## Embark

## HOW AIRLINES

## DETERMINE PRICING

An Embark advisory product

## Overview

We have all asked ourselves - how do airlines come up with these prices?! Airline pricing can be incredibly complex, but it starts with simple economic fundamentals. This article will discuss and provide examples of how airlines approach pricing to form the building blocks of an effective revenue management strategy.

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> "Pricing strategy will make or break any airline brand - getting it right is critical."

Survey after survey, we find the most crucial deciding factors for consumers when choosing an airline is price and schedule. Schedule generally being the most important factor, particularly if the airline has the only non-stop in the market. However, many times competition equalizes the market, making price king.

## Pricing is both an art and science

Before we talk fundamentals, it is important to note that there are many variables that influence the overall strategy. Given the highly competitive nature of the airline industry, it's not a simple exercise of "here are my costs, so my price is $x^{\prime \prime}$.

As figure 1 illustrates, the competitive environment of a market is a key variable that generally dictates the initial approach to pricing.

| Competitive Situation | Pricing Approach |
| :--- | :--- |
| No Air Competition | Pricing built off cost and forecasted <br> load factor performance |
| Ground Competition | Pricing build off cost + LF, but must <br> factor in highway time/convenience |
| Indirect Air Competition | Pricing built off dominant carrier in <br> nearby city, likely with fare premium |
| Direct Air Competition | Pricing essentially built to compete <br> with dominant carrier |
| ULCC Disruptor | Pricing built off cost |

Figure 1: Pricing Approaches

## So why do airlines have so many prices?

It is important to understand that an airline seat is "perishable" and demand is highly dynamic across time. Unlike a sofa in a furniture store that can sit on display at a fixed price until purchased, the opportunity to sell an airline seat is gone after the flight departs. These reasons have driven airlines to use a dynamic pricing model to extract maximum revenue.

Let's begin with a basic demand curve. The 'curve' used in Figure 2 wouldn't be a perfectly straight line, but it helps simplify the explanation.

If an airline wanted to offer only one price in the market, they would first determine a price that maximizes revenue (price labeled as $\$ 200 \mathrm{Y}$ in the first
chart in Figure 2). To calculate total revenue production, multiply the price by demand (or quantity), which is represented by the blue box.


Figure 2: Airline Demand Curve
Keep in mind however, that the area under the curve represents the total revenue potential for a given flight. With only one price in the market, the airline is forgoing all the revenue outside the blue box. To the right of the blue box the area represents customers who are willing to fly this route, but not willing to pay the $\$ 200$ price creating a lost revenue opportunity for the airline. Conversely, the area above the blue box represents customers that are willing to pay more than $\$ 200$. They will fly but will pay the lower price; this is known as revenue dilution.

Remember the demand curve represents what a customer is willing to pay for a particular flight. With that in mind, the foundational goal of every revenue management department is to maximize the revenue potential of each flight. To help accomplish that goal, the airline will segment out the demand to reduce the dilution and lost revenue opportunity. This is represented in Figure 2 with the orange squares. In this example, the airline has now created three prices to maximize the revenue potential of the demand curve.

## How does an airline segment the demand?

Most airlines segment their customers into three core groups:

1) Business travelers - price is mostly inelastic, they book at the last minute, and they need the most flexibility for changes.
2) Visiting Friends and Relatives (VFR) - this segment is more price sensitive and driven by a good deal, but generally travels more frequently. They tend to plan in advanced and have flexibility about when they travel
3) Leisure - this segment is the most price sensitive and willing to jump through hoops to get the best deal possible. Leisure markets like Hawaii for example, generally are very elastic and deal seekers drive demand.

Airlines use a variety of tools to segment the demand in these groups, but that is driven by a lot of different variables. This includes competitive influence, day of the week, time of the day, cabin experience, penalties or restrictions, and more. Airlines use a mix of these to create their fare product.

The most basic tools or 'fences' include:
Advance purchase requirement (AP): to get the lowest fare the airline requires the fare to be booked further in advance

Round-trip requirement: if the airline requires the purchase of a round-trip ticket. Round-trip requirements fence out higher-yield, last minute customers who are traveling one way and have the flexibility to return on other carriers

Minimum (Min) stay: if the airline requires round-trip travel, how many days are required to stay before returning - for example, some airlines require a Sat or Sun night stay - again, used to fence out higher-yield, customers who have short stays, or to motivate leisure travelers to stay over a weekend to obtain the best price.

Day of week or time of day restrictions: to target weaker performing flights or off-peak periods, airlines use directional or time of day pricing to target more price-sensitive customers with more schedule flexibility.

Refundability Restrictions: generally, the highest fares are the most flexible and allow for changes and refunds. Lower fares are generally restricted

## An Example...

Assume a new airline wants to fly between two cities (your choice) without any non-stop service today. Knowing that the total revenue opportunity available to the airline is depicted below the demand curve in Figure 2, the airline will add multiple fares to capture as much revenue as possible.

## A rule of thumb:

- There is a segment that is more value conscious and not willing to pay $\$ 200$, but they are willing to pay something less. They generally forgo flexibility to get a better deal and will buy further in advance.
- There is the bulk of the market willing to pay $\$ 200$, this can be a mix of last-minute travelers and those that are cost conscious, but value flexibility.
- There is a smaller segment of the market that is willing to pay more than $\$ 200$. This segment is largely inelastic - they will go when they want and need to go. Since this segment generally tends to travel last minute, the airline will want to capitalize on the revenue opportunity from this segment and have seats available at the last minute. That generally means holding out with higher fares.

In Figure 2, we segmented the demand out into three different fares: $\mathrm{V}: \$ 100, \mathrm{~B}: \$ 200$, and Y : $\$ 300$. By utilizing the first fence - advanced purchase (AP) requirements, the airline can create many more. Figure 3 shows an expanded approach.

Simple 3 Fares

| Fare Bucket | Fare Basis | Price | Allocation |
| :---: | :---: | :---: | :---: |
| V | VO (Fare 1) | $\$ 100$ | 50 |
| B (Fare 2) | BO (Fare 2) | $\$ 200$ | 120 |
| Y (Fare 3) | Yo (Fare 3) | $\$ 300$ | 30 |
|  |  |  |  |
| Fares with Fencing |  |  |  |


| Fare Bucket | Fare Basis | Price | Allocation |
| :---: | :---: | :---: | :---: |
| V | V14 | $\$ 100$ | 50 |
|  | V7 | $\$ 150$ |  |
| B | B3 | $\$ 200$ | 120 |
|  | $\$ 250$ | 30 |  |
| Y | Y0 | $\$ 300$ | 30 |

Figure 3: Fare Fencing

## How does an airline build a fare structure?

1. Determine how many seats to allocate for each price - generally based off a new forecast or as markets mature, determined by demand on each specific flight over time.
2. Assign these prices to various 'buckets' or fare classes.
3. Assign inventory allocations to each bucket.
4. With fencing, the airline can offer more than 3 fares with multiple fare basis codes (noted in Figure 2), while leverage only 3 'buckets'. This allows the airline to offer more incremental 'steps' using AP requirements to sell-up with fences as well as inventory control. The combination of additional buckets and fenced fares offers substantially enhanced control.
5. Finally, the airlines will leverage inventory management strategies to maximize revenue between the buckets based on day of week, time of day, and season. The airline can also adjust their APs based on the same factors, or as the markets mature, utilize the markets natural booking curve to optimize APs.

## CONTACT US

No matter what the pricing approach, the fundamentals are the same. Embark is more than a consulting firm; we help craft airline business strategy - then work with our partners to make it a reality. Embark provides airlines with (short-term or long term) outsourced support across any commercial function. Our Revenue Management team has extensive experience helping airlines review, optimize and develop industry standard revenue management strategies adapted to the airline's business model. Our experience comes from nearly two decades of practice at major carriers including: Alaska, American, Horizon, Delta and US Airways. Connect with us today to learn more about how we can take your airline to new heights.

Contact our team via phone or email and we'd be happy to discuss how we can work together to support your needs.
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