POLAROID VERSUS KODAK

From *Economics: Principles & Policy, 12th Edition, by William J. Baumol and Alan S. Blinder, pp. 121-122.*

Let's look at an example from the real world to show how the elasticity concept helps to resolve a concrete problem rather different from those we have been discussing. Admittedly, such issues have played a part in many more recent cases, but the dispute between rival photographic products manufacturers, Eastman-Kodak and Polaroid—once the giants of photography—remains perhaps the clearest example of elasticity issues in action. In 1989, a lengthy trial in a U.S. district court resulted in a judgment against Eastman-Kodak for patent infringement of technology that rival firm Polaroid had designed. The court then set out to determine the amount of money Kodak owed Polaroid for its patent infringement during the 10-year period 1976 to 1986, when Kodak had sold very similar instant cameras and film. The key issue was how much profit Polaroid had lost as a result of Kodak's entry into the field of instant photography, because that would determine how much Kodak would be required to pay Polaroid. Both price elasticity of demand and cross elasticity of demand played crucial roles in the court's decisions.

The court needed accurate estimates of the price elasticity of demand to determine whether the explosive growth in instant camera sales between 1976 and 1979 was mainly attributable to the fall in price that resulted from Kodak's competition or was attributable to Kodak's good reputation and the resulting rise in consumer confidence in the quality of instant cameras. If the latter were true, then Polaroid might actually have *benefited* from Kodak's entry into the instant camera market rather than *losing* profits, because Kodak's presence in the market would have increased the total number of potential customers aware of and eager to try instant cameras.

After 1980, instant camera and film sales began to drop sharply. On this issue, the *cross elasticity of demand* between instant and conventional (35-millimeter) cameras and film was crucial to the explanation. Why? Because the decline in the instant camera market occurred just as the prices of 35-millimeter cameras, film, developing, and printing all began to fall significantly. So, if the decline in Polaroid's overall sales was attributable to the decreasing cost of 35-millimeter photography, then Kodak's instant photography activity was *not* to blame. In that case, the amount that Kodak would be required to pay to Polaroid would decrease significantly. But if the cross elasticity of demand between 35-millimeter photography prices and the demand for instant cameras and film was low, then the cause of the decline in Polaroid's sales might well have been Kodak's patent-infringing activity—thus *adding* to the damage compensation payments to which Polaroid was entitled.

On the basis of its elasticity calculations, Polaroid at one point claimed that Kodak was obligated to pay it $9 *billion* or more. Kodak, however, claimed that it owed Polaroid something in the neighborhood of $450 million. A lot of money was at stake. The judge's verdict came out with a number very close to Kodak's figure.