CHAPTER 12

Making Revenue Management Decisions

Revenue management should be an intentional, high-level management activity. A company should have a portfolio of revenue management techniques that it employs, with some knowledge of the effectiveness of each. A good system of analyzing revenue management decisions and tracking and evaluating their results is essential to achieving revenue growth and greater profitability.

Michael Treacy, in his best-selling book *Double-Digit Growth*, suggests that many companies do not do a good job of managing revenue growth. Growth is not achieved by chance or luck, or by coming up with an occasional hot product, or by having a temporary surge of business.[1] Rather, it involves a four-part discipline of:

- Protecting the current customer base;
- Gaining market share from competitors;
- Finding and participating in the most attractive market segments; and
- Entering both adjacent markets and new markets.[2]

Many of the specific pricing and customer-gaining techniques discussed throughout this book are tactical means of achieving these broad goals.

Revenue management decisions may be made on a judgmental basis or may be based on complex models.

Modeling and Revenue Management

A considerable literature exists on developing models of the revenue process for use in revenue management applications. The early applications by the airlines were based on extensive, detailed models of passenger data to identify flights where price reductions might increase overall revenue.

This book is not about modeling. Readers interested in modeling are referred to *The Theory and Practice of Revenue Management* by Talluri and Van Ryzin[3] and to numerous articles in the *Journal of Revenue and Pricing Management*. This literature is briefly highlighted in the following sections. According to Talluri and Van Ryzin, modeling for revenue management generally involves repeated applications of the following four steps:[4]

1. Data collection and analysis of historical prices, customer demand, and other causal factors.
2. Estimation and forecasting, which includes specifying and estimating explanatory variables for the demand curve, forecasting demand, and forecasting other relevant factors such as cancellation rates.
3. Optimization to determine the best prices, allocations, discounts, and the like.
4. Applying the optimization results to direct the sale of capacity or inventory via the transaction processing system.

Models can and should be formulated for a variety of revenue management decisions. Talluri and Van Ryzin identify three broad categories of such decisions:[5]

1. Structural pricing decisions, such as the following:
    a. Should list prices, negotiated prices, or auction prices be used?
    b. What basis should differentiation among customers be done, if at all?
    c. What terms (discounts, refund or cancellation rights, or other pricing concessions) should be offered?
    d. Should products or services be offered on a bundled or unbundled basis?
2. Specific pricing decisions, such as the following:
    a. How to set prices?
    b. How to vary prices across product or service categories?
    c. How to vary prices over time?
    d. When to offer discounts or markdowns?

3. Quantity decisions, such as the following:
   a. Accepting or rejecting offers
   b. Allocating capacity across products, product lines, or distribution channels
   c. Taking a product off the market

Modeling in the Airline Industry

The airline industry is the original, and perhaps still the primary, practitioner of revenue management. There is an extensive literature on modeling in the airline industry. Early work by Kimes identified four factors that determine airline revenue management:

- Demand forecasting
- Overbooking policy
- Pricing
- Capacity allocation (also called seat inventory control)[6]

With the possible exception of overbooking, these factors would play a role in most revenue management models. Studying the rich literature on airline revenue management could provide modeling guidance for managers in other industries.

Unlike some applications of revenue management, such as restaurants or golf courses, airline (and hotel) models involve network considerations—multiple nights for hotels and multiple flights for airlines. While hotels can quote different prices for different nights, an airline ticket is commonly quoted as a single price, though outbound and return flights may be priced separately. Network models have been used to deal with flights having multiple legs and return flights that are not taken until some time after the outgoing flights. Modeling approaches have been developed for such applications.[7] Alliances among airlines, where *code sharing* is used to combine flights on multiple carriers, further complicate the task.[8]

As management modifies the operating characteristics of the business, traditional optimization techniques may be no longer applicable. The UK discount airline, bmi, changed to offering one-way, no-restriction fares, varying only the price over time. The decision thus became when to post a fare change during the time reservations for the flight were being received.[9]

Revenue management need not be a pure modeling activity. Research by Zeni showed that a human dimension adds to value.[10] Zeni found that adding an analyst, who would provide an element of decision making that is not reflected in the formal model, could add up to 3 percent in incremental revenue.

Measuring the Success of Revenue Management

A good measurement system is essential to assessing the success of any activity. If revenue management is to be a long- term practice of the organization, measures to assess the success of this activity are needed.

One obvious measure is the growth of total revenue itself. But a second important consideration is that revenue growth should be profitable; hence, it is important to simultaneously consider both revenue *and* income growth.

What income measure is appropriate? Some suggest net income, while others suggest gross profit. Both have their merits. Gross profit (sales revenue minus the direct costs of providing the goods or services) addresses the question of how much additional value has been created by the revenue growth. Certainly, if increased revenues impose greater direct costs, the merit of generating those revenues is questionable, at least beyond the short term. But gross profit, at least as conventionally measured in accounting, may not capture all the costs incurred in growing revenue. To the extent that revenue growth is accomplished via increased promotion, greater sales effort, and the like, these costs typically are included in selling, general, and administrative (SGA) expenses and are not considered part of the gross profit. Also, if revenues are expanded by selling to less credit-worthy customers, losses from bad debts are not usually incorporated in gross profit. The recent experience in the mortgage industry attests to the significance of this consideration.

One approach is to try to isolate all the marginal effects of increased revenues—both direct and SGA. But separately identifying all these costs can be difficult or not cost-effective. A truly successful long-term revenue management activity should show improvement in all three measures: *total revenue*, *gross profit*, and *net income*.

An emerging field in accounting and finance is that of *sustainability*. Do the revenue management activities lead to a lasting impact on performance measures? While short-term, nonsustainable gains are certainly of some value, sustainable improvements are vital to the long-term health of the organization. Thus, effects on these three measures should be considered for both the short term and the long term.

Looking at overall measures of revenue, gross profit and net income may not provide enough information, especially when various revenue management techniques are employed. Some finer breakdowns need to be considered.

Analyzing Revenue Sources

Understanding one's current revenue and its sources is a key starting point for revenue management. Some authors suggest preparing a *sources of revenue* statement, containing these five components:[11]

1. Continuing sales to existing customers;
2. Sales to new customers, which gain market share at the expense of competitors;
3. New sales by expanding one's markets, such as new geographical areas, new stores, Internet sales, expanded customer base, and the like;
4. Sales from moving into *adjacent* markets that build on the company's core capabilities; and
5. Sales from entirely new lines of business unrelated to previous core capabilities.

Sales to Existing Customers

Existing customers constitute the company's revenue base. Retention of that base is a key to ongoing success. It is often said that it costs up to nine times more to gain a new customer than to keep an old customer. Metrics that help assess customer retention include calculation of the percentage of prior customers retained, and growth in sales to retained customers. This latter measure is akin to the *growth in same store sales* commonly reported in the retail industry.

The ability to continue to sell to existing customers depends on the nature of the business. A personal-injury law firm, for example, would not normally have continuing customers, as evidenced by their constant advertising to attract new customers. Other businesses may have repeat customers, but the repurchase cycle may be fairly lengthy: new car dealers, furniture stores, appliance dealers, and the like. Measuring customer retention in such businesses requires a longer than annual cycle.

Even when direct retention of customers is not expected because of the nature of operations, some businesses find that current customers may contribute to ongoing revenue generation by providing *referrals.* Thus, professional service providers such as attorneys and certified public accountants (CPAs); durable goods providers such as home builders and car dealers; and *one-time* service providers such as funeral homes, wedding planners, colleges, and the like, may track referrals as a way of indicating that their current customers are happy with them, even though those same customers do not continue to require their product or service. Indeed, *word of mouth* has long been considered to be the best advertising.

Thus, although *sales to existing customers* is a standard measure of performance, it depends on the nature of the business and the length of the repeat sales cycle, and it may include indirect repeat sales such as referrals by past customers.

Sales to New Customers

Sales to new customers may often be a goal of revenue management. As mentioned earlier, one way to acquire new customers enmasse is to acquire a competitor. In such a situation, retention of the acquired customer base is an especially critical concern. Apart from this strategy, there are many ways to add new customers. In its most limited form, new customer sales means adding new customers without expanding the company's existing base of operations, usually by added sales effort and promotion. However, the next category also involves sales to new customers, and it may not be feasible to differentiate the two.

New Sales from Expanding Markets

Probably the most common way of adding new customers, apart from acquisitions, is to expand the company's market presence. This action may take the form of entering new geographic areas, including international markets; opening new retail outlets; finding new channels of distribution; and reaching out to potential customers by other means.

In retail businesses, opening new stores is a common approach. By knowing same-store sales, one can estimate the additional revenues brought about by opening new locations. New locations may take various forms. Coffee-and-donut shops, fast food operations, banks, and other providers have moved beyond free-standing locations, offering their products or services within supermarkets or discount stores, on college campuses, at rest stops on interstate highways, and even in megachurches. In some cases, satellite locations may even be nonattended, such as ticket-sale kiosks and ATMs. All these satellite locations, being smaller in scale, should be measured separately from free-standing operations. Because of the smaller volume of business and the possible higher costs of operating these satellite locations, the three-part measurement of revenue, gross profit, and net income should be used.

New channels of distribution are also a common way of expanding the customer base. Many businesses now have an Internet presence as well as physical locations. Internet sales are an expanded form of long-standing catalog sales. Internet sales offer considerable cost savings over catalogs, since printing and distribution costs become nonexistent.

Sales from Adjacent Markets

This revenue source also builds on the existing core capabilities of the company and may overlap with the foregoing by moving into new markets for existing products and services. Adjacent markets often cater to the same customer base, as when a toy retailer adds children's clothing or a bookstore adds a coffee shop. Adjacent markets may utilize the same distribution system or the same production technology.

Sales from New Lines of Business

Finally, new revenues may be generated by entirely new activities, unconnected to existing activities. The conglomerate movement some years ago was an extreme example, when companies pursued diversification so as to minimize cyclical effects. Considerable costs may be incurred when entering new lines of business. Here an acquisition of an existing business, in the desired new line, may be the most cost-effective way to enter new fields, rather than developing the expertise and infrastructure from the ground up.

It is important for companies to understand what percentage of total amount each of these categories contributes to the total revenue of the company. Each category may require a different strategy to manage or grow. Categorizing and quantifying revenue sources enable an organization to develop more accurate strategies for managing revenues.

Analyzing Revenues by Product Mix

The previous discussion of revenue sources analyzes revenues primarily by market segment and customers, and to some extent by products and product lines. A simpler analysis focuses on product sales rather than customers, such as the following:

- Revenues from sales of existing products;
- Revenues from sales of revised products; and
- Revenues from sales of new products.

This approach seems most suitable for a company with a broad line of relatively stable products, where product upgrades and revisions occur from time to time, and where new products are often introduced. A food manufacturer, for example, could add products within each variety of a product line, such as new flavors or features of soft drinks (regular, diet, caffeine free, lemon flavored, etc.). Distinguishing a new product from a revised product may be difficult at times. For example, a new flavor of soft drink might be a revised product, whereas adding energy drinks or flavored waters might constitute new products.

Conclusion

The main point of this discussion is that an understanding of where one's revenues come from is not only a key starting point for managing revenues but also a useful tool for assessing the success of revenue improvement initiatives. As discussed earlier, tracking the effects of revenue management decisions on revenue, gross profit, and net income is a must!