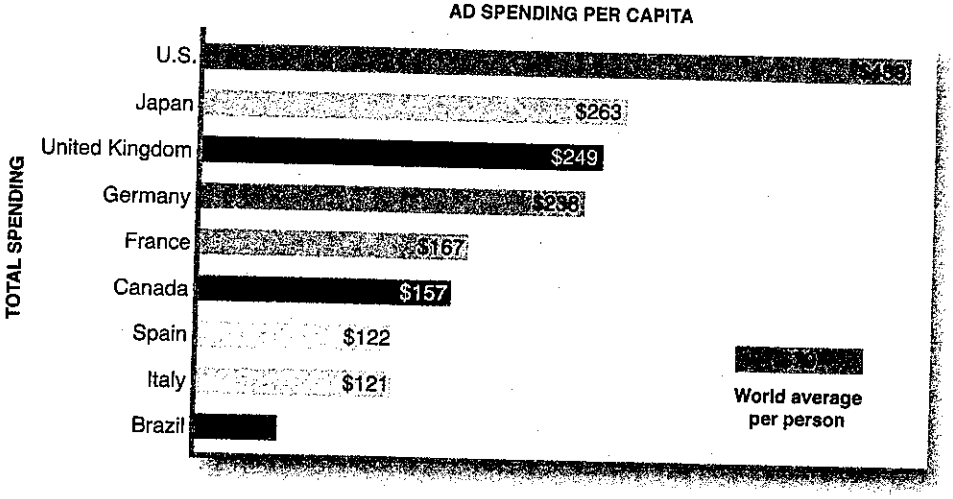
WORLD VIEW

Where the Pitch Is Loudest



Source: *Ad Age Global*, February 2001. Reprinted with permission. Copyright Crain Communications, Inc. 2001.

Analysis: Producers advertise to change consumer tastes (preferences). At higher levels of income, advertising is likely to play a greater role in consumption decisions.

product to the right, inducing consumers to increase their purchases of a product at every price (see Figure 5.9). Advertising may also increase brand loyalty, making the demand curve less elastic (reducing consumer responses to price increases). By influencing our choices in this way, advertising will affect the consumption choices we make in the economy tomorrow. Advertising alone is unlikely to affect the total *level* of consumption, however.

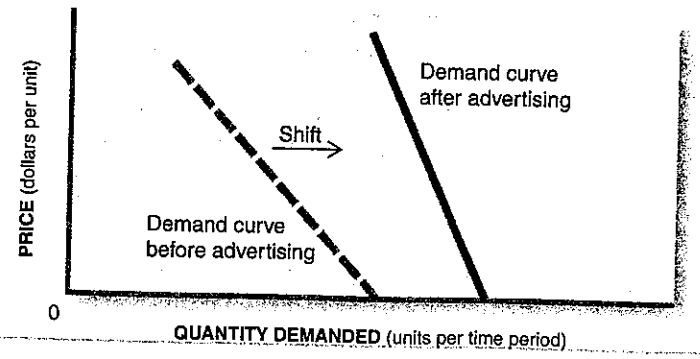


FIGURE 5.9
The Impact of Advertising on a Demand Curve

Advertising seeks to increase our taste for a particular product. If our taste (the product's perceived utility) increases, so will our willingness to buy. The resulting change in demand is reflected in a rightward shift of the demand curve, often accompanied by diminished elasticity.

IN THE NEWS

New York City's Costly Smokes

New York City has the nation's costliest smokes. NYC Mayor Michael Bloomberg raised the city's excise tax from 8 cents a pack to $1.50 effective July 2002. Together with state and federal taxes, that raised the retail price of smokes in NYC to nearly $8 a pack.

Mayor Bloomberg expected the city to reap a tax bonanza from the 350 million packs of cigarettes sold annually in NYC. What he got instead was a lesson in elasticity. NYC smokers can buy cigarettes for a lot less money outside the city limits. Or they can stay home and buy cigarettes on the Internet from (untaxed) Indian reservations, delivered by UPS. They can also buy cigarettes smuggled in from low-tax states like Kentucky, Virginia, and North Carolina. What matters isn't the price elasticity of demand for cigarettes in general (around 0.4), but the elasticity of demand for *NYC-taxed* cigarettes. That turned out to be quite high. Unit sales of NYC cigarettes plummeted by 44 percent after the "Bloomberg tax" was imposed.

Source: "*NewsFlash*," *Economy Today*, October 2002.

Analysis: If demand is price-elastic, a price increase will lead to a disproportionate drop in unit sales. In this case, the ready availability of substitutes (cigarettes from other jurisdictions) made demand highly price-elastic.

budget (and consumption decisions). The demand for such big-ticket items tends to be elastic. By contrast, coffee is so cheap that even a large *percentage* change in price doesn't affect consumer behavior very much.

Because the relative price of a good affects price elasticity, the value of E_1 *changes* along a given demand curve. At current prices the elasticity of demand for coffee is low. How would consumers behave, however, if coffee cost $5 a cup? Some people would still consume coffee. At such higher prices, however, the quantity demanded would be much more sensitive to price changes. Accordingly, when we observe, as in Table 5.1, that the demand for coffee is price-inelastic, that observation applies only to the current range of prices. Were coffee prices dramatically higher, the price elasticity of demand would be higher as well. As a rule, ***the price elasticity of demand declines as price moves down the demand curve.***

Time. Finally, time affects the price elasticity of demand. Car owners can't switch to electric autos every time the price of gasoline goes up. In the short run, the elasticity of demand

IN THE NEWS

Professor Becker Corrects President's Math

President Clinton has seized upon the cigarette excise tax as an expedient and politically correct means of increasing federal revenue. In 1994, the federal government took in $12 billion from the present 24-cents-per-pack tax. If the tax were quadrupled to $1 a pack, Clinton figures tax revenues would increase by more than $50 billion over three years. Those added revenues would help finance the health-care reforms the President so dearly wants.

Professor Gary Becker, a Nobel Prize–winning economist at the University of Chicago, says Clinton's math is wrong. The White House assumed that cigarette sales would drop by 4 percent for every 10 percent increase in price. Professor Becker says that reflects only the first-year response to higher prices, not the full adjustment of smokers' behavior. Over a three-year period, cigarette consumption is likely to decline by 8 percent for every 10 percent increase in price—twice as much as Clinton assumed. As a result, the $1-a-pack tax will bring in much less revenue than President Clinton projected.

Source: *BusinessWeek*, August 15, 1994. © 1994 The McGraw-Hill Companies, Inc. Reprinted with permission. www.businessweek.com

Analysis: It takes time for people to adjust their behavior to changed prices. Hence, the short-run price elasticity of demand is lower than the long-run elasticity.

IN THE NEWS

Dramatic Rise in Teenage Smoking

Smoking among youths in the United States rose precipitously starting in 1992 after declining for the previous 15 years. By 1997, the proportion of teenage smokers had risen by one-third from its 1991 trough.

A prominent explanation for the rise in youth smoking over the 1990s was a sharp decline in cigarette prices in the early 1990s, caused by a price war between the tobacco companies. Gruber and Zinman find that young people are very sensitive to the price of cigarettes in their smoking decisions. The authors estimate that for every 10 percent decline in the price, youth smoking rises by almost 7 percent, a much stronger price sensitivity than is typically found for adult smokers. As a result, the price decline of the early 1990s can explain about a quarter of the smoking rise from 1992 through 1997. Similarly, the significant decline in youth smoking observed in 1998 is at least partially explainable by the first steep rise in cigarette prices since the early 1990s. The authors also find that black youths and those with less-educated parents are much more responsive to changes in cigarette prices than are white teens and those with more-educated parents.

However, price does not appear to be an important determinant of smoking by younger teens. This may be because they are more experimental smokers.

Source: National Bureau of Economic Research, *NBER Digest,* October 2000. www.nber.org/digest

Analysis: The effectiveness of higher cigarette prices in curbing teen smoking depends on the price elasticity of demand.

According to Table 5.1, the demand for airline travel is even more price-elastic. Whenever a fare cut is announced, the airlines get swamped with telephone inquiries. If fares are discounted by 25 percent, the number of passengers may increase by as much as 60 percent. As Table 5.1 shows, the elasticity of airline demand is 2.4, meaning that the percentage change in quantity demanded (60 percent) will be 2.4 times larger than the price cut (25 percent).

Determinants of Elasticity

Why are consumers price-sensitive ($E > 1$) with some goods and not ($E < 1$) with others? To answer that, we must go back to the demand curve itself. The elasticity of demand is computed between points on a given demand curve. Hence, ***the price elasticity of demand is influenced by all the determinants of demand.*** Four factors are particularly worth noting.

Necessities vs. Luxuries. Some goods are so critical to our everyday life that we regard them as "necessities". A hair brush, toothpaste, and perhaps textbooks might fall into this category. Our "taste" for such goods is so strong that we can't imagine getting along without them. As a result, we don't change our consumption of "necessities" very much when the price increases; ***demand for necessities is relatively inelastic.***

A "luxury" good, by contrast, is something we'd *like* to have but aren't likely to buy unless our income jumps or the price declines sharply, such as vacation travel, new cars, and iPhones. We want them but can get by without them. That is, ***demand for luxury goods is relatively elastic.***

Availability of Substitutes. Our notion of which goods are necessities is also influenced by the availability of substitute goods. The high elasticity of demand for fish (Table 5.1) reflects the fact that consumers can always eat chicken, beef, or pork if fish prices rise. On the other hand, most bleary-eyed coffee drinkers can't imagine any other product that could substitute for a cup of coffee. As a consequence, when coffee prices rise, consumers don't reduce their purchases very much at all. Likewise, the low elasticity of demand for gasoline reflects the fact that most cars can't run on alternative fuels. In general, ***the greater the availability of substitutes, the higher the price elasticity of demand.*** This is a principle that New York City learned when it raised the price of cigarettes in 2002. As the News explains, smugglers quickly supplied a substitute good and legal sales of cigarettes declined drastically in New York City.

Relative Price (to income). Another important determinant of elasticity is the price of the good in relation to a consumer's income. Airline travel and new cars are quite expensive, so even a small percentage change in their prices can have a big impact on a consumer's