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THE TRANSFORMER

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“Fare”ly Simple

Many traditional network carriers are implementing various fare simplification practices to combat the increasing impacts of low-cost competition.

■ By Ben Vinod | *Ascend* Contributor

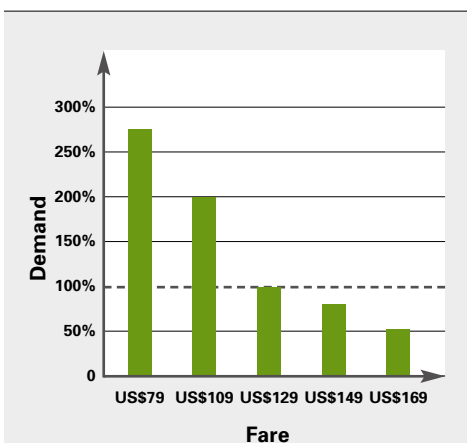
The rise of low-cost carriers in the late 1990s with aggressive pricing and marketing initiatives has resulted in renewed competition that threatens the very existence of major U.S. airlines, global pure play and international flag carriers. Today’s low-cost carriers have viable and sustainable business models, accounting for more than 20 percent of industry capacity. While traditional network carriers have shrunk in size, LCCs are growing at 20 percent per year. With their rapid growth, they now compete directly with traditional U.S. carriers on more than 60 percent of their route networks.

LCCs are known for having a simple, no-frills product offering for the price-conscious customer — high frequency, point-to-point operation to secondary airports and low operating costs with a homogeneous fleet, high fleet uti-

HIGHLIGHT

With tickets being sold at various prices for the same product, the assumption of independent demand for each fare class is no longer true.

Unconstrained Demand



Even though a fare of US\$129 would generate 100 percent capacity, the total revenue for the flight would not be optimal. By offering varying fares during the life of the flight, the total revenue on the flight can be maximized with optimal price-driven inventory controls.

lization and consumer direct distribution. With their distinct lower-cost-per-seat-mile advantage, airlines such as AirAsia, AirTran Airways, easyJet, Frontier Airlines, jetBlue, Ryanair and Southwest Airlines, are proactively setting the fare structure in major markets and rapidly altering customers’ valuation of air travel.

Most low-cost carriers have a cost per seat mile ranging from 6.7 U.S. cents to 8.0 U.S. cents, which presents a critical issue for the world’s traditional carriers that have a much higher cost structure. In addition, there is also little or no barrier for entry of a new low-cost airline, which can change the landscape of competitive fares overnight.

Low-cost carriers also practice a unique brand of revenue management. Some traits that differentiate them from full-service network carriers include:

- One-way fares, fewer fare rules and restrictions — Typical restrictions imposed are refund penalties and ticketing constraints (instant purchase or 72-hour time limit); therefore, the fare is the primary determinant of the customer segment.
- Conservative overbooking — No-show rates are lower because of ticketing requirements and most fares are non-refundable, which is augmented by the absence of interline agreements to book denied boarding passengers on alternate carriers.
- Fare classes — There are fewer fare classes and smaller fare differences between fare classes.

When a flight is first detailed in the reservations system, there is a single one-way

fare in the market. Over time, as bookings build up for the flight, the fares are progressively increased until flight departure.

With the absence of restrictions, the real-time reservations inventory control environment for a low-cost carrier must be dynamic to ensure that target bookings are achieved for each fare class. For carriers operating point to point, the inventory control environment can be derived from authorization levels and time limits based on days to departure. In the absence of time limits, the offline revenue management process must provide frequent updates to the real-time reservations inventory control environment. A time-of-day-specific limit may also be required for airlines that want to override the selling fare at a specific time (e.g. 9 a.m. versus 2 p.m.).

Restriction-free pricing introduces some unique challenges for traditional revenue management, which assumes that the fare classes are independent. With tickets being sold at various prices for the same product, the assumption of independent demand for each fare class is no longer true. The demand is dependent or conditional on the selling fare being offered, which is the only determinant of demand for the segment.

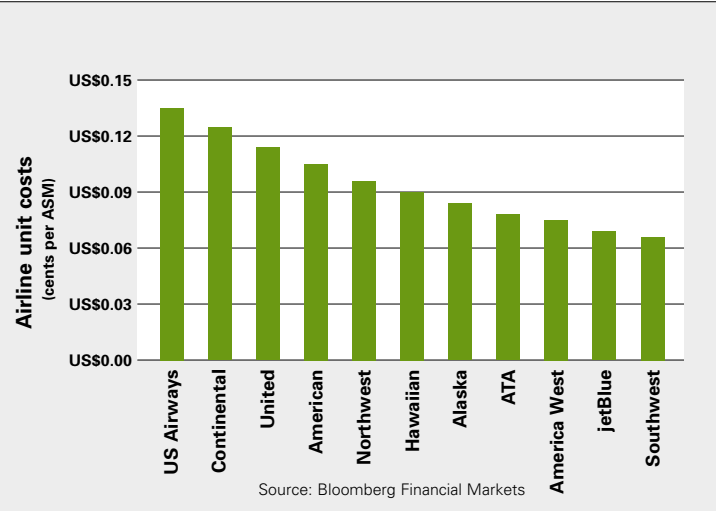
When looking at unconstrained demand expressed as a percentage of capacity by price, if only a US\$129 fare was published throughout the life of the flight, the total revenue for the flight would not be optimal. By introducing fares above and below the reference price during the life of the flight, the total revenue on the flight can be maximized with optimal price-driven inventory controls.

Revenue Management and Low-Cost Carriers

Sabre Airline Solutions' archives



The high frequency, point-to-point operations to secondary airports with homogeneous fleets and direct distribution helps low-cost carriers offer a simply priced product that appeals to price-conscious customers.



With their lower cost per available seat mile, low-cost carriers, such as Southwest and jetBlue, have a clear advantage over many of the traditional carriers they compete against.

One of the key challenges is to generate the price-demand curve for each price point based on the underlying relationship between demand and price. One way to create this relationship is to establish a causal relationship based on historic price points, observed bookings and inventory controls as a function of days to departure. In addition, buy-up and buy-down behavior as a function of proximity of fares between classes prior to departure can be established. A better alternative to traditional conditional demand forecasting using proba-

ble, calibrated price-demand curves can be used in conjunction with available seat inventory and conditional demand forecast to determine the optimal timing and price to be offered, subject to business constraints in the market encapsulated as rules. This has a distinct revenue advantage over a manual rules-based revenue management environment practiced by many LCCs. With rules, closure of a fare class is linked to a time-based event (e.g. 14 days prior to departure) or a booking buildup-based event (e.g. booked load factor

based on soft qualifiers such as access to the Maple Leaf lounge, priority baggage check in, fare refundability, advance seat selection, frequent flyer miles based on mileage and dollars spent, and change fees. Each category has a range of one-way fares, with only one selling fare in each category at a given point in time.

American Airlines' value pricing initiative in 1992 to move to a simplified fare structure and abolish corporate discounts collapsed when major competitors that had initially matched the airline's tariff structure quickly retracted. The initiative, which was acknowledged by industry analysts as well ahead of its time, prompted then AMR Chairman Robert Crandall to famously remark, "You are only as smart as your dumbest competitor."

Today, to counter the competitive threat from LCCs, fare simplification has been adopted to varying degrees by U.S. majors. However, this has not eliminated corporate deals. To combat low-cost competition on its routes, American Airlines introduced a new simplified fare structure to and from Florida in 2004 with fewer classes, rules, restrictions and the elimination of Saturday night stays. Earlier this year, Delta Air Lines introduced a vastly simplified fare structure called SimpliFares that's based on the recognition that LCCs competed on 70 percent of the airline's network. Domestic fares were capped at US\$499 for coach and US\$599 for first class, Saturday night stays were eliminated and only six to eight fares in a market were offered. This was an attempt to lure back business travelers who had been paying steeply higher full-fare coach prices, which only impacts 5 percent of the customer base. Delta controls inventory and hence avail-

HIGHlight

The dilemma faced by full-service network airlines is how to effectively compete against their low-cost counterparts in key markets.

bilistic and Bayesian methods is the use of choice models based on shopping data from online and offline channels. Such models have the added advantage of considering the effects of competitor schedules and fares directly when demand is estimated. A key process requirement from revenue management analysts is to ensure that fare classes are not reused across fare ranges when responding to competitor actions. Consistency in the usage of fare classes based on predefined fare ranges is a fundamental requirement for an accurate calibration of price-demand curves.

Through the use of dynamic program-

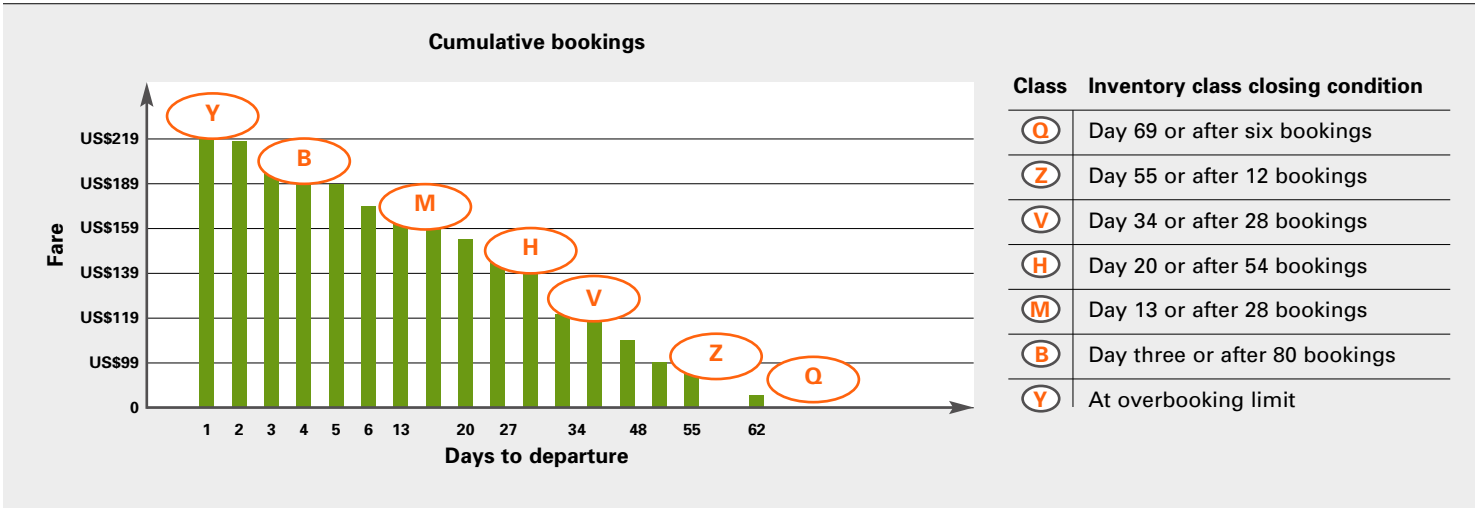
ming, calibrated price-demand curves can be used in conjunction with available seat inventory and conditional demand forecast to determine the optimal timing and price to be offered, subject to business constraints in the market encapsulated as rules. This has a distinct revenue advantage over a manual rules-based revenue management environment practiced by many LCCs. With rules, closure of a fare class is linked to a time-based event (e.g. 14 days prior to departure) or a booking buildup-based event (e.g. booked load factor

Impact on Network Carriers

While airlines have realized the need for fare simplification, various simplified tariff structures have been considered. For example, Air Canada introduced five broad categories — Tango, Tango Plus, Latitude, Latitude Plus and Executive Class — each with distinct segments



Dynamics of Restriction-Free Pricing



For a low-cost carrier to reach target booking levels in a restriction-free environment requires a very dynamic real-time reservations inventory control environment. For a point-to-point route network, inventory controls can be based on authorization levels and time limits based on days to departure.

ability of SimpliFares with a combination of revenue management decision support and rules for closing fare classes using Sabre® AirMax® Revenue Manager. Ultimately, the success of these fare simplification initiatives depends on whether demand stimulation can be sustained and revenue dilution can be contained without risking the loss of market share to LCCs.

The dilemma faced by full-service network airlines is how to effectively compete against their low-cost counterparts in key markets. While retaining their traditional fare structure for flow traffic, these airlines have to compete against LCCs on short-haul routes. To effectively compete and protect market share, they have to operate in a hybrid environment. From an inventory control perspective, to operate in a hybrid environment, a cabin on a flight can be viewed as consisting of a virtual partition to accommodate the optimal mix of customers on the traditional fare structure in the first partition and the optimal mix of passengers who purchase unrestricted fares at various prices in the second partition. The revenue

management process should, therefore, have two distinct demand models for forecasting traditional fare classes (independent demand) and restriction-free fare classes (dependent demand). The network optimization model uses both types of demand forecasts as input along with the associated uncertainty in demand to determine the optimal inventory controls for independent and dependent demand fare classes subject to business rules that encapsulate business constraints and boundary conditions.

The Value Proposition

Currently in production at bmi, bmibaby, Estonian Air, Copa Airlines, TAM Brazilian Airlines and WestJet, Low-Fares Manager has played a key role in the migration to a flexible pricing structure at these airlines. The observed revenue performance improvement ranges from 4 percent to 6 percent compared to a manual rules-based system. Simulation validation with data from several airlines has shown conclusively that revenue benefits

exceed 10 percent. The difference can be attributed to revenue management analysts who monitor market conditions and take corrective action that is not modeled in the simulation. Observations indicate that the traditional expected marginal seat revenue-based algorithms result in higher load factors, high revenue dilution and the lowest yield; while the manual rules-based process results in higher spoilage, lower load factors and the highest yield. Low-Fares Manager exploits the sell-up behavior implicit in the price-demand curves to increase yield (compared to expected marginal seat revenue) and higher load factors (compared to manual rules). In addition, it enables airlines to streamline pricing and revenue management business processes for consistent adoption across the operation. **E**

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+count it up

3 hours — Approximate flight time between Auckland, New Zealand, and Sydney, Australia, a decrease from six to seven hours required in 1940.

1983 — Year a Rockwell Sabreliner became the first airplane to cross the Atlantic Ocean with a pilot guided only by a satellite navigation system.

5,000+ — Number of additional flights to and from North America last summer compared to the same period in 2004, according to recent data from OAG.