

SHA543: Segmentation and Price Optimization

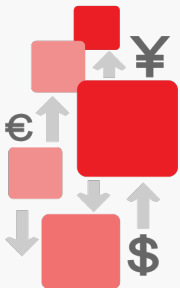
This course includes

- Three self-check quizzes
- Multiple discussions; you must participate in two
- Two tools to download and use on the job
- One scored project
- One [video transcript file](#)

Completing all of the coursework should take about five to seven hours.

What you'll learn

- Make smart pricing decisions based on market segmentation
- Apply variable versus dynamic pricing strategies
- Use prospect theory to structure pricing communication
- Predict the diluting impact of poor segmentation
- Develop an upgrade strategy and evaluate its marginal value
- Determine how to best structure prices posted online



Course Description

Today's progressive businesses use technology to evaluate and set prices in almost every major market. This use of technology has quietly revolutionized the way we do pricing. Shoppers find that prices vary widely, from customer to customer and even from day to day. And businesses can target individual customer segments to maximize their

profitability.

In this course we examine techniques for analyzing and setting prices. The first part of the course focuses on variable pricing. It looks at how to create different prices for the same service or product and how to use segmentation, communication, and upgrading to capitalize on those prices. The second part of the course examines dynamic pricing, how prices evolve over time.

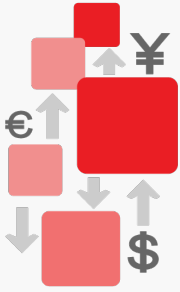


Chris Anderson
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Chris Anderson is an associate professor at the Cornell School of Hotel Administration. Prior to his appointment in 2006, he was on faculty at the Ivey School of Business in London, Ontario Canada. His main research focus is on revenue management and service pricing. He actively works with industry, across numerous industry types, in the application and development of RM, having worked with a variety of hotels, airlines, rental car and tour companies as well as numerous consumer packaged goods and financial services firms. Anderson's research has been funded by numerous governmental agencies and industrial partners and he serves on the editorial board of the *Journal of Revenue and Pricing Management* and is the regional editor for the *International Journal of Revenue Management*. At the School of Hotel Administration, he teaches courses in revenue management and service operations management.

[Start Your Course](#) 

Module Introduction: Variable Prices and Segmentation



Businesses that use variable pricing offer different prices to different market segments. This approach can increase overall revenue and profit, and is particularly beneficial to the hospitality industry. In this module we examine how variable pricing affects consumers' buying patterns and how we strategically apply pricing and segmentation to increase revenue.

By the end of the module you will be able to:

- Describe the benefits of variable pricing
- Use variable pricing to maximize profit
- Evaluate how prospect theory influences buying patterns
- Use prospect theory to better structure pricing communications
- Assess how prospect theory affects upgrade decisions
- Discuss the benefits of upgrading customers

About the Course Project

In this course, you complete a project designed to evaluate the variable and dynamic pricing strategies of your firm or another travel-related firm. Over the duration of the course, you monitor and record prices at a firm of your choosing. It is important that you begin the project early in the course (preferably on the first day) so you will have enough time to collect the data needed. Towards the end of the course, you will analyze and report on the data.



Read: Price Discrimination

Price discrimination is charging different customers different prices for the same product. It is a legal practice and common in the hospitality industry. Price discrimination enables companies to increase revenue by selling products and services at the highest prices that consumers are willing to pay, and also by using low prices to attract price-sensitive customers who might not otherwise buy.

In price discrimination, the hotel or company setting prices must first identify its customer segments. This can be done by examining differences in the elasticity of demand: a group with a more price-inelastic demand will pay a higher price, and a group with a more elastic demand will pay a lower price. Once the company has identified the segments, it can target them using different prices.

One problem companies face when using price discrimination is *leakage*. That is, customers who are willing to pay higher rates can sometimes slip down into lower rate categories. The company's goal, however, is to set a revenue-maximizing price for each distinct customer segment. If your company cannot effectively segment customers, implementing price discrimination is difficult. Trying to discriminate across nonsegmented customers is not recommended.

Theoretically, price discrimination has three classifications:

First-Degree Price Discrimination-Charge whatever the market will bear. First-degree price discrimination occurs when you charge the customer the maximum price he or she is willing and able to pay.

Second-Degree Price Discrimination- Charge lower prices when the customer buys a larger quantity.

Third-Degree Price Discrimination-This relies on customer attributes as a proxy for their willingness to pay. Because a customer's willingness to pay cannot be completely identified, sellers may find it effective to provide incentives for consumers to segment themselves.

Hotels, airlines, and other users of revenue management excel at third-degree price discrimination. Businesses may sell rooms in hotels or seats on the plane or at the theater at a discounted rate close to the use date. To be successful, firms must limit the ability of consumers to resell their purchases to other consumers (that is, to become competitors). To avoid this problem, once purchased, these products or services are generally nonrefundable and nontransferable.

Second- and third-degree price discrimination are not really mutually exclusive categorizations.

Note: From this point forward, we use "differential pricing" or "price customization" as more customer-friendly terms to refer to price discrimination as applied in hospitality. These three terms are synonymous.



Watch: **Price Customization**

Customers in different segments may have different willingnesses to pay at different prices. This gives hoteliers an opportunity to consider price customization, as Professor Anderson explains.

Read: **Examples of Rate Fences**

★ **Key Points**

Rate fences allow you to charge different prices to different customer segments

Direct fences: product attributes

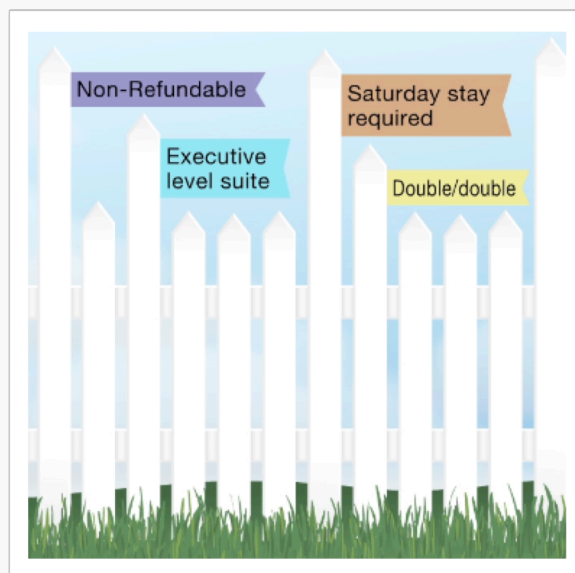
Indirect fences: consumer attributes

How can you differentiate and optimize the product you sell? By using rate fences. Rate fences allow you to charge different prices to different customer segments. *Physical* or *direct* fences are based on product attributes or characteristics and rely on direct differentiation of the good or service. *Indirect fences* (as the name indicates) are based more on consumer attributes.

Direct or Physical Rate Fences

Physical or direct rate fences are based on characteristics of the product, such as the view from a certain class of hotel room. For the firms that control them, these characteristics present opportunities to charge different rates for similar products. We see an extreme example of a direct rate fence in the airline industry, where customers can select from business class, with many perks, and coach class, with few or no perks. The cruise industry provides another example—customers pay differently depending on the physical locations of their rooms. Physical rate fences are based on physical characteristics such as:

- View
- King bed
- Two double beds
- Club floor
- Roominess of seat (business class versus coach class)
- Balcony
- Room or cabin size
- Car type (standard, economy, luxury, etc.)
- The first-class section of a ski resort with well-maintained conditions and a limited quantity of tickets



Indirect Rate Fences

Indirect price fences are based on characteristics of the consumer or the transaction, not the product. These fences can be divided into categories such as consumer, affiliation, and transaction.

Consumer

An example of a consumer rate fence is "residency," as with a cruise ticket. If a cruise is leaving from Florida in five days, discounting the price by \$500 for residents of a certain state may attract customers who would not ordinarily purchase. Offering the discount for New York residents probably will not attract a segment that wouldn't have purchased otherwise-if they can afford the expensive airfare to Florida, \$500 probably doesn't mean much to them. However, offering the discount to Florida residents (who do not have to buy airfare) will attract customers who may not have bought at the higher price.

Other examples of consumer rate fences include attributes such as:

- Age of the consumer
- Ability to pay (for example, students)
- Rewards program member or season pass holder discounts
- Loyal customer
- Corporate traveler

Affiliation

Examples of affiliation fences include:

- Institution with which the consumer is affiliated
- Affiliation (for example, military)
- Rewards program member

Transaction

These rate fences are determined by the transaction. For example, nonrefundable reservations or those made online or through a promotion can generate corresponding rate fences.

- Nonrefundable-Fees apply if you change this ticket.
- Refundable-Fares are fully refundable and may be changed at any time (fees may apply).
- Preferred upgrade-A "flexible" coach fare. If you're a Dividend Miles Preferred member and you buy this fare, you'll be upgraded immediately to first class (when seats are available and as long as the itinerary doesn't require a paper ticket).

Other Fences

- Place of purchase (for example, online purchase versus in-person purchase)
- Advance requirement
- Quantity sold
- Coupons (for example, to certain customer groups or email blasts)
- Time of use (for instance, weekday versus weekend. Golf fees are more expensive on the weekend. Weekend-segment people work during the week and can play only on the weekend.)
- Season of the year (for instance, high season versus low season)



Read: Common Mistakes Using Differential Pricing

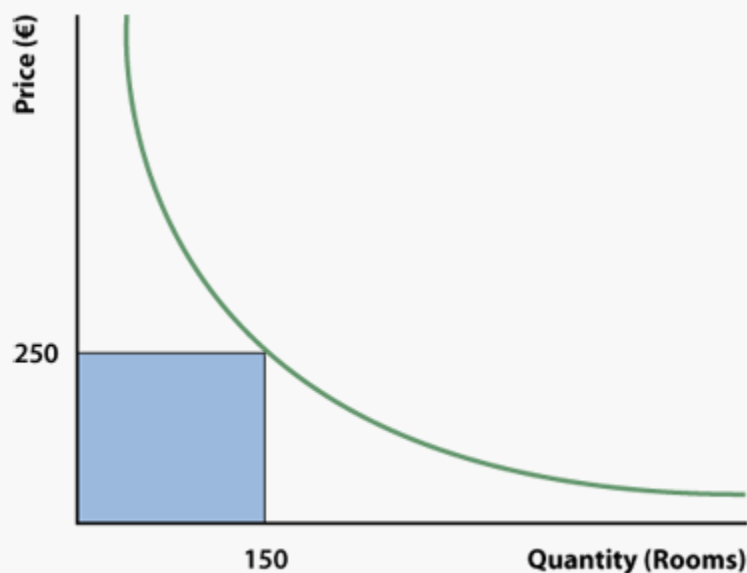
★ Key Points

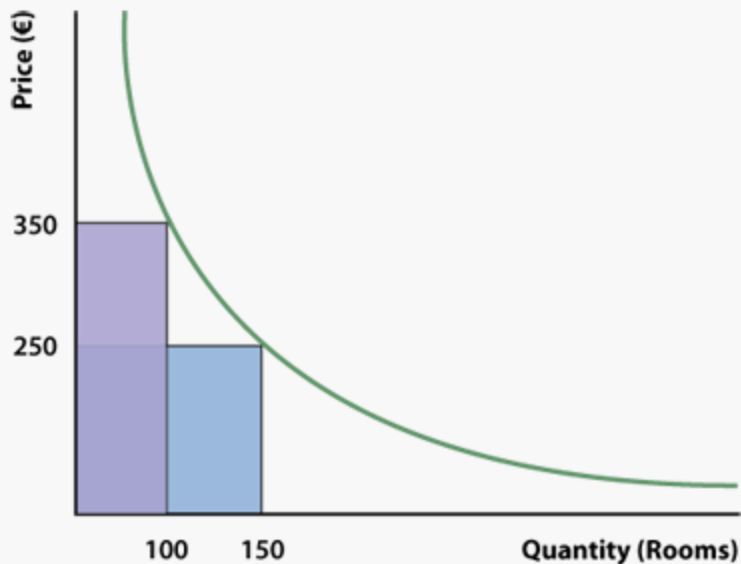
Segmentation and differential pricing are excellent ways to increase revenue

"Leakage" results in lower average daily rates

Segmentation and differential pricing are excellent ways to increase revenue. But not all firms use these techniques wisely. More often than not, organizations use differential pricing to target more price-conscious consumers, allowing them access to discounts in a selected fashion. The goal, however, is to increase profits. If a company executes differential pricing poorly using imperfect segmentation, consumers with a higher willingness to pay may gain access to lower rates. This problem, stemming from an ineffective rate fence, is sometimes referred to as *leakage*. It results in lower average daily rates.

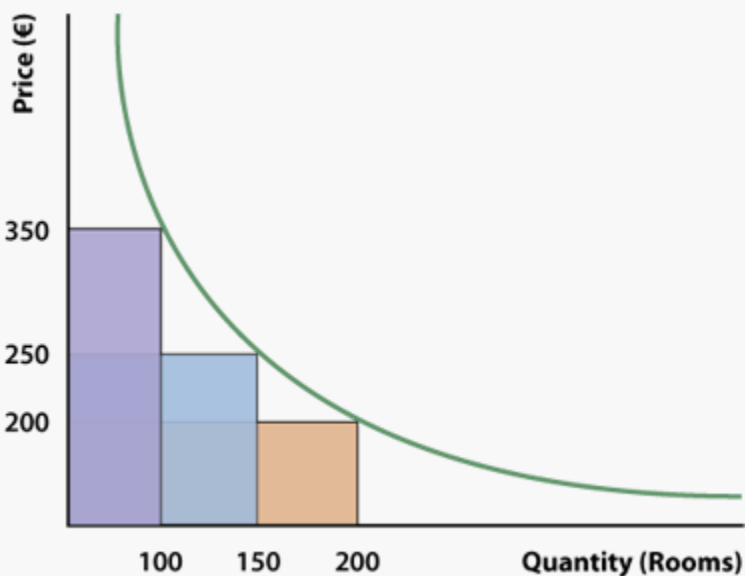
As a hospitality company, you may be tempted to discount prices in hopes of selling more units to make up for the lower price. But this approach may bring the average price for both you and your competitors down. For example, when Hotel Ithaca first opened they had just one rate class: €250. In an effort to increase ADR and RevPAR, a year later, they expanded that to two rate classes: €350 and €250.

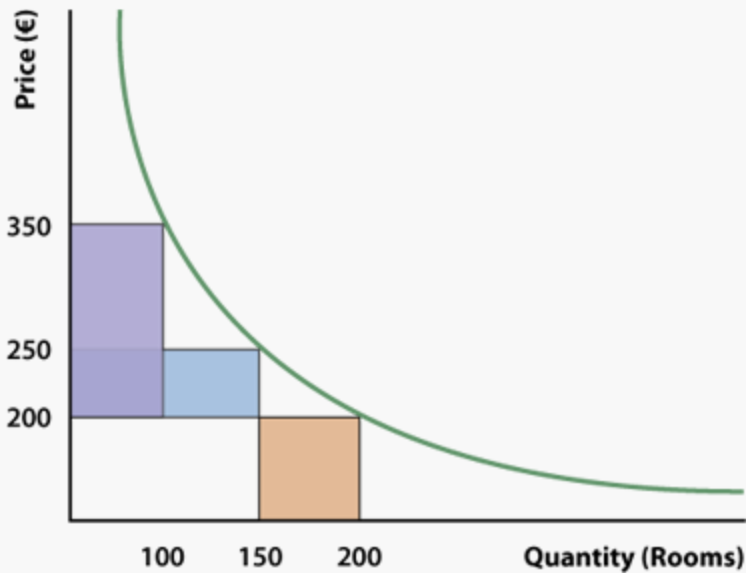




Not long afterward, in an attempt to capture more market share, the hotel decided to offer a third rate class at €200. Though this move would reduce the ADR, the hope was that RevPAR would increase. As part of the plan, the hotel placed restrictions on the discounted rooms. Specifically, customers were required to purchase 30 days in advance, and those purchases were nonrefundable. Unfortunately, this rate fence did not work out as intended.

The hotel soon found that some of its customers, those who would normally pay €250 (or €350), paid only €200. That is, there was leakage of the €250-paying customers into the €200 category with a less-than-anticipated increase in volume. The lower rate did entice new customers for whom the €250 rate had been too high. However, the rate fence was still ineffective because the increase in demand was not enough to offset the lost contribution from €250-paying customers who were able to pay €200.



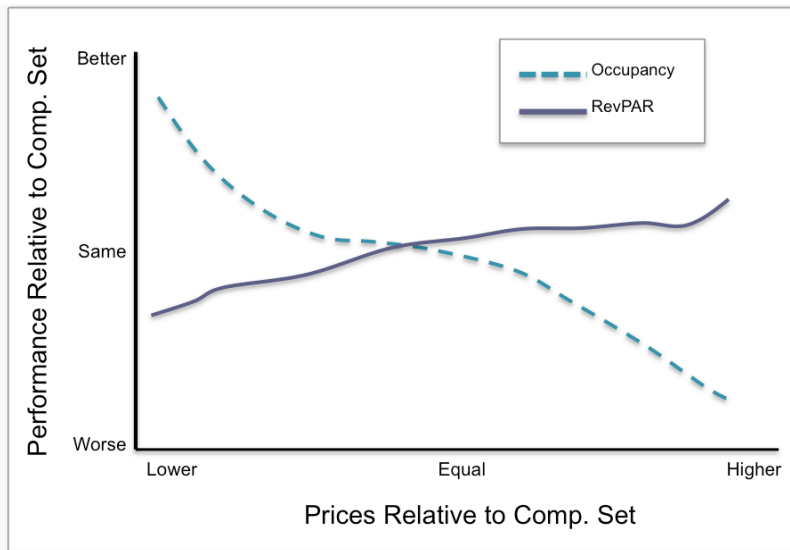


The figures above illustrate the problem. The area to the right of 150 is new demand created by the €200 rate. Leakage can occur from two regions. First, the area below €250 and above €200, between 150 and 100, consists of some customers who are willing to pay €250 but now pay €200.

Second, the area above €200 and below €350, to the left of 100, consists of some customers who are willing to pay €350 but now pay €200 (some of these customers may have also been paying €250 if the restrictions on the €250 rate were also imperfect).

A company may choose to decrease its average price as a strategic move, but it should do so only if it can increase its RevPAR. If a hotel lowers its rate and its nearby competitor does the same, it will maintain the same market share but at a lower ADR. A company may choose to lower its average price as a strategic move, but it should do so only if it can realize a significant increase in occupancy. That is, it can lower its the ADR but must also increase its RevPAR.

Firms too often structure restrictions in an effort to attract lower-value consumers. That is, they try to grow demand instead of attempting to extract the consumer surplus by getting current guests with higher willingness to pay (WTP) to pay closer to their WTP price. To extract customer surplus, firms use fences such as value-added packages that include free breakfast or Internet and are priced higher.



Empirical evidence suggests that firms pricing higher than their competitors tend to receive a RevPAR premium--the occupancy decline is more than offset by price increases. The adjoining figure summarizes data collected by Smith Travel Research (STR). The figure is based on data collected from 6000 properties over three years. The chart, comparing the annual ADR (horizontal axis) to occupancy and RevPAR (two series graphed) shows that avoiding lowering prices with imperfect fences (maintaining higher relative prices) may be a better strategy in certain circumstances.

STR tracks supply and demand data for the hotel industry and provides market share analysis data. For further details on the data and study summarized in this figure see [Competitive Hotel Pricing in Uncertain Times](#)," by Cathy A. Enz, Linda Canina, and Mark Lomanno.



Read: Combat Market Dilution/Leakage

Historically, major airlines have used rate fences to create segmentation. These fences included 7-, 14-, and 21-day advanced purchase restrictions, a round-trip purchase, and a Saturday-night stay. See Table 1.

Fare Code	Dollar Price	Advance Purchase	Round Trip	Sat. Night Stay	Percent Nonrefundable
Y	\$400	---	---	---	---
B	\$200	7 day	Yes	---	50%
M	\$150	14 day	Yes	Yes	100%
Q	\$100	21 day	Yes	Yes	100%

Table 1: Segmented Fare Classes

In response to low-cost airlines that operated point-to-point one-way flights (such as JetBlue), major carriers began to allow customers to combine two one-way tickets to create a round-trip ticket and eliminated the Saturday stay requirement. As a result, major carriers could no longer segment customers based on one-way flights or itineraries that had a Saturday night stay. Dilution started to occur because segmentation was not perfect. Customers who were willing to pay more were able to buy lower-priced fares because the restrictions (embedded with lower fares) no longer inhibited their purchases. Airlines saw the demand for B class move down to M class and people willing to pay \$200 paying only \$150. See Table 2.

Fare Code	Dollar Price	Advance Purchase	Round Trip	Sat. Night Stay	Percent Nonrefundable
Y	\$400	---	---	---	---
B	\$200	7 day	---	---	50%
M	\$150	14 day	---	---	100%
Q	\$100	21 day	---	---	100%

Table 2: Reduced Segmentation

Mileage Accrual and Top Tier Benefits	Tango	Tango Plus	Latitude	Executive	Executive Flexible
Air Canada Status Miles accumulated ?	25% non-Status Aeroplan Miles	100%	100%	150%	150%
Travel Experience	Tango	Tango Plus	Latitude	Executive	Executive Flexible
Priority check-in, baggage handling and boarding ?			✓	✓	✓
Access to Maple Leaf Lounges ?	+\$45 CAD	+\$35 CAD	+\$30 CAD	✓	✓

Some airlines have been more successful in reversing this trend than others. Air Canada, for example, created more innovative restrictions by giving each fare class a name to which people can relate, in essence branding the product classes. They moved away from four fare classes--Y, B, M, Q--and created five classes. The new fare classes are called Tango, Tango Plus, Latitude, Executive, and Executive Flexible. Each class presents the customer with a set of attributes rather than just a price. For example, customers who select Latitude class earn more bonus miles for travel than Tango class and they have access to priority check-in. Another distinction is access to the airline's lounge. The Executive classes are not charged incremental fees; Tango through Latitude classes are charged.

This segmentation is not very different from what we typically expect from an airline product, but now it's associated with a name instead of a price. By simply giving the classes names and assigning them different qualities (cancellation fees, loyalty miles, advance check-in, etc.), Air Canada branded the fare classes and created more concrete differentiation. It wanted consumers to ask themselves: "Is it worth selecting this to get my miles? Is it worth selecting this to get priority check-in?" Now consumers are selecting based on attributes as well as price. This has led to significant revenue gains for Air Canada.



Watch: **Grand Casino de France Auditorium Seating**

Trying to adjust prices appropriately is a challenge across the hospitality industry, as Professor Anderson explains in this example of the Grand Casino de France Auditorium and its seating prices.

Tool: Auditorium Pricing Review

 [Download the Tool](#)

[Auditorium Pricing Review](#)

In the previous exercise, your challenge was to help the casino management develop a plan to maximize auditorium revenue given its new seating configuration. Capacities and demand at €100, €200, and €300 were summarized for you, and your assignment was to analyze revenue using different pricing strategies. Download the Auditorium Pricing Review to examine how we reach the calculations.



Activity: What's Your Opinion?

Take this quick poll and then click *See previous responses* to see the results.

Read: Prospect Theory

★ Key Points

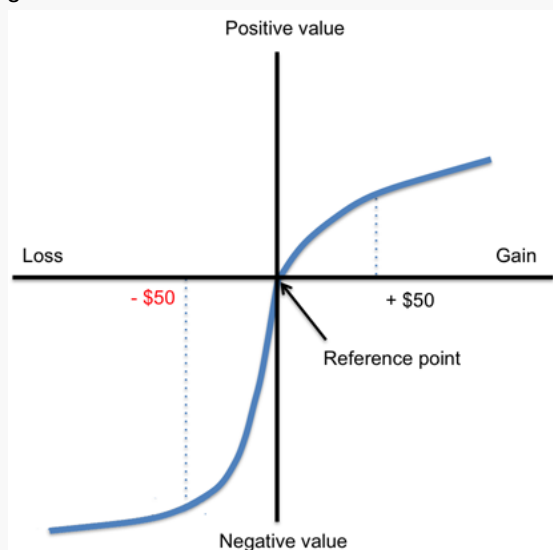
"Prospect theory" examines how consumers make decisions

Losses have more emotional impact than equivalent gains

Once a consumer has agreed to pay: paying a little more is not difficult

How firms display or list their prices dramatically influences what customers buy and how much they spend. Although our lowest price may dominate our marketing communications, ideally we don't always want customers to pay the lowest available price. Additionally, most firms in the hospitality industry attempt to up-sell a customer to generate more revenue. A hotel may try to upgrade a standard room to a suite; a car rental agency may upgrade a customer to a luxury car or try to sell amenities such as a refueling package.

How you answered the previous poll illustrates an economic theory referred to as *prospect theory*. If you were to use a purely logical approach to answer, you would pick either A in both situations or B in both situations. In most cases, however, a significant number of people switch their preference from A to B or B to A as they move from question 1 to question 2. Quite often, people choose to receive the cash outright rather than take their chances at the game in question 1, but they take a substantive risk at a potentially large loss rather than knowing for sure that they are going to lose money in question 2. This finding is interesting because, logically, if you are taking a 50:50 chance at the game in question 1, you should be willing to take an 80:20 chance to play the game in question 2. You need to understand prospect theory to know how to display prices to discourage purchase at the lowest available price and to understand how to up-sell using upgrades to increase revenue.



Prospect theory (Kahneman and Tversky, 1979) argues that consumers make decisions based on the potential value of a loss or gain compared to a reference point, not compared to the actual value of the good or service (value is associated with anticipated changes in well-being). According to prospect theory, losses have more emotional impact than equivalent

gains. The figure to the right illustrates the perceived impact of a \$50 gain versus a \$50 loss. Notice that the changes in state of being (positive or negative value) are different for the same absolute change: the negative value of a \$50 loss is perceived to be greater than the positive value of a \$50 gain.

The figure also shows that the marginal change in well-being for gains is different than for losses. Changing from \$110 to \$120, for example, is almost as pleasurable as (actually, slightly less than) going from \$10 to \$20. Losses, however, tend to exhibit much stronger decreasing marginal impacts. Losing \$10 is painful when going from \$20 to \$10, but the incremental pain felt when going from \$110 to \$100 is considerably less. Thus, once a consumer has agreed to pay a certain amount of money, getting the consumer to pay a little more is not difficult.

D. Kahneman and A. Tversky. 1979. "Prospect Theory: an analysis of decision under risk," *Econometrica* 47: 263-291.



Watch: **Ways to Communicate**

Now we'll examine the three facets of prospect theory that relate to pricing.

You are at a restaurant and the waiter hands you a wine list with two options for the house merlot:

- Flying Goose Merlot €35
- Flying Goose Merlot Reserve €45

Which wine do you choose?

WINE LIST

House Merlot

Bottle

Flying Goose Merlot.....	€35
Flying Goose Merlot Reserve.....	€45



You're at the same restaurant and you receive this this modified wine list:

- Flying Goose Merlot €35
- Flying Goose Merlot Reserve €45
- Flying Goose Merlot Premium Reserve €55

Now which wine do you choose?

WINE LIST

House Merlot

Bottle

Flying Goose Merlot.....	€35
Flying Goose Merlot Reserve.....	€45
Flying Goose Merlot Premium Reserve....	€55



The vast majority of people who select the €35 wine from the first list switch to the €45 wine in the second list. This is an example of reference pricing--the customer purchases the wine based on the price in relation to the other listed prices rather than to the wine itself. The way a business communicates prices (as well as the options available) influences our choices.

Reference pricing is paramount in prospect theory. A reference price can come from a variety of sources.

- Memories of past prices

What consumers have paid in the past for similar products. For example, if the customer paid €35 for a midsize car rental in Nice he might expect to pay the same amount a month later.

- Prices set by brand leader

If McDonald's charges \$1.20 for a hamburger, customers expect to pay about the same at another nearby fast food restaurant.

- Price of related products and services

If airline coach travel from London to Paris costs €350, that helps create a reference price for airplane tickets for similar flights.

- The way the price is presented

For instance, a firm may advertise a product available for four simple payments of €25 rather than one payment of €100. Another approach is strike-through pricing: the old price has a line through it with the new, limited-availability, lower price beside it, as you can see in the ad below. This creates a sense of urgency to purchase. The ad in the illustration showing the reference pricing with strike-through pricing presents a gain, and the sale tag "Hurry! Offer ends soon!" and "Only 4 rooms left at this price" creates some urgency and potentially increases the likelihood that the consumer will book.

The image displays two screenshots of hotel listings from Expedia, illustrating pricing strategies. Both listings use strike-through pricing to show a discount and include urgency tactics.

Top Listing: The Nonsense Inn

- Header:** Sale • Stay 2 nights and save 20% off your stay!
- Image:** A yellow taxi in front of the hotel.
- Rating:** 3.8 out of 5 (865 reviews)
- Location:** New York (Broadway - Times Square) - Map
- Phone:** 1-866-264-5744
- Expedia Extras:** Save up to 50% off On Location Tours, TV & Movie
- Urgency:** Only 4 room left At this price
- Price:** ~~\$162~~ **\$130** avg/night
- Label:** Expedia Special Rate
- Button:** SEE DETAILS

Bottom Listing: Midtown Stay

- Header:** Sale • 72 Hour Sale: save up to 25% Hurry! Offer ends soon!
- Image:** A tall building in Midtown.
- Rating:** 4.2 out of 5 (1542 reviews)
- Location:** New York (Midtown West) - Map
- Phone:** 1-866-267-9053
- Expedia Extras:** Save up to 50% off On Location Tours, TV & Movie
- Urgency:** Limited rooms available
- Price:** ~~\$209~~ **\$157** avg/night
- Label:** Expedia Special Rate
- Button:** SEE DETAILS
- Label:** VIP

Bottom Banner: Sale • Overnight Sale! Act Now!

When a firm reduces the offered price below the reference point, the customer views this as a "gain"--the customer "gains" more for the offered price. On the other hand, if the firm increases the offered price from the reference price, the customer views it as a "loss."

Perhaps one of the major implications of reference pricing centers around universal discounting. During a downturn, firms often lower prices, and if a competing firm matches these prices, then the market price decreases. In essence the reference price for this market has now decreased. When demand picks up, consumers are accustomed to these lower prices, and it takes considerable time to increase prices as demand increases. It is much easier for firms to increase prices if they avoid reducing the reference price.

One example of stimulating price-sensitive demand while minimizing reference price effects is the tactic of offering a free night with the purchase of multiple nights at the standard rate- *Stay 3 nights, get the 4th night free*. In this example the hotel effectively drops prices 25% for a four-night stay, yet the posted price or reference price is still the original price. If demand is price sensitive, it should respond to our increased value offer.



Read: Prospect Theory and Upgrading

One of the most common applications of prospect theory happens daily in the hotel business. Hoteliers use prospect theory every time they attempt to up-sell guests to a better class of room or add some amenity for a small fee. These up-sells may be offered at check-in or online. With both approaches, the offer can be separated from the original purchase decision. For example, using the online approach, the upgrade offer appears after the customer selects the purchase and navigates to the checkout screen. The success of this strategy rests on one of the key tenets of prospect theory—it is easier to get customers who have already committed to purchase to spend an additional amount (the amount of an upgrade, for example) than it is to get them to make the more expensive purchase at the initial decision point.

Many airlines use this strategy during both online transactions and check-ins at the kiosk. They may ask customers if they want to upgrade to business class or to a refundable fare for an extra charge. This example displays how one firm communicates the benefits of the upgrade (gain) before stating the fee (loss).

ADD FLEXIBILITY TO BUSINESS CLASS

Enjoy the perks, keep the flexibility

- No fees when travel plans change
- Attentive service, luxurious surroundings
- First on, first off

☐ **Upgrade to Flex Business** for only **\$1772.80** more per person each way
Includes taxes & fees

The screenshot shows a yellow header with the text 'ADD FLEXIBILITY TO BUSINESS CLASS'. Below this is a section titled 'Enjoy the perks, keep the flexibility' with three bullet points: 'No fees when travel plans change', 'Attentive service, luxurious surroundings', and 'First on, first off'. To the right of the text is an image of two glasses of drinks on a tray. At the bottom, there is a checkbox followed by the text 'Upgrade to Flex Business for only \$1772.80 more per person each way' and 'Includes taxes & fees'.

Some strategies to gain revenue through online upgrading:

- Put time limits on the purchase; for example, "Act now to receive a free upgrade to a King Suite" or "Price good until 8 PM!"
- Clearly state how much the customer is saving (gaining) by purchasing or upgrading now. Using a strike-through is a good way to do this.
- Offer the upgrade at "checkout." Many Web site designs can provide offers for items related to the consumer's purchase in the Web site's pop-ups, banners, or sidebars once the consumer is at "checkout" or is checking the "shopping cart." This approach effectively uncouples the purchase and upgrade decisions.



Watch: **Upgrading Online**

Several strategies have proved successful in getting consumers to upgrade when placing orders online, as Professor Anderson explains.



Read: **Benefits of Upgrading**

★ **Key Points**

Consumers may upgrade to get the best-quality product or service

Upgrading can increase profits and improve guest loyalty for sellers

Online upgrading offers ease of implementation and management

Consumers are often motivated to upgrade a product or service by the desire to get the best-quality product or service for their money. In addition to providing benefits for consumers, upgrading can increase profits and improve guest loyalty for sellers, and online upgrading also offers ease of implementation and management.

Increased profits

Properly structured upgrade strategies provide the opportunity to increase profits dramatically by selling off product lines that are generally undersold. After you have effectively segmented your product line, upgrades help you combat against people buying down to lower rates or lower-priced products. Even if the upgrade is steeply discounted or free, the next time that consumer comes to buy, he or she is more likely to purchase the same grade of product or class of service that the previous transaction was upgraded to in the past. Generally, people price shopping online are looking for a deal. Customers perceive the offer of an additional product or a discounted luxury item as a gain, and that can lead to a revenue boost for you.

Improved customer loyalty

Upgrading can help an organization improve guest loyalty. An effective upgrade strategy can strengthen guest relationships and loyalty by providing increased value. Also, because you are exposing your premium product or service to a wider audience, you increase future demand. At the front desk, you could upgrade a returning guest to free up a room valued at a lower amount. This helps develop brand loyalty by rewarding guests who stay frequently with a complementary upgrade to a higher-priced room.

An online upgrade or loyalty system can further increase both your revenue and your customers' satisfaction. Online, you can show loyal customers what their loyalty will provide them in the form of a free upgrade. You can then show them the next greater upgrade, which they can purchase for a small fee. You can extract more revenue from your loyal customers by converting your top-tier loyalty consumers from complementary upgrades to paid upgrades. At the same time, you keep them happy by providing what they view as a gain: a nicer, better product or service, for just a little more than they originally planned to spend.

Exclusive online "clubs" for frequent buyers and loyal customers are another way to use upgrades to improve loyalty and increase revenue. You can offer members of these groups perks such as free meals, discounted rooms for their birthdays, percentage-off discounts on their purchases, or guest passes for friends and family to encourage new consumers.

Prime examples of using upgrade programs to increase loyalty are frequent-flyer airline programs. These programs provide free flights, free upgrades to first and business class, free drinks and meals, and many other benefits to increase

customer loyalty; they increase revenue by requiring a certain number of purchases (ensuring that the customer will keep coming back) to earn the benefit.

Easy to implement and manage online

Online upgrade programs additionally provide the benefit of easy implementation and management. If it's online, you don't have to train people to solicit the upgrade purchases. Generally, with online upgrade programs, you incur no up-front charge for setup, implementation, or maintenance, and you have final authority over the upgrade and pricing structure. An online solution requires minimal daily management and demands little implementation time or effort. You can quickly generate additional revenue at little to no cost.



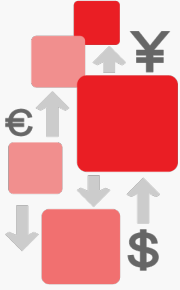
Tool: Upgrading at Ideal Car Review

 [Download the Tool](#)

[Review Spreadsheet](#)

In the last practice exercise you determined how many cars Peter should keep for "true" luxury customers. If you had trouble with the exercise, please click the link on the right to download and review the spreadsheet with the completed analysis. When you are ready, try the quiz again.

Module Introduction: Dynamic Pricing and Price Optimization



If performed properly, dynamic pricing (adjusting prices throughout the booking window in response to demand) complements price segmentation and leads to increased overall revenues and profits. If performed poorly, dynamic pricing can erode revenues and encourage consumers to become strategic or to time their purchase in an effort to obtain goods or services as cheaply as possible. In this module, we discuss how dynamic pricing can be paired with segmentation to increase profits and avoid leakage.

By the end of the module you will be able to:

- Use booking curves to assess how different segments reserve inventory over the booking window
- Compare booking curves across segments to determine when each segment tends to make reservations
- Predict how customers will react to dynamic pricing
- Discuss how to best structure prices available online



Read: **Variable Pricing Versus Dynamic Pricing**

We've been discussing variable pricing, but let's compare that with a different way to set prices: dynamic pricing. Variable pricing for a particular product or service involves setting multiple price points for distinct market segments. The prices are preplanned, and all prices could potentially be offered simultaneously. For example, on June 3, a customer checking room prices at the Milton Hotel for a July 3 stay may find that a single costs €135, the double costs €157, and the king suite costs €200 per night. These are preplanned, variable prices for a room in that hotel.

By contrast, dynamic pricing involves an expectation that prices will change over time in response to demand uncertainty. Usually you decrease price in an attempt to stimulate demand and increase price in response to strong demand. For example, on June 3 a customer calling the Milton Hotel to request a king suite for July 3 (one month from the request date) may receive a quote of €200 per night. Another customer calling on June 25 to request a king suite for July 3 (one week from the request date) may receive a quote of €250 per night. That's dynamic pricing: the same room sells for different prices depending on the date of purchase.

The airline industry is often cited as a dynamic pricing success story. In fact, it employs the technique so artfully that most of the passengers on any given airplane have paid different ticket prices for the same flight. On a flight from Ontario, Canada, to Los Angeles, the traveler in seat 7A may have paid \$470, whereas the traveler in 7B may have paid \$640. The difference in ticket price depends on when these passengers booked their flights.



Watch: [Introduction to Booking Curves](#)

Booking curves help us understand how demand is evolving over time and what the opportunities are to capture with a dynamic pricing strategy, as Professor Anderson explains.

Read: **How Booking Curves are Created**

One of the most important sources of data we have to support dynamic pricing decisions is booking curves. When we look at them, one goal is to be able to determine how people book over time, and then compare the booking behaviors of different segments over time. We define segments by such factors as rate class, length of stay, or channel (that is, through an online travel agent site or by word of mouth). Ideally we construct booking curves for all segments in an effort to identify possible leakage or demand losses if we change prices (that is, if we employ dynamic pricing). Booking curves provide insight into pricing opportunities and also show when dilution may be a problem.

Table 1 displays the ROH for the day of arrival (0) and 7, 14, 21, and 28 DBA over the course of five stay dates (say the last five Mondays). At the bottom of Table 1 we calculate the Average ROH for each of the DBAs (0, 7, . . . 21); we also display the average as a Percentage of Average ROH at arrival (DBA 0).

	A	B	C	D	E	F
1		Days Before Arrival (DBA)				
2	Stay Date	0	7	14	21	28
3	7/15	150	85	60	30	20
4	7/22	175	120	80	30	10
5	7/29	200	145	55	30	10
6	8/5	170	100	85	20	10
7	8/12	120	80	55	30	5
8						
9	Average ROH	163	106	67	28	11
10	Percent Average ROH	100.0%	65.0%	41.1%	17.2%	6.7%

Table 1

Table 2 shows the calculations used for the Average ROH and the Percent Average ROH. In this table, we calculate Average ROH by entering the formula =AVERAGE(B3:B7) in B9 and then copying that formula to cells C9 through F9 (C9:F9). To calculate the Percent Average ROH, we entered the formula =B9/\$B\$9 in B10 and then copied it to C10:F10.

	A	B	C	D	E	F
1		Days Before Arrival (DBA)				
2	Stay Date	0	7	14	21	28
3	7/15	150	85	60	30	20
4	7/22	175	120	80	30	10
5	7/29	200	145	55	30	10
6	8/5	170	100	85	20	10
7	8/12	120	80	55	30	5
8						
9	Average ROH	=AVERAGE(B3:B7)	=AVERAGE(C3:C7)	=AVERAGE(D3:D7)	=AVERAGE(E3:E7)	=AVERAGE(F3:F7)
10	Percent Average ROH	=B9/\$B\$9	=C9/\$B\$9	=D9/\$B\$9	=E9/\$B\$9	=F9/\$B\$9

Table 2

To facilitate decision making, we convert this data from a matrix into a graph or booking curve. The booking curve graph makes it easier to visualize the booking pace at the firm.

To create a booking curve of the Average ROH for the DBA:

1. Use your mouse to select cells B9:F9
2. Locate the Insert chart option on your version of Excel
3. Select the Line graph option
4. Right-click the line graph, click Select Data
5. Click the x-axis labels and select cells B2:F2 and click OK
6. Figure 1 shows this graph

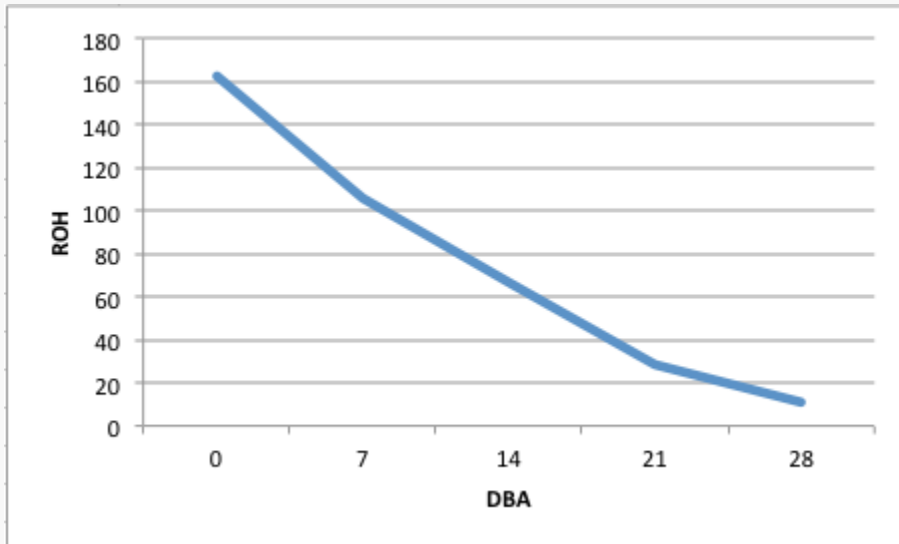


Figure 1

We most often use booking curves in combination, to compare one rate class to another or one length of stay to another, for example. Because one rate may have substantively more (or fewer) bookings than another, it's best to use percentages of the averages. You find this percentage by dividing all the averages by the maximum average ROH. In Table 1, we divide the averages by 163 (the maximum average on the day of arrival). Now, instead of graphing the averages, we create the booking curve by graphing the percentages.

To create a booking curve of the percent average ROH for the DBA:

1. Use your mouse to select cells B10:F10
2. Locate the Insert chart option on your version of Excel
3. Select the Line graph option
4. Right-click the line graph, click Select Data
5. Click the x-axis labels and select cells B2:F2 and click OK
6. Figure 2 shows this graph

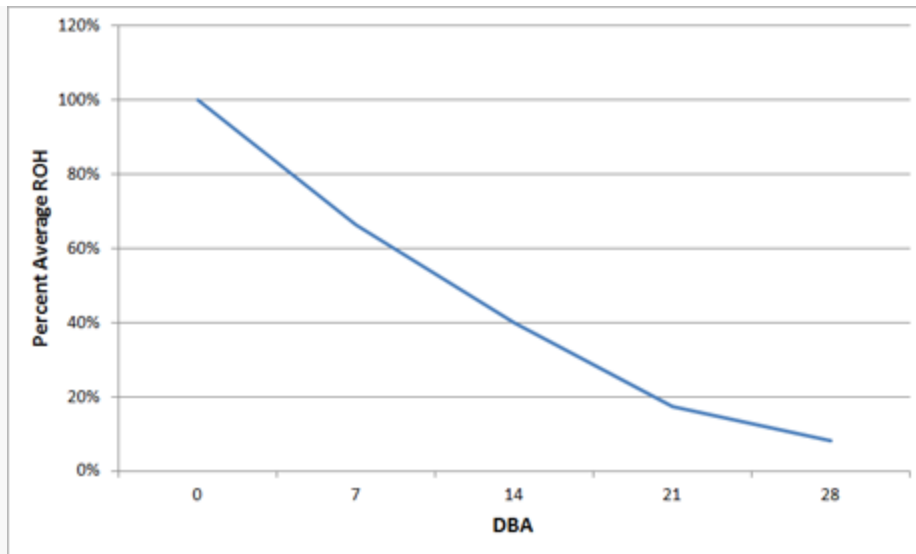


Figure 2

If we had data on multiple segments, we could then plot these booking curves (as percentages) on the same graph to compare when each booked. If you do this for your own hotel and you don't find any major differences among the graphs, then perhaps you need to revisit your segmentation!

In the following exercise, you download a spreadsheet that includes detailed instructions for creating the booking curves and you create your own booking curve.



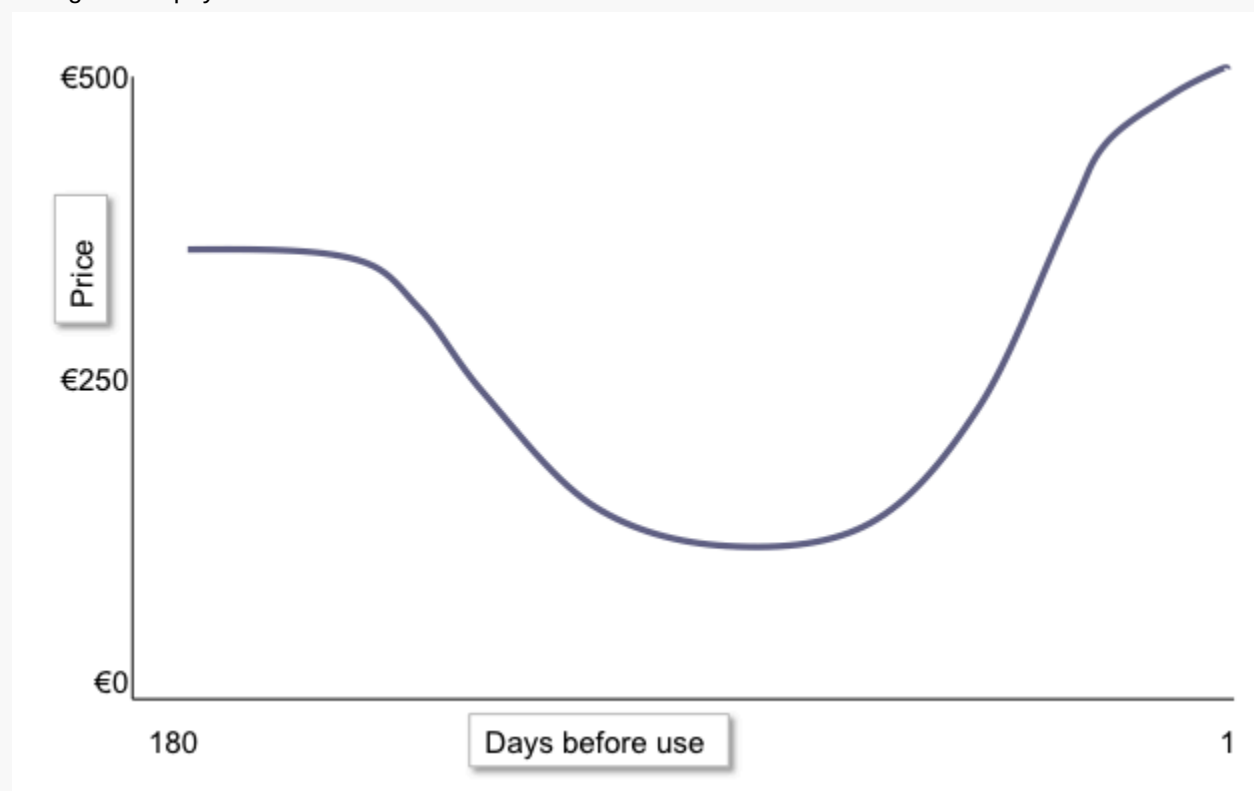
Watch: **Using Booking Curves**

What information can you get from booking curves? Sometimes, booking curves can test the logical hypotheses that you have put forth from a marketing standpoint.

Read: Consumers and Dynamic Pricing

Dynamic pricing by definition indicates that prices, in response to demand, evolve over the booking window. As dynamic pricing becomes more commonplace, consumers may learn to anticipate price changes and attempt to time their purchases to get better prices. They may see that, in general, prices do not change monotonically (that is, prices do not either consistently increase and never decrease or consistently decrease and never increase) as the service date approaches.

The accompanying figure shows a typical price curve for many service firms deploying a dynamic pricing strategy. As the curve shows, prices often are higher early in the booking cycle, decrease in reaction to demand uncertainty, and then increase in the final few days or weeks prior to service, in response to later-arriving business travelers with greater willingness to pay.



Such a price curve works well when

- Risk-averse consumers willing to pay a higher rate book early to ensure they get access to service (perhaps for an annual vacation)
- Consumers looking for a discount book in the midrange time frame—for an airline typically two to six weeks prior to departure
- Late-arriving consumers exhibit greater willingness to pay owing to their need to travel and their inability to have flexible plans or plan in advance

When customers follow this pattern, firms can close discount fares or rates after a certain time period and increase rates as the service date approaches.

But the use of dynamic pricing may change consumer behavior. If consumers anticipate price changes, they may

postpone purchase decisions even though they may be happy with current prices. Before price-shopping moved online, it was difficult for consumers to compare prices across firms (to compare airline A to airline B, for example) and over time (comparing today to next week, for instance). Now it is becoming increasingly easy for consumers to see how prices evolve over time. The Internet makes it easy for buyers to look at the pattern of pricing and demand and to evaluate where pricing currently is in the U-shaped curve.

As a result of these nonmonotonic prices, consumers are perpetually checking prices to try to get the best deal. As a service provider, you want to encourage customers who are willing to purchase from you to decide right away, not to wait for a better price. If the customer does not decide right away, he or she may get access to lower prices later. If your prices don't decrease and your competitor's prices do, you run the risk of losing the customer.



Watch: **Strategic Consumer Behavior-Airlines**

To create an effective dynamic pricing strategy, you must understand consumer behavior. With the availability of online tools, today's consumers are more strategic in their purchasing decisions than ever before. It is therefore critical that firms understand their customers' decision processes and the tools they are using to make those decisions. This information can be used to strengthen the firm's dynamic pricing strategy.

When consumers book and shop for airline tickets, they rely on metasearch sites, which aggregate results from many sites and deliver best results for consumers. This makes shopping easier for consumers, but creates new challenges-- and opportunities-- for the industry.



Watch: **Strategic Consumer Behavior-Hotel**

Increasingly, consumers are looking to metasearch sites, such as Expedia, to aggregate the search results when search, shop, and book online, as Professor Anderson explains.

Read: **Enabling Strategic Reservations**

Consumers now have access to online rate comparers, third-party companies that enable price shopping, as well as a series of new entrants that facilitate consumer transactions at the lowest possible prices through a series of cancellations and rebooks. These new entrants continue to search the Internet for lower prices even after you have made your reservation, cancelling and rebooking your reservation automatically if they find a better a price.

Sometimes these online offers are predominantly for marketing purposes. For example, Orbitz's price-assurance policy states that it will issue you a refund if, after you book with them, another customer gets the same thing at a lower price. But how does this really work? After your reservation is confirmed, Orbitz tracks to see if any other Orbitz customer subsequently books the same flight or hotel on Orbitz at a lower price. If that happens, they *will* issue a refund to you for the difference. However, although the refund comes out of the pockets of Orbitz (not the airline or hotel), Orbitz is risking very little by making this offer. For you to receive a refund, another customer must book exactly the same room or flight with the same legs on the same date and time-a relatively unlikely event.

Two newer entrants target rental cars and hotels specifically. Like Orbitz, they compare prices. But they extend the Orbitz model in that, if they find better prices for your desired service, they automatically cancel and rebook your reservation at the newly found lower price. Let's look at these services next.

To initiate a request through the rental car service, the customer specifies a location, car type, dates, and brand-just like with other rental car services. He or she may then make a tentative reservation. Subsequently, the service monitors prices daily between the time of the initial reservation and the car pickup, automatically cancelling and rebooking the reservation if prices decrease. In essence, this service has automated strategic consumer behavior. This is facilitated by the fact that most rental car firms have no fees or penalties associated with cancelling a reservation or not showing up for a reservation.



The other service, similar to the one for rental cars, is for hotel rooms. Through it, customers make a reservation at their hotel of choice (room type and stay dates). If a lower price becomes available, this company automatically cancels and rebooks the customer at the lower price.

These last two examples are distinct from Orbitz because the supplier bears the risk of this behavior. These services physically cancel the original reservation and replace it with a new one at the lower price. The supplier (rental car or hotel) pays the "cost" of this strategic rebook behavior. Orbitz, on the other hand, rebates the original customer out of its commissions.



Automated cancel-and-rebook service providers and online rate comparers have implications for service providers:

- Consumers quickly learn about pricing mistakes.
- Consumers can adapt to pricing strategies.

- Purchasing decisions may become more focused on price, with decreasing emphasis placed on brand loyalty.

In summary, it is a great time to be a consumer. But it's not a great time to be a company with a poor pricing strategy-a strategy that misuses revenue management-related actions. Armed with a good pricing strategy and an understanding of these consumer resources, a firm can use these rate comparers for its own benefit.



Read: **Thank You and Farewell**

Congratulations on completing the Segmentation and Price Optimization course. The course examined techniques available for analyzing and setting prices, given that technology has revolutionized the way we do pricing. We focused on variable and dynamic pricing strategies, and how to make smart pricing decisions based on market segmentation. I hope to see everyone in the remaining courses in the series.

Thanks.

Chris Anderson

Stay Connected

