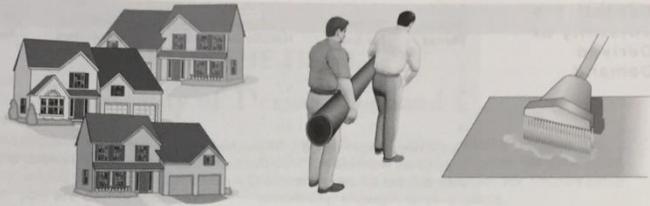


The Nature of Demand

Demand for business products does not always operate in the same fashion as demand for consumer goods. In part, the nature of demand in business markets is due to the types of products sold, varying for raw materials, component parts, and so forth. Understanding demand is important for business marketers because decisions concerning which markets to serve, what business to be in, and where to invest company resources are based on projections of demand. Two concepts, derived demand and joint demand, are useful in understanding how demand for business products can be determined.

Exhibit 1-4
Demand for BASF's carpet treatment is derived from demand for new homes. The homes need carpet, which needs treatment.



Derived Demand

When business analysts and economists focus on consumer spending and consumer confidence, they are looking for indicators that affect the entire economy. Consumer and government spending ultimately drives all of the economy. Business marketers must recognize that the demand for their products and services is **derived demand**; that is, demand for their products and services is derived from the demand for their customers' products and services (whose demand may also be derived). Ultimately, most demand is derived from consumer demand, the exception being demand derived from government purchases such as arms sales.

In the salt example at the beginning of this chapter, it is easy to see how Morton Salt can predict salt sales based on the predictions of sales for institutional foods, meals purchased outside the home, and home purchases. The demand for salt is derived from the demand for, among other things, fast food. Similarly, as illustrated in Exhibit 1-4, the demand for BASF's carpet treatment product is derived from the demand for buildings, vehicles, and other products that use carpets as well as the demand for remodeling existing facilities and homes.

For suppliers to manufacturers of consumer products, the issue of derived demand may not be too great. In this situation, there is virtually a one-to-one relationship; for every consumer product purchased, there is a one-to-one relationship with the supplier of a component of that product. If we made bottle caps and sold them to Coca-Cola, for example, then the demand for bottle caps would be the equivalent of the unit demand for bottled Cokes.

As we move further away from the consumer market, however, derived demand can cause wide swings in demand, called **volatility**. For example, assume we make a machine that processes salt and makes it ready for human consumption. Morton Salt will decide how many of our machines to purchase derived from the need for salt. Morton has, let's say, 50 such machines. Assume that in a year of steady sales, Morton Salt will purchase 10 machines to replace those that are old and worn out. In year one, salt demand goes down 5 percent, and Morton Salt may decide that it can get by with purchasing only seven new machines. In year 2, demand goes up 10 percent. How many will Morton Salt now replace? If demand of 100 percent equals 50 machines, 95 percent demand equals approximately 47 machines, while 105 percent demand means roughly 52 machines (52.5 to be exact). Based on a replacement rate of 20 percent, as illustrated in Exhibit 1-5, demand for our machines went from 7 to 12 to 10. Demand for our machine went up almost 50 percent, then down 20 percent, as compared to the change in salt demand of 5 percent to 10 percent. Derived demand can cause wide swings, or volatility, in the demand for industrial products.

Exhibit 1-5 Volatility of Derived Demand

Time Period	Demand for Salt	Machines Needed to Handle Demand	Worn-Out Machines	Machines Available	New Purchases
1	100%	50		40	7
2	95	47	10	40	12
3	105	52	7	40	10
4	100	50	12	40	

At the beginning of Period 1, 50 machines are required based on forecast of sales. At the end of the year, 10 are worn out but 7 are purchased because only 47 are needed. Over year 2, 7 machines wear out, but 52 are needed, so 12 are purchased.

Demand elasticity is also affected by derived demand. **Demand elasticity** is the percentage change in sales relative to the percentage change in price. In a consumer market, demand elasticity means that as price goes up, consumers will look for alternatives or do without, and sales will go down. Morton Salt may choose to do without our salt processing machines (elastic demand), but if the price of raw salt went up, Morton Salt would have little option but to pay the higher price. So for products without substitutes, there is **inelastic demand**—it is not affected greatly by price. Morton Salt cannot simply choose to do without salt, though you can if the price is too high.

On the other hand, there are many more substitutes for some industrial products than for consumer goods. When assembling a product, a manufacturer can choose between rivets, nuts and bolts, adhesives, and other forms of fasteners. When there are many substitutes and the choice of one or the other has no visible impact on the final product, demand will be more price elastic, or more affected by price.

Because of the importance of the concept of derived demand, business marketers are always paying close attention to consumer demand forecasts and reports. You may notice the importance paid by the news media to two types of consumer demand: that of new housing (often reported in terms of new housing starts) and that of new cars. The demand for so many industrial products and supplies is derived from the demand for housing and cars that they are important bellwethers of the economy as a whole. From the Field 1-2 describes the experiences of two very different companies as they deal with the consequences of derived demand.

FROM THE FIELD

The Reality of Derived Demand

Do you prefer diet drinks containing Splenda, the artificial sweetener? When you shop for a new computer, do you look to see if Intel processors are inside? If so, you are demonstrating derived demand, as the demand for Splenda and Intel is derived from your desire for a diet cola or new computer.

In fact, demand for Splenda has been so strong that the company that makes it, Tate & Lyle, had to halt taking on any new customers for nearly two years. Demand through its current customers grew so rapidly that all expansion plans were filled just by supplying current customers such as Coca-Cola (Splenda is in Diet Coke), Starbucks (used in low-calorie Frappuccinos), and Atkins Nutritionals (Splenda is in their low-carb diet foods).

The challenge for Intel has been somewhat different. Chinese Internet cafés contain some 11 million PCs—no small market. The average café has 100 computers—no small customer. If you are Ian Yang, and your job is to sell Intel

computer chips in China, you can't ignore this market and the demand it creates for your products. Coming up with an answer for China's price sensitivity, though, took a while.

Stuck in a Beijing traffic jam, Yang, Minerva Yeung, and other Intel execs began to brainstorm. As the car crept along, they talked about the challenges facing Internet café owners. By the time they reached their destination, they had the beginnings of a new product line. The result was dramatic. China now accounts for 9 percent of Intel's worldwide sales.

Understanding the demand from which your products' or services' demand is derived is important to business marketers. These are just two success stories that began with a better understanding of derived demand.

Bruce Einhorn, "In China's Net Cafés, Intel Pours It On," *BusinessWeek* (November 6, 2006), p. 52; Elizabeth Esfahani, "What Works: Finding the Sweet Spot," *Business 2.0*, (November 2005), pp. 49-51.