something breaks down?
- What’s their reputation like for keeping everything moving on time and on budget, no matter where they are in the supply chain?
- Can they offer the flexibility you need if you want to adjust production volumes either up or down?

Lead Time Analysis

This is another one of those terms that gets defined differently among different people. Elements of supplier lead time can include order processing time, production control scheduling time, setup time, training time, inspection time, packaging and shipping time, receiving time, and distribution time. In addition, the accumulated lead time can change regularly, depending on things like the internal efficiencies of your supplier, and supply and demand from you and other customers.

Communication Technology Capability Analysis

The ability to connect suppliers to customers through digital channels makes communication flow much more regularly, and the ability for a supplier to coordinate with you using technology can be a prerequisite to be considered as a potential supply chain partner. The type of analysis done here will depend on the buyer’s technological capability and on your requirements.

Green Capability Analysis

It’s not that many years ago that “being green” was seen as an attractive option and companies climbed on board to offer support through projects based on the 3 R’s of reduce, reuse, and recycle. Now, we take a much larger scope with that responsibility and companies are committed to sustainability, reclamation, and environmental protection. Are your suppliers on board, and can they demonstrated their “greenness” as part of your analysis?

Risk Analysis

Many companies have very clear health and safety, engagement, and risk management programs, but there are still plenty who don’t. This will be something you need to pay particular attention to, especially if you are working with global suppliers. What are their plans to mitigate risk? Related to that, what are your plans to manage an issue that develops because of a supplier you decide to work with?

Negotiation Basics

Being a competent negotiator is one of the most important roles in supply management. As the global market shrinks and business becomes more complex, it's not unusual to leverage a cross-functional negotiation team to make sure that all elements are adequately addressed.

At its finest, negotiation is a pervasive undertaking for people trying to reach a joint decision over some issue where there is disagreement. We often speak of a "win-win" negotiation as the most pleasant option because it implies that both parties get something out of the process, despite the reality that neither party will get everything they want and one side typically comes out farther ahead. This isn't necessarily all bad, since excellence in business skill should lead to better outcomes.

Key Negotiation Techniques

Here are several techniques applicable to procurement negotiations.

Getting to Know You

Just because it's a negotiation doesn't mean there is no small talk. You're not dealing with abstract notions or faceless companies. You are negotiating with people, and at the same time building relationships. If possible, it's a good idea to get to know who will be negotiating ahead of time and to get to know them. Some cultures are better at investing this time to get acquainted than others, yet it benefits everyone and makes for much more pleasant discussions when you are speaking with people you already know. If there is no time in the agenda to exchange niceties, try to arrive early and stay behind after the formal sessions so that you can get to know people.

Use Diversions

A good negotiator will have studied human nature as well as the seller and their personal behaviors. When things get intense, or tempers flare, an experienced negotiator can quickly divert attention from the situation into a more neutral state by introducing a safe joke, sharing an anecdote, or simply calling for a coffee break. These diversions are a lot easier to accomplish when negotiators on both teams know one another at least a little bit, and recognize which situations tend to irritate the other party.

Be Positive

Using a positive framework will favorably influence your negotiation. Instead of saying to a seller that their information is wrong, or that you don't believe them, keep your statements in a positive frame. Even if you don't agree with the supplier, you can say something like, "I see your point, and it's well taken. I understand how you feel about this issue." This will keep the supplier closer to you in the negotiation, whereas negative comments will push them away.

While we're on the topic of being positive, also make sure that you never, ever say anything negative about your company. If you give the slightest inclination that your company isn't quite ready for this new product, there are management issues, or potential labor disputes that could interfere with the seller's relationship with you, you could derail the negotiation. Keep those thoughts to yourself and maintain your professional integrity.

Be Considerate

Some negotiators approach this process as if their life depended on it, and they behave rudely and aggressively. This is not how business negotiations should be held. Certainly, there will be the occasional situation where a negotiator needs to take a hard stand, but most of the time (especially the times when you are interested in a

long-term relationship with the seller) a considerate, respectful technique is advised. You don't gain any kind of negotiation advantage by being hard-nosed. In fact, when you are considerate, you can help the seller achieve their goals and you have a much better potential outcome.

Learning the Ropes

There are lots of moving elements in a negotiation. It's a good idea for you to start by learning from effective negotiators before you have to take the lead in a negotiation yourself. You need to learn how not to give anything away, so that when you make a concession on something, the seller does so in return. The concessions may not match in size, but they are still important as each party moves toward what they want. Keep in mind that a contract negotiation should be mutually advantageous, but they are rarely equally advantageous.

Another area of learning is to avoid letting the other party to frame the questions in their favor. If your supplier says, "Do you want sample A or B?" you need to know how to reply with, "Those may certainly be respectable options, but let's develop some others."

Effective Questions

Questions are, of course, a very effective technique in negotiations. A skilled negotiator can control the progress and direction of negotiations by using timing, phrasing, and tactful yet carefully planned unwinding of the other party's position.

The closer the objectives are together at the beginning of a negotiation, the easier the negotiation will be. Sometimes, each party will try to convince the other that they have reached their objectives and that negotiations can wrap up. However, as you do get closer to reaching your objectives, the negotiation may become more difficult. This shift usually occurs because of further investigation, analysis, and reassessment of the original positions or facts.

A skilled negotiator should stand out well when negotiations get to this stage (close to the objective, but not quite there yet). They can make substantial progress by revealing or uncovering new facts and additional topics that will persuade the supplier to reduce their demands. For example, if you analyze the manufacturing operation and discover that the job could be done with fewer people or machinery by increasing lead time only slightly, and this shift could significantly reduce the supplier's setup and scheduling costs (saving you both money), you have created a situation that benefits both parties. This step will encourage the supplier to move closer to your objective.

There are several ways that a negotiator can use questions in their favor. For example, you can effectively defend your own position by asking the supplier to speak to carefully chosen data that you have selected. You can create these questions when you analyze information provided by the supplier, or data that you have discovered in your own analysis.

The way that you answer questions will be just as important as how you ask them. Your answer can help with a short-term issue or a long-range strategy. You can learn from skilled politicians and labor union leaders who, instead of directly answering a question, will also work in comments so that the listener hears about their platform, whether or not the answer fully addresses the question asked. This is a good skill for a negotiator to master.

Answering questions precisely is not the point. Questions are not asked in a negotiation to see what someone

knows or to get a good mark. Instead the idea is to learn as much as you can about the seller and how they are going to meet your objectives.

Instead of asking, “Do you have a good service record?” (to which the supplier would probably answer, “Yes”), you need to ask questions that lead to more conversation. So, when you want to know what their service is like, you could ask these kinds of questions:

- How many people work in your service department?
- What is their average response time?
- How many service requests do they handle?
- What’s your return rate like?
- What kinds of problems can your service department staff solve?
- What is the proper procedure for a service call to follow?
- Will you allow a contract clause that guarantees a minimum response time?

All of these questions are about very specific aspects of service, without asking them a closed, yes or no kind of question. Do you see the difference?

Collaboration Techniques

It’s probably worth repeating that you are not negotiating about procurement in the same way you might as a labor negotiator. There is a perception that labor negotiations can get quite adversarial (which is sometimes accurate), whereas in supply chain management your negotiation is with a potential supplier that you are interested in working with who has already passed several levels of scrutiny, making this a relationship you want to foster.

How can you negotiate and get what you need without messing up the relationship? It’s simple: learn the art of negotiation.

In their masterpiece on collaborative negotiation called *Getting to Yes*, Roger Fisher and William Ury teach five powerful techniques.

Separate People From the Problem

Successful negotiators are able to divide the negotiation into two factors: people and problems. **People issues** address human nature and human behavior. They require that you understand where the other person stands, and what the motivation behind that stance is. Since you want to maintain the relationship with this seller, you should be highly motivated to reach this degree of understanding and be comfortable rephrasing what you hear in order to make sure you understand. Then, you can focus on the **technical problems**, like quality, timing, pricing, risk, and other procurement related issues.

Focus on Interests

During the initial phases of negotiation, you are trying to find out the seller’s interests while sharing your own interests (not objectives). As you narrow down the differences, you both work on reconciling interests, but not your positions. Since you probably both have multiple interests, it is smart to identify all of them and then work

toward an agreement that satisfies as many interests as you can agree on. This approach takes creativity but also frequently leads to a bigger opportunity for both parties.

Create Options for Mutual Gain

When both parties get creative and start generating ideas, they create solutions where both parties can benefit. Two suggestions from Fisher and Ury are to develop lots of options, and remain in option generation mode until things are well into an uncomfortable range. The reason for this is that creative ideas require time (and discomfort, which is why we call it “getting out of our comfort zone”) in order to create something meaningful. Only after the list includes truly creative ideas should the negotiators try to select something from the list.

Use Objective Criteria

Since we’ve already established that a long-term relationship is one objective of both parties, using objective criteria makes sense. Instead of getting into positions where a negotiator might dig their heels in (called **positional negotiation**), objective criteria will further along the **collaborative relationship**. For example, if the parties are negotiating on price, the objectives could include one of the following items:

- Allowable cost plus a reasonable profit
- Application of a cost model to be used as the basis for pricing
- Market-based pricing

Benefits are Not Divided Equally

Sometimes people think that negotiation leads to an equal sharing of benefits between the buyer and seller, but this isn’t really the case. Up to two-thirds of the benefits typically get awarded to the most skilled negotiator, whether they represent the buyer or the seller. However, even though that’s the case, it’s a good idea to keep in mind that both parties are still better off than they were before the agreement because they are doing business together. This is the real meaning to a win-win outcome in negotiation.

The Learning Curve

After negotiations are completed, it’s essential to conduct a debriefing. Even just a 15-minute debriefing with the negotiation team creates an incredible learning opportunity for everyone involved. Most of us don’t receive a lot of guided teaching to become negotiators, and even when we do, real experience is where the learning registers with people. It should be part of your negotiating process to conduct a thorough debriefing after every negotiation.

When you conduct the debriefing, be sure to include a look at what went well, what could have been better, and any mistakes that were made. This allows individuals and the entire team to learn from the negotiation experience. Analyze face-to-face meetings, the documentation that was used, presentation styles, and reactions of the other party.

If you have used a component of online negotiation, that will be equally important to review. We often talk about how online interactions are impacted by an absence of body language and different interpretations of information shared. Add in the sensitive nature of some negotiations, and the absence of people in a negotiation can make a big difference in the outcome. However, as we continue to do business in a global marketplace,

online negotiations make sense as a way to reduce travel time and perhaps also shorten several processes along the supply chain cycle.

Further Reading:

- ✓ Reinecke, Nicolas, Peter Spiller, Henrique Teixeira, and Drew Ungerman. 2014. *Procurement 20/20: Supply Entrepreneurship in a Changing World*. Wiley.
- ✓ Rogers, Stephen C. 2009. *The Supply-Based Advantage: How to Link Suppliers to Your Organization's Corporate Strategy*. AMACOM.