Illustration 18.2
Cannibalization by Saturn Concerns General Motors Corporation

As noted in the previous analysis, when a firm produces multiple products that are related in consumption, the demand and marginal revenue functions for each product depend on the levels of output for all the other related goods. Since the multi-product firm can control production levels, and hence prices of the various products, the manager of this type of firm must account for such interdependence when choosing the profit-maximizing prices and outputs.

When a multi-product firm produces related goods that are substitutes, the pricing decision places the management in a rather pernicious position. Lowering price on one product to increase sales will cause a reduction in sales of the substitute good, which is also produced by the same firm. This complication in pricing substitute goods is sometimes referred to as cannibalization.

A recent example of the cannibalization problem involves General Motors Corporation's pricing decision regarding its new Saturn line of automobiles. The Saturn Corporation is GM's $3 billion project aimed at producing a high-quality, price-competitive car that would make GM more competitive with Japanese imports. The Saturn plant, in Spring Hill, Tennessee, began production in 1991 with three Saturn sedans and one coupe priced between $8,000 and $12,000.

A few problems have arisen in the early stages of getting the new Saturn decided to begin production at the new plant by concentrating on production of sedans rather than coupes. In fall 1990, managers at Saturn reasoned that with winter approaching, sedans sell better than the sportier coupes. Apparently, management was wrong. According to newspaper reports, Saturn dealers have been "howling" for coupes as demand for coupes relative to sedans was much higher than forecasted.

A more vexing problem for management at Saturn and the parent corporation, GM, is the problem posed by cannibalization. The low-to-moderately priced Saturn is taking sales away from Chevrolet, GM's other low-to-moderately priced line of automobiles. GM management had predicted that 20 percent of Saturn's sales would come from cannibalization of other GM models. By summer 1991, the cannibalization rate reached approximately 33 percent. One-third of Saturn's sales, which came mostly at the expense of Chevrolet, did nothing to expand GM's market share with respect to the Japanese (or, for that matter, any other automaker).

This example illustrates the complexity of pricing and output decisions that face managers of multiple product firms. As this example shows, even when management recognizes in concept that cannibalization is going to occur, it maybe very difficult to predict the degree to which it will occur. You can be sure that a corporation like GM, which has always faced the problem of pricing substitute goods, is as well equipped as any firm to estimate the impact of cannibalization among its various products. Their forecast error indicates just how complex the decision actually is for real-world managers.

Source: The information for this illustration is from "After Early Snags, Saturn in Orbit," *The Tampa Tribune,* August 1,1991, p.8.