Restaurant Revenue Management

Is It on the Menu?

Revenue management concepts have been around for several years, first pioneered by airlines in an era of deregulation. The brainchild of operations researchers, revenue management helped airlines optimize price points at which inventory (airline seats) was sold, with the objective of maximizing revenue and profitability. Revenue management is based on a detailed understanding of current and historical demand, supply, and a wealth of other factors, such as demand generators (for instance the Olympic Games, Thanksgiving, and Christmas) which have the propensity to enhance the public’s willingness to pay a premium for the ability to get from point A to point B. At a high level these variables feed into a complex mathematical model that recommends price points that should be used to sell inventory, minimizing the revenue opportunity gap and improving the bottom line.

Hotels caught on to revenue management and this was a perfectly logical thing for them to do, given the fact that they possess some similar characteristics as airlines, namely perishable inventory and capacity constraints. If a room goes unsold on a particular night, that room night is lost forever. As a result, hotels are continually faced with a use it or lose it situation. In addition, hotels have capacity constraints, just like the airlines. Capacity can be added up to a point, by adding extra beds in rooms, or extra seats in coach, but there is a limit beyond which it becomes impossible.

Revenue management principles are being extended to other capacity-constrained, use it or lose it scenarios as well. However, this article will focus on revenue management application to restaurants and the foodservice industry. A good reason why this is a good fit is that certain categories of restaurants that offer seating have perishable inventory and are also capacity-constrained. For instance, they have limited capacity in terms of seating, or are only capable of producing, say, a certain quantity of pie a la mode per hour. Thus, the principles of revenue management extend very logically to restaurants. Other categories of restaurants that do not offer seating can also benefit from revenue management by using price elasticity functions to improve the bottom line.

Two Schools of Thought

As revenue management continues to gain acceptance in the restaurant industry, two major schools of thought have emerged on how best to approach it. The first and most common approach uses the principles of hotel and airline yield management to maximize capacity during peak periods. This approach has proven to be valuable in increasing restaurant profits by managing guest dining duration to improve throughput, reconfiguring seating to accommodate more guests per hour and using merchandising and suggestive selling to encourage higher priced meals during peak hours. The second approach uses mathematically determined price elasticity functions to determine the optimal menu pricing structure. Improvements in computer processing speed and storage capacity have allowed for significant advancement in applying highly sophisticated econometric models to restaurant menu price optimization. Although integrating such methods can be rather cost prohibitive for independent restaurants and small chains, more medium size chains are finding that the costs are quickly recuperated by the profit enhancement that it provides.

Whether integrating strategies that maximize revenue during peak periods, or using statistical models to optimize price, many restaurant companies are finding that implementing an integrated revenue management strategy provides them with a better understanding of their guests and how they value their restaurant experiences. The past year has shown that during a period of high commodity cost increases and accelerated competition, restaurants need to run better and smarter operations just to make a profit. Restaurants that overestimate how the consumer values their experience are apt to set prices too high, thus driving away traffic. Those that underestimate the value of the dining experience they provide are leaving money on the table that most restaurants are not in a position to give up. The price/value relationship is very different from one concept to the next and even from one geographic area to the next within the same concept. Restaurants that are best able to measure that relationship will find themselves with a profound and sustainable competitive advantage over those that are just making their best guess.

The Role of Analytics and Accurate Data

Revenue management models, regardless of the approach employed, are closely tied to the availability of historical data on diner demand patterns, price and menu item consumption history. Restaurants must understand that for accurate revenue man-
management, it is important for them to commit to a very high level of data integrity. If accurate data are not available, the sophisticated algorithms of the optimizers will not be able to produce accurate results. As always, remember that the garbage-in, garbage-out philosophy holds very true with any revenue management and price optimization model.

Restaurateurs must bear in mind that timely availability of data will allow optimizers to harvest, process, analyze and present results in almost real time. This translates to even more granular variations in price structures in response to varying demand and restaurants will come even closer to closing their revenue opportunity gaps.

### The Rise of New Metrics

Just as hotels have metrics such as RevPAR, occupancy and ADR, restaurant revenue management has spawned new metrics such as RevPASH (revenue per available seat hour) and RevPAS (revenue per available square foot). RevPASH is calculated by dividing the total revenue for the day by the total number of seats in the restaurant multiplied by the number of hours the restaurant has been working. This metric was introduced by Dr. Sheryl E. Kimes, the Richard J. and Monene P. Bradley director for graduate studies at Cornell University’s School of Hotel Administration, and one of the foremost authorities on revenue management. RevPAS is calculated by dividing the total revenue for the day by the total square footage of the establishment. This metric is primarily used by function spaces and banquet facilities. These new performance metrics, in addition to existing key performance indicators, such as APC (average per cover) and average check, are giving restaurateurs new tools to evaluate their performance. Perhaps another metric will also make its presence felt—ProfPASH (profit per available seat hour) anyone?

Revenue management principles have been in practice for several years now and airlines and hotels are taking advantage of them. Restaurants have an opportunity to do so as well. Getting there will require an abundance of accurate and reliable data, both present and historical. Soon restaurants can begin reaping the benefits of revenue management to close the revenue opportunity gap and maximize revenue. Vive le revenue management!

Amitava Chatterjee, CHTP (amitava.chatterjee@us.ibm.com) is a senior consultant with IBM Business Consulting Services’ Travel and Transportation, Hospitality and Travel-related Services industry, based in Fairfax, Va. Mike Lukianoff (mike@revenuemanage.com) is vice president, North American Division, with RMS North America.

---

1 The gap between the theoretical maximum possible revenue and the current revenue being earned by a business.