

# GETTING AIRLINE REVENUE MANAGEMENT TO DRIVE MORE REVENUE

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**T**HROUGHOUT THE SUCCEEDING WAVES of consolidation and intensifying competition that have characterized the airline industry for the past three decades, perhaps no single tool has been more essential to companies' profitability than revenue management. The ability to differentiate prices, experiment with various levers, and make use of massive amounts of customer data has enabled airlines (as well as hotels, car rental companies, and others in the travel industry) to drive revenue by using increasingly sophisticated pricing models.

This sophistication has come at a price: complexity. Today, revenue management systems juggle and sort a seemingly endless number of factors—some of which the airlines control, many of which they don't. The latest wave of company consolidation is ushering in a new phase of competition, this one characterized by an increasing "unbundling" of services and prices. The ability of revenue management systems to measure what's working and what isn't—and where the real value is

being generated—may now be more critical to an individual company's success than ever before.

## The Size of the Prize

Carriers of all stripes today—domestic, international, low cost, legacy—are experimenting with unbundling services and charging separately for the many different components of carrying a passenger from point A to point B. Low-cost carriers are earning a significant part of their revenue from ancillary charges, such as bag fees. Spirit Airlines in the U.S. reportedly derives more than a third of its revenue from ancillary sources. American Airlines offers four pricing bundles, altering such variables as change fees, "free" checked baggage, additional bonus miles, and premium beverages on board as a part of the standard online ticket-buying experience. In India, IndiGo has started charging extra for window, aisle, exit-row, and front-row seats (with higher charges on international than on domestic flights) and has introduced per-use charges at several

of its airport lounges. We expect this trend to continue as carriers look to stay competitive on basic ticket prices and find new sources of incremental revenue.

An increasingly important part of the equation for all airlines will be identifying which changes and innovations are creating real value, particularly as companies look to increase the degree of unbundling. The opportunity is large. Global air-transport revenues reached almost \$600 billion in 2011, according to the International Air Transport Association.

By combining our pricing expertise across multiple industries with our work in revenue management, we have developed a methodology for revenue enhancement in the travel and tourism industry that has helped individual airlines increase revenue per available seat mile (or kilometer) by 1 to 2 percent, sometimes gaining as much as 20 percent on specific routes. We have helped client airlines build new capabilities into already highly functioning revenue-management organizations and drive improved performance on a continuing basis.

## The Complexity Trap

In any business with perishable inventory, optimizing price is a difficult challenge. Airlines are pulling many levers at any given time—capacity, promotions, loyalty offers, price, discounts, length-of-stay offers, and so forth. In addition, economic shifts, fuel price fluctuations, and competitive changes affected by revenue management, capacity, and marketing moves all constantly alter the dynamics.

Too much variability makes it difficult for even the most sophisticated revenue-management systems to determine whether a given move did or did not create value—and if it did create value, to what degree. At the same time, as we have written in our recent work on “adaptive advantage,” continuous experimentation is critical to success. (See “Adaptive Advantage,” BCG article, January 2010.) Some industries have embraced the concept of control groups and statistical modeling to determine the

impact of experiments in a wide range of areas. Most airlines, however, have not embraced this approach, in part because of the complexity created by factors such as seasonality and the variability in the dynamics of different routes. We have found that a statistics-based approach, using pilot and control groups, can prove the value associated with revenue management tests and can drive incremental revenue in the near term. We have used this approach at airlines and other companies and have found it to be a fundamental tool for building a culture of experimentation into the revenue management organization.

We hear multiple reasons why a more robust statistical-measurement approach can’t work, from the need to run too many pilots to not having access to the necessary data. These are some of the most common reasons cited:

- There are too many variables that are moving simultaneously to truly measure performance—competitive capacity and pricing, our network, macroeconomic trends, and on and on.
- The revenue management black box is sophisticated and optimized. We don’t know what can be done to improve it further, so the safest thing is not to touch it.
- Each route is unique. There are minimal similarities, and therefore we must evaluate each route independently.

For many airlines, revenue management has turned into a “complexity trap.”

## Focusing on Substance

Building, in part, on our experience in other industries, we have helped airlines set up “structured experiments”—methodologies that predict, with statistical significance, the impact of any revenue-management move. These models cut through the complexity of an airline revenue-management system to expose the impact of changing one or more variables. Moreover, we can reach a sufficient level of statistical comfort in a relative-

ly small number of days using existing data for only a few routes.

The first step is segmenting routes based on two key dimensions—versions of supply and demand—in order to align their value to consumers with their value to the company. The supply dimension is based on competitiveness, for example, or the number of airlines that are flying a particular route nonstop. Demand is based on the customer’s willingness to pay—the percentage of high-yield business travelers on a route, for instance. Routes can be segmented at the origin-and-destination or flight level, depending on the individual revenue-management system.

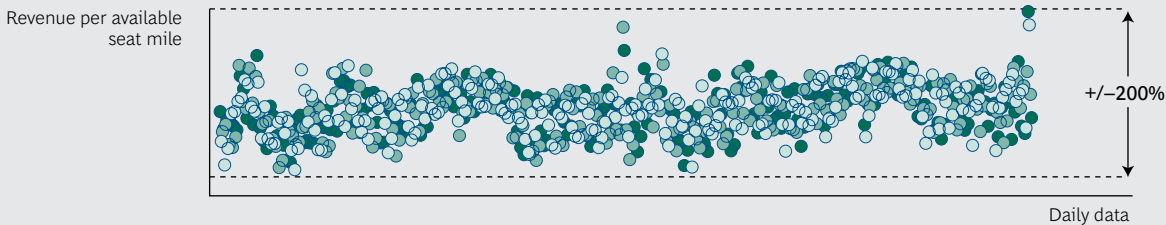
The next step is to focus on one type of segment, such as routes with high competitive intensity and high willingness to pay. Even though day-to-day performance on individual airline routes typically fluctuates widely—up to a 200 percent varia-

tion—the fact is, it is *both possible and likely* to find a control group that allows for an analysis based on the statistical variation of the pilot. (See the exhibit below.) We can model how much of a change must be observed and for how long in order to determine if, and to what degree, revenue management adjustments create value. We have seen this work for many airlines globally—in the U.S., Latin America, and Europe.

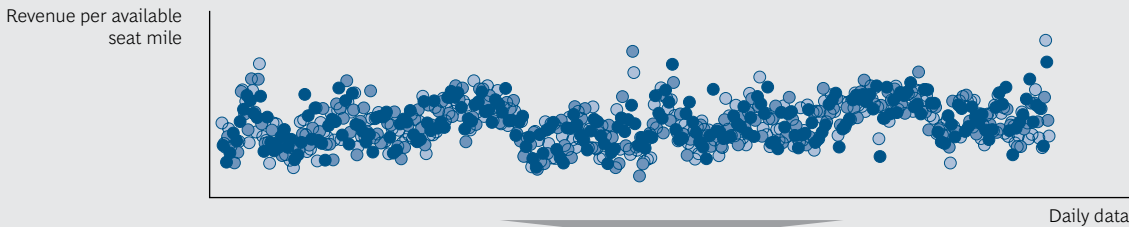
Every airline is different, of course, but for some carriers, a pilot route might be New York to Los Angeles, which typically has high yields but also significant competition. We then look for routes with similar characteristics—control routes—against which changes to the pilot route can be compared. Routes can be analyzed across a series of dimensions (such as revenue per available seat mile by day and load factor and yield by day) to find the ones that behave similarly.

### Despite High Performance Variation, Companies Can Find the Control Group Needed for Experimentation

Three pilot routes with more than 200% variance ...



... behave similarly to three also highly variable control routes



... resulting in predictable pilot-minus-control revenue



Source: BCG analysis.

Note: The data in the charts are representative.

## Driving Value from the Methodology

With all the changes occurring in the industry, this is actually a good time to test revenue enhancement opportunities. For example, we recently worked with one global airline to define and pilot a series of moves—such as changes in pricing practices, reactions to competitor moves on pricing and capacity shifts, and unbundling key ancillary charges such as refund and bag fees. By demonstrating the tangible value associated with each of these moves in a statistically significant way, we were able to choose the right moves for the airline to roll out broadly. For another carrier, we introduced alterations to key elements included in various pricing bundles—for example, bonus mileage multipliers, cancellation fee discounts, and bag fee waivers—to optimize pricing both systemwide and by individual route. Again, our statistics-based methodology helped distinguish between the moves that simply “felt right” and those that drove real value.

Such changes can have a big impact—in the tens or hundreds of millions of dollars. One airline saw aggregate revenue gains of more than 2 percent, a material increase, as it implemented revenue management improvements in connection with its ongoing efforts to unbundle prices and services. These changes were proven using the pilot methodology.

**S**OME 30 YEARS ago, American Airlines’ Robert Crandall called yield management “the single most important technical development in transportation management since we entered deregulation.” Revenue management plays an ever more important role today. For successful carriers, though, it is about much more than maximizing yield. It’s about using data, analytical, and experimentation capabilities to fuel a culture of innovation, experimentation, and energy, fostering continuous learning and improvement—the qualities that provide competitive advantage in a highly volatile world.

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