Unlocking mystery behind air fares

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By Dan Fitzpatrick, Pittsburgh Post-Gazette

As a frequent business traveler, Downtown attorney Gene Kline knows he typically shells out more for his ticket than the person seated next to him, a person eating the same complimentary pretzels and breathing the same pressurized air.

The longtime practice still irritates him.

"It seems to be price-gouging," Mr. Kline said.

But there is some science at work up there. Airlines, knowing that business travelers are willing to pay more for last-minute convenience and comfort, hold open a certain number of choice seats near exit rows and aisles for deep-pocketed customers through a mysterious inventory-control process known as "yield management."

Most flights on US Airways have six to 10 different fare categories -- or "buckets" -- depending on when the ticket was bought and how restrictive it is. The cheapest buckets, advertised heavily on commercials and the Internet, often disappear weeks and months before the flight takes off -- and well before the business traveler discovers a need for a last-minute trip.

"It is frustrating because no one wants to pay $200 and sit next to someone who paid $100," said Bob Harrell, president of New York travel consulting firm Harrell Associates. What most people do not realize, though, "is that a different service was provided to one vs. the other."

The pricing of an airline ticket is half art, half science -- a process that leans heavily on mathematical algorithms, historical patterns, human appetite for risk and the laws of supply and demand.

Day-to-day and sometimes hour-to-hour, the price can go up and down based on how full the plane is when the ticket is purchased.

If the flight books quickly, the airline will take away the cheaper seats and add more expensive seats. The reverse will happen if the bookings are slow. It is no different than a restaurant using early-bird specials to fill tables before the dinner rush or a hotel charging more for reservations during peak tourist seasons.

And like hotel bargains during a slow period during peak travel season, airlines also slash fares in the days before a flight just to fill seats with paying passengers that otherwise would go empty. The most obvious example of this are the "e-savers" that airlines make available for travel the following weekend.

"The law of supply and demand works overtime in the airline industry," said Terry Trippler, a Minneapolis-based airline expert with Cheapseats.com.

"Then I think there are some dart boards involved, too."

Robert Crandall devised the multitiered pricing system while running American Airlines in the 1970s and 1980s.

In the years after Congress deregulated the industry, start-ups tried to undercut the majors with cheap prices on limited routes. Mr. Crandall responded with discounts on the same routes, and advertised them as such.

Beyond the discounts, though, Mr. Crandall was able to predict how far in advance people would book to certain locations by examining old patterns on the airline's reservations system. That way he knew how many cheap seats to set aside for those passengers.

The rest of the seats were reserved for last-minute business travelers, the people who had the money and were willing to pay for the convenience -- a trade-off that maximized revenue for the carrier upon takeoff.

But the pricing strategy, while beneficial to the airline, confused travelers.

It still does.

A joke around the new US Airways headquarters in Tempe, Ariz., is that fares are set by a "pricing monkey" -- a picture of one even hangs in the airline's pricing department.

"To an average consumer, it does sometimes seem that way," conceded Scott Kirby, US Airways' executive vice president of sales and marketing.

Prices on any route can change day by day, or hour by hour, as much as 11 months in advance, in part because the entire process is transparent. That is, airlines share their fares with each other, allowing each to set its pricing not only in response to supply and demand but in response to what competitors are charging.

Here's how it works: Airlines receive fares updates three times a day -- at 10:30 a. m., 1 p.m. and 8 p.m. during the week and once a day on Saturday and Sunday -- from the Airline Tariff Publishing Co., a for-profit company owned by 24 international carriers. The company tracks the fare changes on two mainframe computers from Washington's Dulles Airport and distributes them to all reservation systems and airlines simultaneously.

When airlines receive the fare information about their competitors, it forces thousands or millions of split-second decisions about whether to match prices up or down, or adjust a plane's pricing distribution based on the pace of bookings. US Airways, for example, has 2,000 flights a day. Looking ahead at demand for the next 335 days means examining 730,000 flights. The number of fares on those flights could be in the millions.

"It's actually mind-boggling," Mr. Trippler said.

It helps that the speed and ability of computers to dissect and analyze all the pricing information has improved dramatically over the years since Mr. Crandall devised the yield-management system in the late 1970s. But pricing executives still have to sign off on any changes. The most volatile period is 30 to 45 days before a flight, when most people begin to book.

Sometimes, the airlines override the computers. For example, America West Airlines decided to make fewer discount seats available last summer, contrary to the computer's recommendation, believing that the demand would be higher than expected.

"That is a big risk," said Mr. Kirby, who was at America West then before the carrier merged last month with US Airways.

"When you do something like that, if demand is not strong and competitors sell at a discount," the airline could lose customers and big chunks of revenue. "The art is maintaining fairness to the consumer and to forecast future demand," Mr. Kirby added.

Due to changes in the industry, however, yield management is not the tool it used to be, according to Kevin Mitchell of the Business Travel Coalition.

No longer can airlines always get away with charging artificially high fares to business travelers. Post 9/11, more executives began taking trains or cars, or simply opted to stay in the office, conducting a far-flung meeting via teleconference instead. Or, they booked farther ahead and used the Internet to find the cheapest fares, just like leisure travelers are doing.

As a result, the gap between fares charged to leisure and business travelers is narrowing. A year ago, the ratio of business-to-leisure fares was 6-to-1, according to figures provided by Harrell Associates. By this month, the ratio had dropped to 4-to-1. Locally, leisure fares have increased by 14 percent in the Pittsburgh market while business fares have dropped 26 percent in the past year.

In addition to the Internet, pressure to lower fares and make pricing less complex have come from low-cost carriers such as JetBlue and Southwest Airlines that now control more than 30 percent of the market.

Not only do JetBlue and Southwest sometimes offer fewer and cheaper fares, but they also place a cap on the highest amount, so consumers always know the most they will pay even if booking at the last minute. "The integrity of that offering tends to bring true loyalty," Mr. Mitchell said.

Bigger, older carriers have started to do the same, and experts predict that will continue. Delta Air Lines shook up the industry last year when it capped fares at $499 and sliced many high-end business fares by 50 percent.

But even Southwest and JetBlue utilize yield management to maximize revenue on each flight. The cheaper buckets sell first, leaving the more expensive seats for last-minute travelers.

"They are not idiots," said Mr. Harrell, the New York travel consultant. "They are smart enough to see there are two types of travelers -- the price-sensitive and those who are less price-sensitive. Even though they recognize this is an area that may frustrate some travelers, they are obligated to produce the best return for their shareholders."

"I don't think there is a carrier in the world that has one fare," Mr. Harrell said.

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