



# **37000: Marketing Strategy**

Brad Shapiro

[Bradley.Shapiro@chicagobooth.edu](mailto:Bradley.Shapiro@chicagobooth.edu)

### Exhibit 3: Salient Pricing Information

| <b>COST INFORMATION (per server)</b> | <b>Electricity<br/>(annual cost)</b> | <b>Cost of<br/>Application<br/>Software<br/>Licenses</b> | <b>Labor (# of servers<br/>an "administrator"<br/>can manage)</b> |
|--------------------------------------|--------------------------------------|--|---|
| <b>Basic server</b>                  | \$250                                | \$750  | 40  |
| <b>High Performance server</b>       | \$400                                | \$750  | 20  |
| <b>Atlantic Computer</b>             | <b><u>Price per Server</u></b>       | <b><u>Cost per Server</u></b>                            |   |
| Tronn (Basic)                        | \$2,000                              | \$1,538  |   |
| Radia (High Performance)             | \$11,000                             | \$7,586  |   |
| <b>Ontario Computer</b>              |                                      |  |   |
| Zink (Basic)                         | \$1,700                              | \$1,214  |   |

#### *Other customer expense information:*

- Cost of Electricity: Charge for heating and cooling servers, etc.
- Cost of Software Application Licenses: Assume application software is licensed "per server." The average per server application software license is \$750. Examples of Application Software are supply chain management software, customer relationship management software, web application software. PESA is a software tool, not application software.
- Cost of Labor: A server administrator's annual salary is \$80,000.

The crest of the University of Chicago is visible on the left side of the slide. It features a shield with a book at the top containing the Latin motto "Vita Excolatur". Below the book is an eagle with its wings spread, perched on a branch.

# **37000: Marketing Strategy**

## **More On Pricing**

Brad Shapiro

[Bradley.Shapiro@chicagobooth.edu](mailto:Bradley.Shapiro@chicagobooth.edu)

# Ingredients to Good Pricing

- Consumer Preferences
- Marginal Costs
- Competition

# Boston, February 2015





# Example: iPad Release 2010

The New York Times

Technology

Search All NYTimes.com

Capital One 360

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE AUTOS

Search Technology

Go

Inside Technology

Internet Start-Ups Business Computing Companies

Bits Blog »

Personal Tech »

Digital Cameras Cellphones > ALL PRODUCTS

NORTHWESTERN UNIVERSITY

Kellogg


School of Management

inspiring growth

EXECUTIVE MBA

LEARN MORE >>

## Across the Country, Fans Gather for iPad



Nicole Bengiveno/The New York Times


At Apple's flagship store on Fifth Avenue in Manhattan, the ending point of a snaking line. [More Photos »](#)

By BRAD STONE

Published: April 3, 2010

SAN FRANCISCO — [Apple's](#) most devoted fans congregated on Saturday morning at stores around the country to pick up their latest object of desire: the eagerly anticipated [iPad](#).

**Multimedia**



Lines stretched for a few blocks in the morning hours at Apple stores in New York and San Francisco. Blue-shirted Apple employees passed out free

TWITTER

LINKEDIN

PRINT

REPRINTS

SHARE

BIRD MAN

LOCAL KNOWLEDGE. GLOBAL EXPERTISE.

Kellogg

EXECUTIVE MBA GLOBAL NETWORK

LEARN MORE >>

### Subscribe to Technology RSS Feeds

- Technology News
  - Internet
  - Start-Ups
  - Business Computing
- Bits Blog
  - Personal Tech
  - Pogue's Posts

### MOST POPULAR - TECHNOLOGY

EMAILED VIEWED

1. Bits: Apple Building Solar Farm to Power California Operations
2. Workout Test: Fitness Apps Vs. Trainer
3. Uncovering Security Flaws in Digital Education Products for Schoolchildren
4. Bits: IBM's Watson Turns Japanese and Moves Into Robots
5. Machine Learning: Test of Strength: Fitness Apps vs. Personal Trainers
6. Bits: F.C.C. Dissenter Takes On Net Neutrality Proposal
7. Bits: Apple Grabs 93% of the Handset Industry's Profit, Analyst Says



# **37000: Marketing Strategy**

## **Pricing II**

Brad Shapiro

[Bradley.Shapiro@chicagobooth.edu](mailto:Bradley.Shapiro@chicagobooth.edu)

# Before we get started

- Pricing is one of the most interesting topics in marketing.
- This lecture will cover a ton of ground at a reasonably superficial level.
- This will get you a taste of the topics that you could spend entire careers thinking about.
- If you like these topics, definitely take Prof. Dube's Pricing elective.



# Outline for Today

- More Behavioral Pricing
  - Sunk Costs and Hyperbolic Discounting
- Pricing to different segments
- Different prices over time
  - Skimming, Penetration Pricing
  - Promotions
- Different consumers, different prices
  - Direct segmentation
  - Indirect segmentation
    - Consumers self-select into purchasing the “right” product

# Summary From Last Time

- Think about gains and losses in terms of prospect theory
  - Framing, loss aversion, and reference prices
- Price as a signal of quality
  - Especially relevant when consumers haven't yet experienced the product (of course has limits)
- Price cues (sale signs, prices ending in '9') can be important
  - But can also be overused

# Sunk Costs

Imagine you go see a movie which costs \$10 for a ticket. When you open your wallet or purse you realize you've lost a \$10 bill. Would you still buy a ticket?

- You probably would. Only 12 percent of subjects said they wouldn't.

Now, imagine you go to see the movie and pay \$10 for a ticket, but right before you hand it over to get inside you realize you've lost it. Would you go back and buy another ticket?

- In the experiment, 54 percent of people said they would not.

The situation is the exact same. You lose \$10 and then must pay \$10 to see the movie, but the second scenario feels different.

# Sunk Costs

- The flip side
  - “A man joins a tennis club and pays a \$300 yearly membership fee. After two weeks of playing he develops a tennis elbow. He continues to play (in pain) saying 'I don't want to waste the \$300!'”

# Sunk Costs

**The New York Times**

<http://nyti.ms/1guU9xz>



---

TECHNOLOGY

## **Amazon to Raise Fees as Revenue Disappoints**

By DAVID STREITFELD JAN. 30, 2014

SAN FRANCISCO — Amazon investors might have finally heard the news they have been waiting for: The retailer is raising shipping fees.

Amazon has 237 million active customers but as a general rule makes almost no profit. Thursday's announcement that the company was

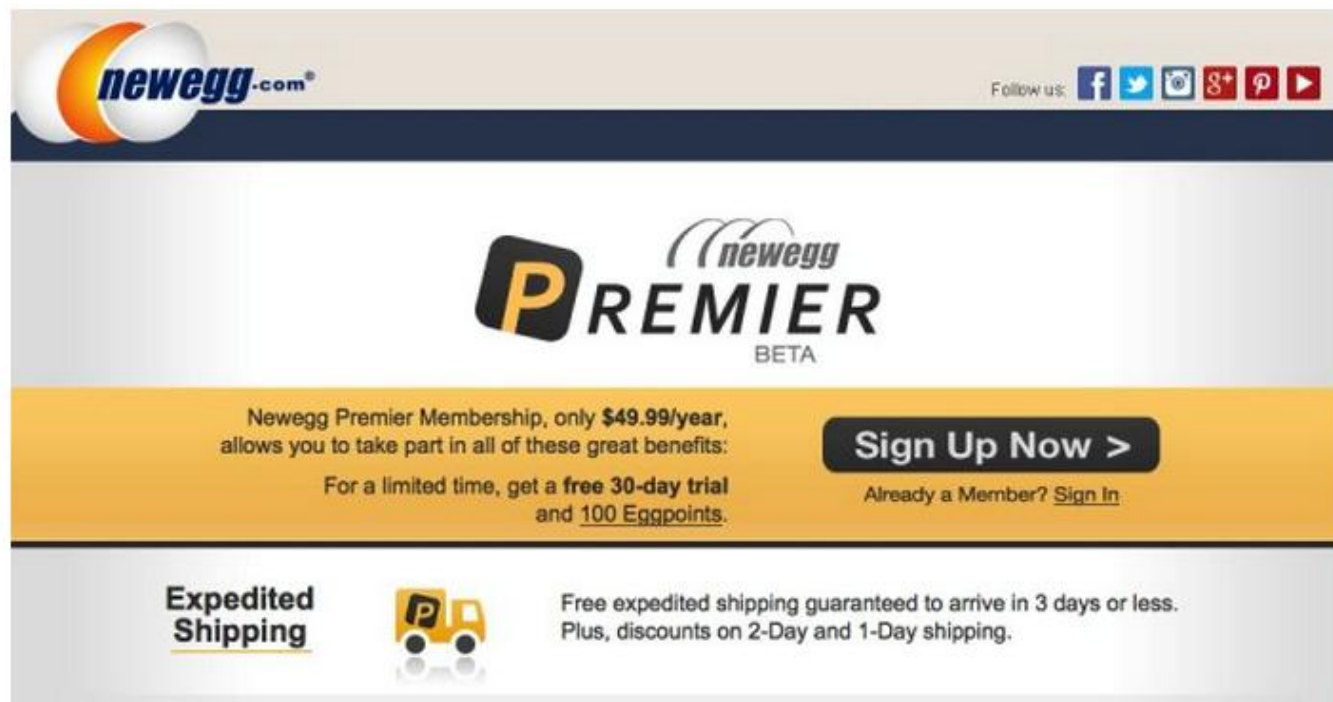
# Sunk Costs

## Newegg's answer to Amazon Prime: \$50 per year for expedited shipping

Meet "Newegg Premier," which also includes free and no-fee returns and more.

by Cyrus Farivar - Feb 5 2014, 10:25am CST

FINANCE MEDIA INNOVATION 86



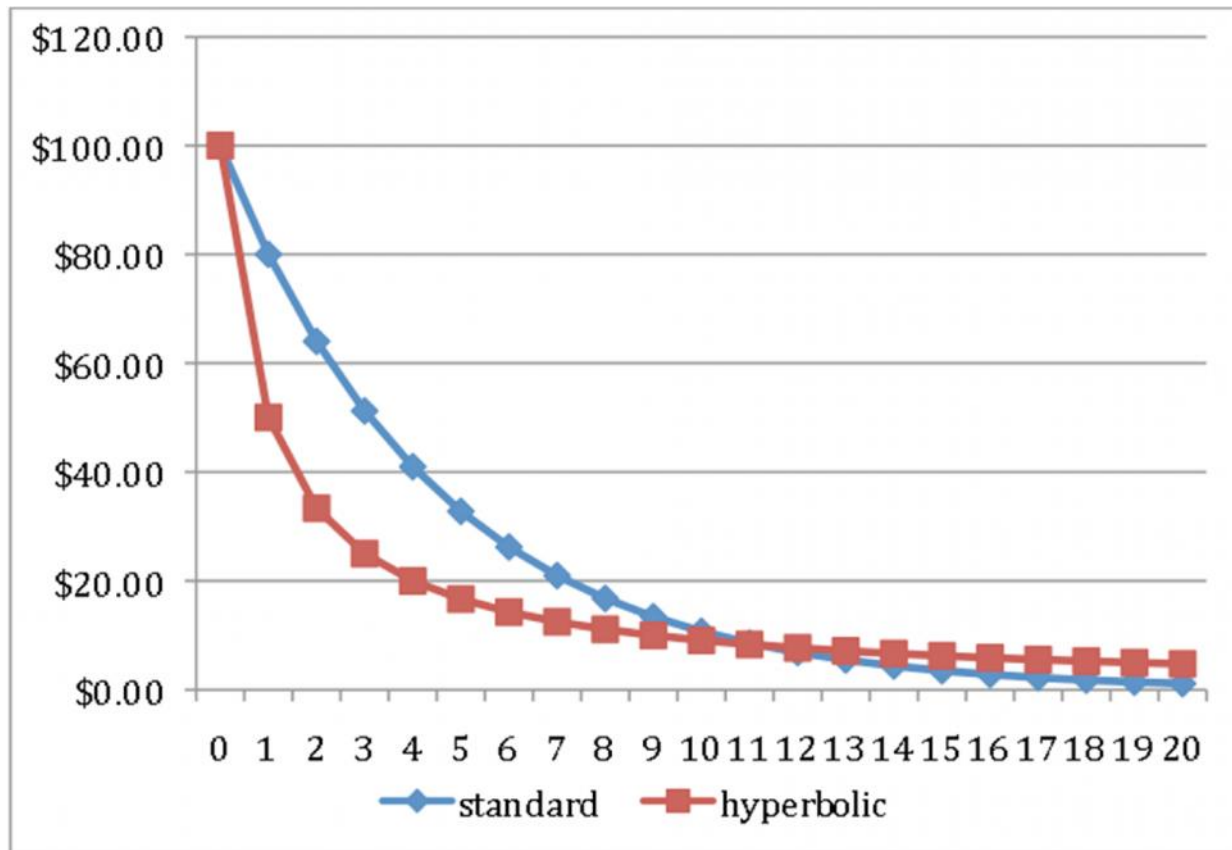
The banner features the Newegg logo in the top left corner. In the top right, it says "Follow us:" followed by social media icons for Facebook, Twitter, Instagram, Google+, Pinterest, and YouTube. The central text reads "newegg PREMIER BETA". Below this, a yellow bar contains the text: "Newegg Premier Membership, only \$49.99/year, allows you to take part in all of these great benefits: For a limited time, get a free 30-day trial and 100 Eggpoints." To the right of this text is a dark button that says "Sign Up Now >". Below the button, it says "Already a Member? [Sign In](#)". At the bottom left, it says "Expedited Shipping" with a small icon of a truck. To the right of this, it says "Free expedited shipping guaranteed to arrive in 3 days or less. Plus, discounts on 2-Day and 1-Day shipping."



# Hyperbolic discounting

- Would you prefer \$100 today to \$101 tomorrow?
- What about \$100 30 days from now or \$101 31 days from now
- Perhaps a more relevant example:
  - A nap

# Hyperbolic discounting

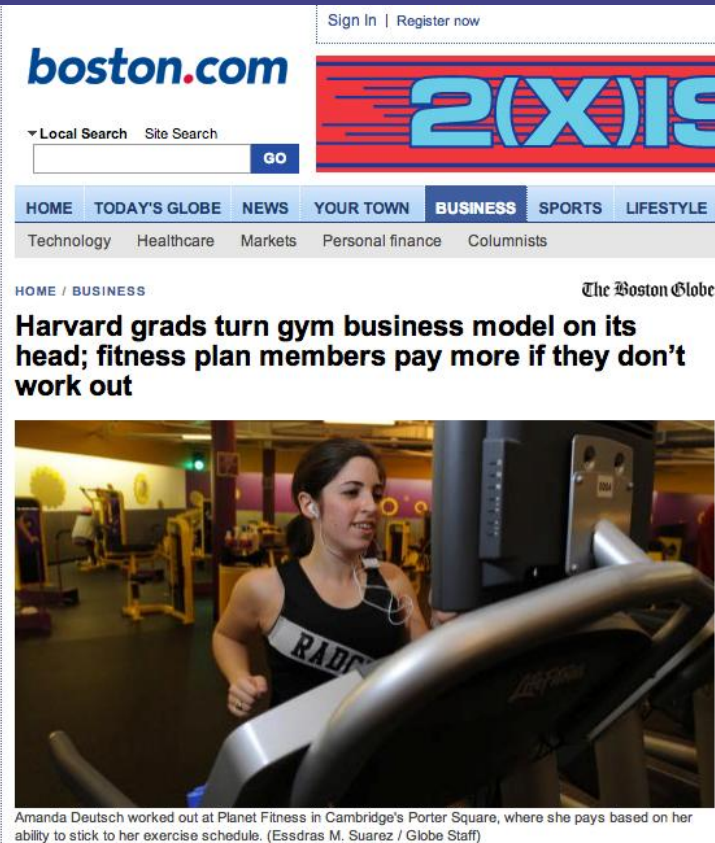


Beta/Delta preferences

# Hyperbolic Discounting

- Paying not to go to the gym:
  - “In the study, members were offered a \$10-per-visit package or a monthly contract worth \$70. More chose the monthly contract and only went to the gym four times a month.
  - As a result, they paid 70 percent more per visit than they would have under the plan they rejected. Why? Because people are too optimistic that they can become gym rats, which would make the monthly package "worth it."

# Hyperbolic



“Gym-Pact offers what Zhang calls motivational fees — customers agree to pay more if they miss their scheduled workouts, literally buying into a financial penalty if they don’t stick to their fitness plans.”

# Behavioral Economics / Pricing

- “A Fine is a Price”:
  - “Parents used to arrive late to collect their children, forcing a teacher to stay after closing time. We introduced a monetary fine for late-coming parents. As a result, the number of late-coming parents **increased** significantly. After the fine was removed no reduction occurred.”
  - “Prior to the imposition of a fine, about 25% of parents came late. When the fine was introduced, the percentage of latecomers rose, to about 33%. As the fines continued, the percentage of latecomers continued to go up, reaching about 40% by the 16th week”



# **37000: Marketing Strategy**

## **Pricing to Different Segments**

Brad Shapiro

[Bradley.Shapiro@chicagobooth.edu](mailto:Bradley.Shapiro@chicagobooth.edu)



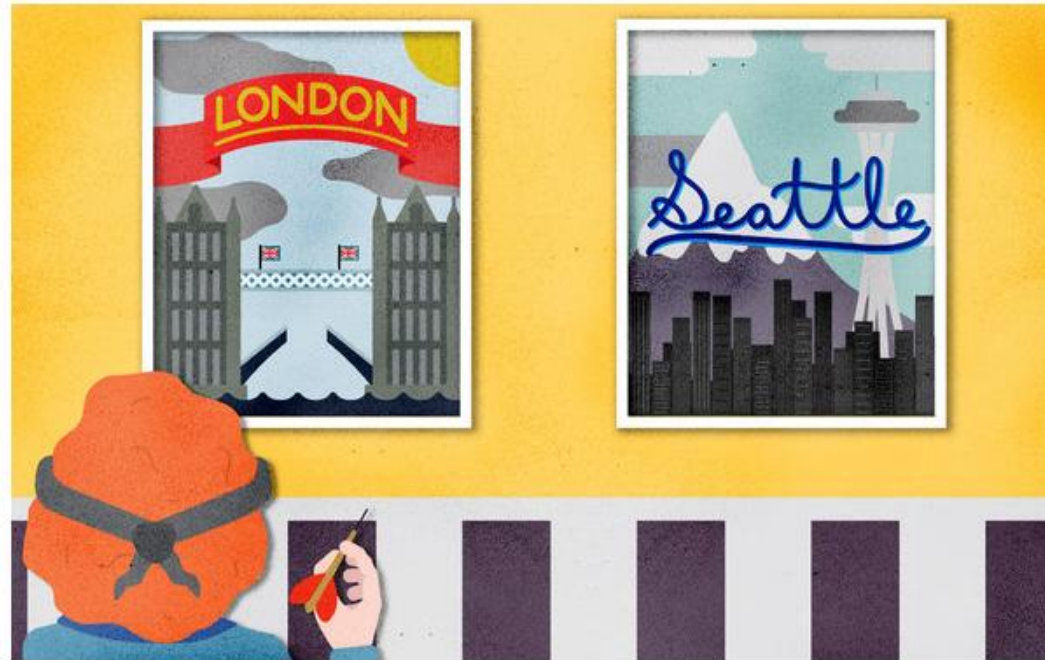
# Takeaways from Last Week

- Pricing
  - Optimal Pricing → constrained optimization
  - Almost always exclude some customers
  - Competitive reaction – iterate to fixed point
    - Take your competitors' current prices as given
    - Figure out the best response function of your competitors
- 3 ingredients to price setting:
  - WTP (elasticity)
  - *Marginal* (not fixed) cost
  - Competition

# Getgoing.com

THE GETAWAY

## Taking Some Mystery Out of Blind Booking



Liz Meyer

By SUSAN STELLIN  
Published: March 28, 2013

“you choose two places you would like to visit (say, Miami and Los Angeles), select your travel dates and flights, then enter your credit card details. GetGoing randomly chooses one of the two trips and books your ticket, which you can’t change or cancel.”

# Price Discrimination Outline

- Pricing to different segments
- Different prices over time
  - Skimming
  - Penetration Pricing
  - Promotions
- Different consumers, different prices
  - Direct segmentation
  - Indirect segmentation
    - Consumers self-select into purchasing the “right” product
- When does this go “too” far

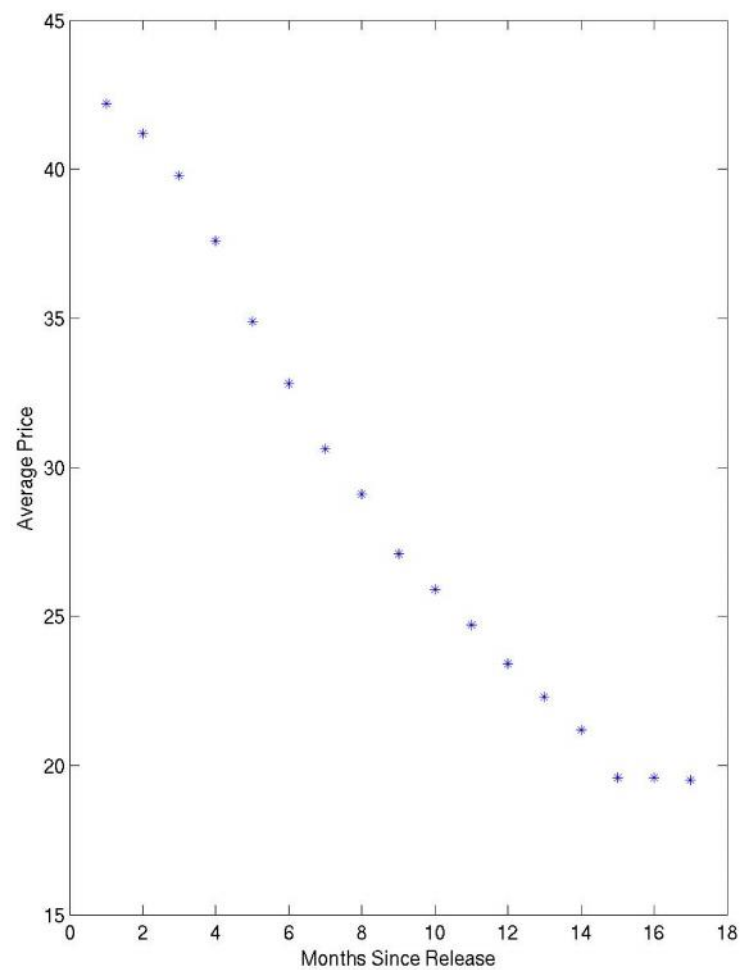
# Durable goods: Price Skimming

- With durables, consumers have the choice:  
Do I buy today or do I buy tomorrow?
  - (for simplicity assume no repurchase)
- The key: People who buy early might be different than those that buy late
  - Higher WTP
  - Inherent value to being an early adopter

# Segmenting Consumers Across Time

- The simple case
- Two consumers:
  - Consumer 1: WTP 9,3
  - Consumer 2: WTP 4,4
- Purchase either today or tomorrow

# Durable Goods Prices Falling



Source: Nair, Harikesh (2007)



# But this can break!

- More complicated
- Two consumers:
  - Consumer 1: WTP 9,9
  - Consumer 2: WTP 4,4
- Purchase either today or tomorrow
- What happens if you implement the same pricing scheme?

# Key Difference

- Model 1:
  - Consumers who have high WTP also have high discount rates
- Model 2:
  - Consumers with high WTP, are more patient
- Reality:
  - A combination of the two
- Conclusion:
  - 1) Commit and sell to only high guys (or low guys)
  - 2) Moderate your decrease in price path

# Are Your Consumers Myopic?

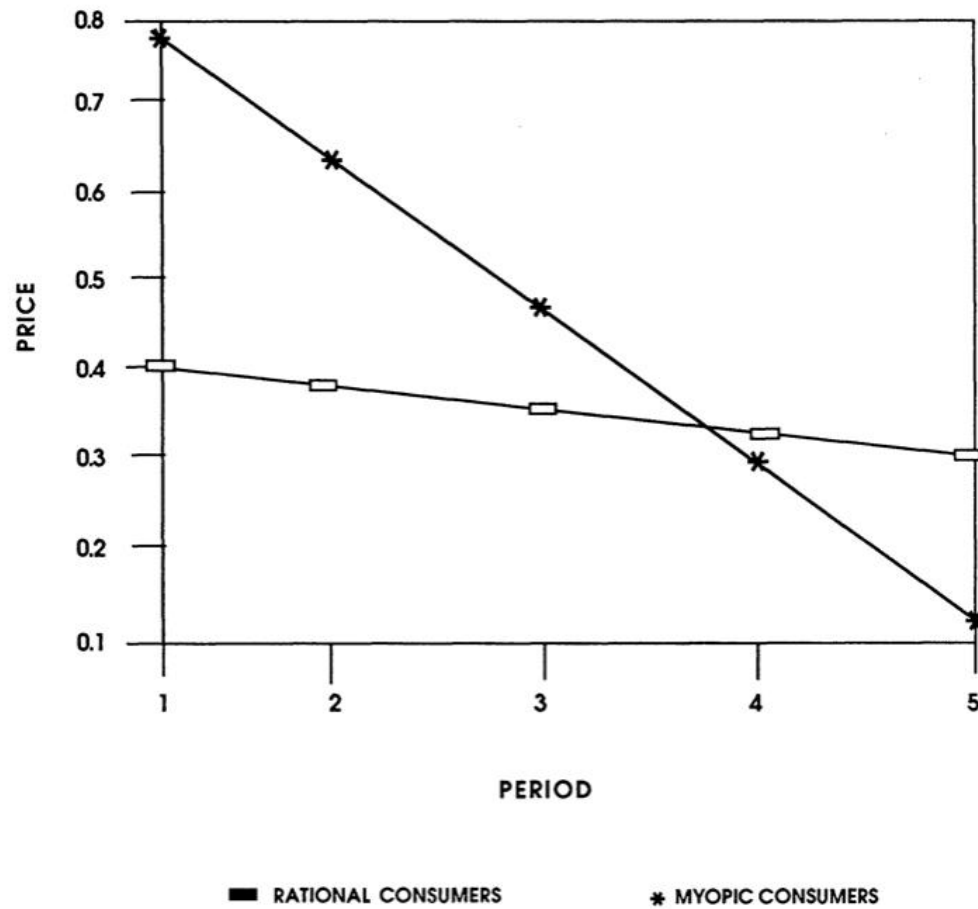
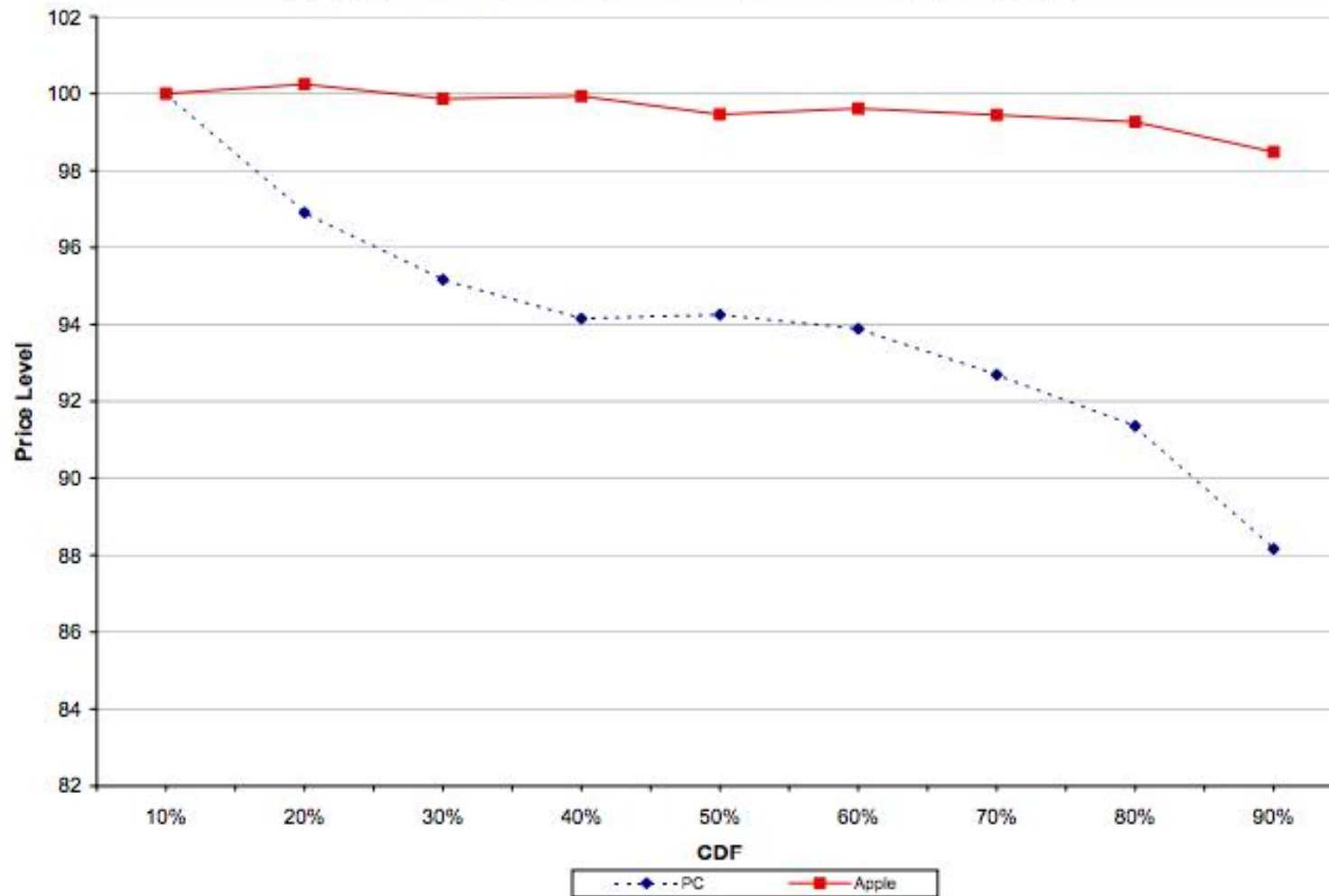


FIGURE 1. Comparison of Prices.

# The Value of Commitment

Figure 2: Price Declines over Product Cycle



# What about Competition?

- What if a competitor can introduce the same product tomorrow?
- Commitment no longer works
  - Competitors will come in and steal your business
- Prices will be lower in the second period
  - If consumers know this, will lead them to wait

# Does it solve everything?

## iPhone / iPad / iPod

- iPhone
- iPad
- iPad Mini
- iPod Touch
- iPod Shuffle
- iPod Nano
- iPod Classic

## Portables

- MacBook Pro
- Retina MacBook Pro
- MacBook Air

## Other

- Displays
- Apple TV

## Desktop Macs

- Mac Mini
- iMac
- Mac Pro

### MacBook Air



**Recommendation** Don't Buy - Updates soon  
**Last Release** June 11, 2012  
**Days Since Update** 335 (Avg = 322)

### Recent Releases

|   |          |          |
|---|----------|----------|
| ■ | ???      | 335 days |
| ■ | Jun 2012 | 327 days |
| ■ | Jul 2011 | 273 days |
| ■ | Oct 2010 | 499 days |
| ■ | Jun 2009 | 237 days |
| ■ | Oct 2008 | 273 days |



# Durable goods lessons

- Need to think about consumers substituting to tomorrow:
  - Competition with yourself
- Would like to segment consumer types
  - WTP is correlated with a high discount factor
    - Price declines over time (skimming)
  - WTP is not correlated with discount factor
    - 1) Commit to a high (low) price throughout
    - 2) Find another characteristic that is correlated with WTP

# Non-durables: Penetration Pricing

- Consumers (might) purchase every period
- Therefore, adoption will be driven by two things:
  - Percentage of people who try your product
  - Percentage of those that decide to repeatedly purchase
- Need to encourage the right people to try early
  - Those that will like it
    - And buy in the future
    - Tell their friends
- Increasing price path might be worthwhile (penetration pricing)
- Free Sampling, couponing, advertising

# Summary

- Non-durables
  - Consumer re-purchase rates will drive long term patterns
- Want to attract best customers for your product
  - Perhaps charge them less at first because they will re-purchase in the future
  - Only if there is this “state-dependence”
- Leads to a strategy of penetration

# Price Promotions

- Now, think about products which are not new.
- When do you want to provide discounts on those products and why?

# Pizza During the Super Bowl



- The amount of pizza that Pizza Hut expects to sell equals 23 million feet of pizza
- Domino's Pizza [expects] an 80 percent increase in sales volume from a typical Sunday.

# Pizza During the Super Bowl

## Best Super Bowl Sunday pizza deals: Papa John's, Pizza Hut, and more

SUPER BOWL PIZZA SPECIALS | FEBRUARY 1, 2013

RELATED ARTICLES: [Pizza Coupons](#) [Restaurant Deals](#) [Papa Johns Menu](#) [Calories and Food](#)



### Domino's \$10 5-topping deal

Load up on your favorite meat or veggie toppings with Domino's large 5-topping pizza, scheduled to be just \$10 delivered during the Super Bowl game. Or use coupon code **EMTN5FT4** to order two large 2-topping pizzas for \$7.99 each. [Click here to order.](#)



Domino's Pizza



## What About Prices?

# Coke During Hot Weather



# Roses During Valentine's Day?



“An estimated 198 million roses were produced last year just for Valentine's Day.

The average Valentine's Day price for a dozen florist-arranged, long-stemmed roses in the United States is just above \$73. At other times of the year, it's just more than \$59.”



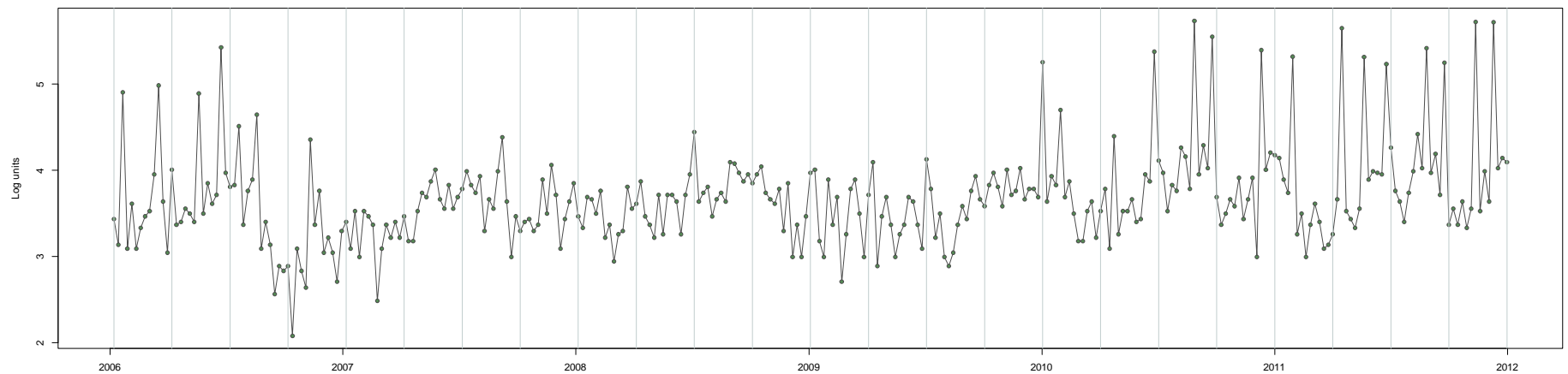
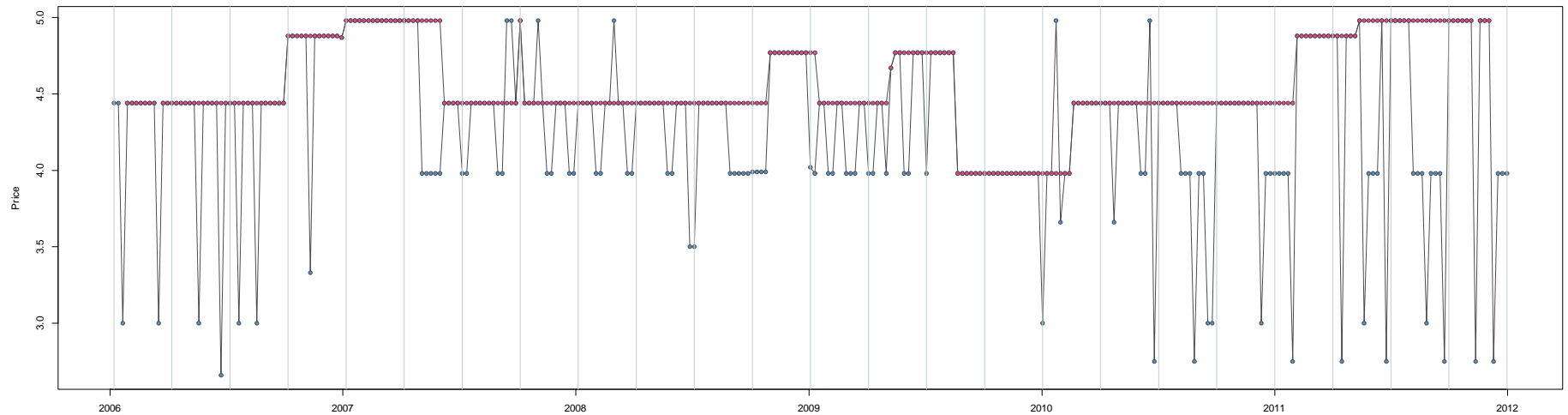
# Prices and Demand Shifts

- Pieces to the puzzle:
  - What are the shifts in WTP for “my” consumers
  - How does the population of consumers change?
  - Do these purchase different products during demand shifts?
    - What are the substitutes

# Thinking More Generally

- How can we increase revenue by
  - 1) Recognizing changes in the population of consumers that show up to your door
  - 2) Acting strategically to set the right price to the target consumer group
    - Encourage the target group to show up at the right time
- This is the basis of promotional theory

# Price of Coke?



INGLES MARKETS - Oconee County, SC. UC store ID: 2401296. Missing weeks: -0.32 %

### Save *a lot* up to **40%** on groceries!

|  |   |  |
|--|---|--|
|  <p><b>3.99</b><br/>each<br/><small>Price good thru 2-10-07</small></p> |  <p><b>2/\$5</b><br/>28 oz box</p> |  <p><b>1.97</b><br/>12 pack, 6.75 oz pkts</p> |
| <p><b>Special Buys</b><br/>Great deals on special purchase items<br/><small>Limited quantities while supplies last</small></p>                           |   |  |
|  <p><b>98¢</b><br/>each<br/><small>Price good thru 2-10-07</small></p>  |  <p><b>1.49</b><br/>28 oz jar</p>  |  |
|  <p><b>98¢</b><br/>3.75 to 6.125 oz can</p>                             |  <p><b>19.99</b><br/>each</p>      |  <p><b>1.79</b><br/>8 oz pkg</p>              |
|  <p><b>1.88</b><br/>6 oz pkg</p>  |  <p><b>9.99</b><br/>each</p>       |  <p><b>88¢</b><br/>2.3 to 11 oz pkg</p>       |

### Save *a lot* Grand Opening February 1st!

|  |   |
|--|---|
|  <p><b>25¢ LB</b></p>                               |  <p><b>25¢ LB</b></p>              |
| <p><b>Look What 25¢ Buys</b></p>   |   |
|  <p><b>25¢</b><br/>7.5 oz can</p>                   |  <p><b>25¢</b><br/>7.25 oz pkg</p> |
|  <p><b>25¢</b><br/>4 oz pkg</p>                     |  <p><b>25¢</b><br/>8.5 oz pkg</p>  |
| <p><b>Wylwood Canned Vegetables</b><br/>Cut Green Beans, Sweet Peas, Whole Kernel Sweet Corn or Cream Style Corn 14.5-15.25 oz can</p> |   |
|  <p><b>25¢</b><br/>2.5 oz pkg</p>                   |  <p><b>25¢</b><br/>16 oz can</p>   |

Ad prices effective thru Tuesday, Feb. 13.  
**Vancouver, WA**  
**7907 NE Hwy 99**  
 in the Totem Pole Shopping Center  
 Open 8-9 Mon-Sat, 9-9 Sun

Come celebrate with us  
 Friday, Feb. 2nd—Sunday, Feb. 4th!  
 Free product sampling all three days!  
 Free gift boxes  
 to the first 100 customers each day.

Supermarkets want *certain* people to know when they put products on sale

# Theory Behind Promotions



Different WTP and different costs of  
“time-shifting”

# Theory Behind Promotions

- Consumers dislike shifting their times schedules:
  - $U = 12 - s - p$
  - $U = 16 - 12s - p$
- Both prefer to shop on Sunday and pay a cost for shopping on Monday
  - $S = \{0,1\}$
- Options: same price on Monday and Sunday
- Or promote on Monday and have a regular price on Sunday



# Other ways of doing the same thing?

## Coming Soon: Toilet Paper Priced Like Airline Tickets

Article

Video

Graphics

Stock Quotes

Comments (74)

Email

Print

Save

f

Twitter

Google+

in

A

A

By JULIA ANGWIN and DANA MATTIOLI



It used to be only airfares that changed every minute. But now, prices of everything from clothing to toilet paper are fluctuating dramatically online. Julia Angwin explains on The News Hub.

The fast-moving Internet pricing games used by airlines and hotels are now moving deeper into the most mundane nooks of the consumer economy.

Deploying a new generation of algorithms, retailers are changing the price of products from toilet paper to bicycles on an hour-by-hour and sometimes minute-by-minute basis.

United

We're more than 78,000 people  
for more than 70 million Americans

THE NEW PORTFOLIO TOOL

ENTER YOUR BROKERAGE ACCOUNT

WE'LL GIVE YOU ALL THE NEWS AND ANALYSIS

LEARN MORE

Most Popular

Read Emailed Video Commented

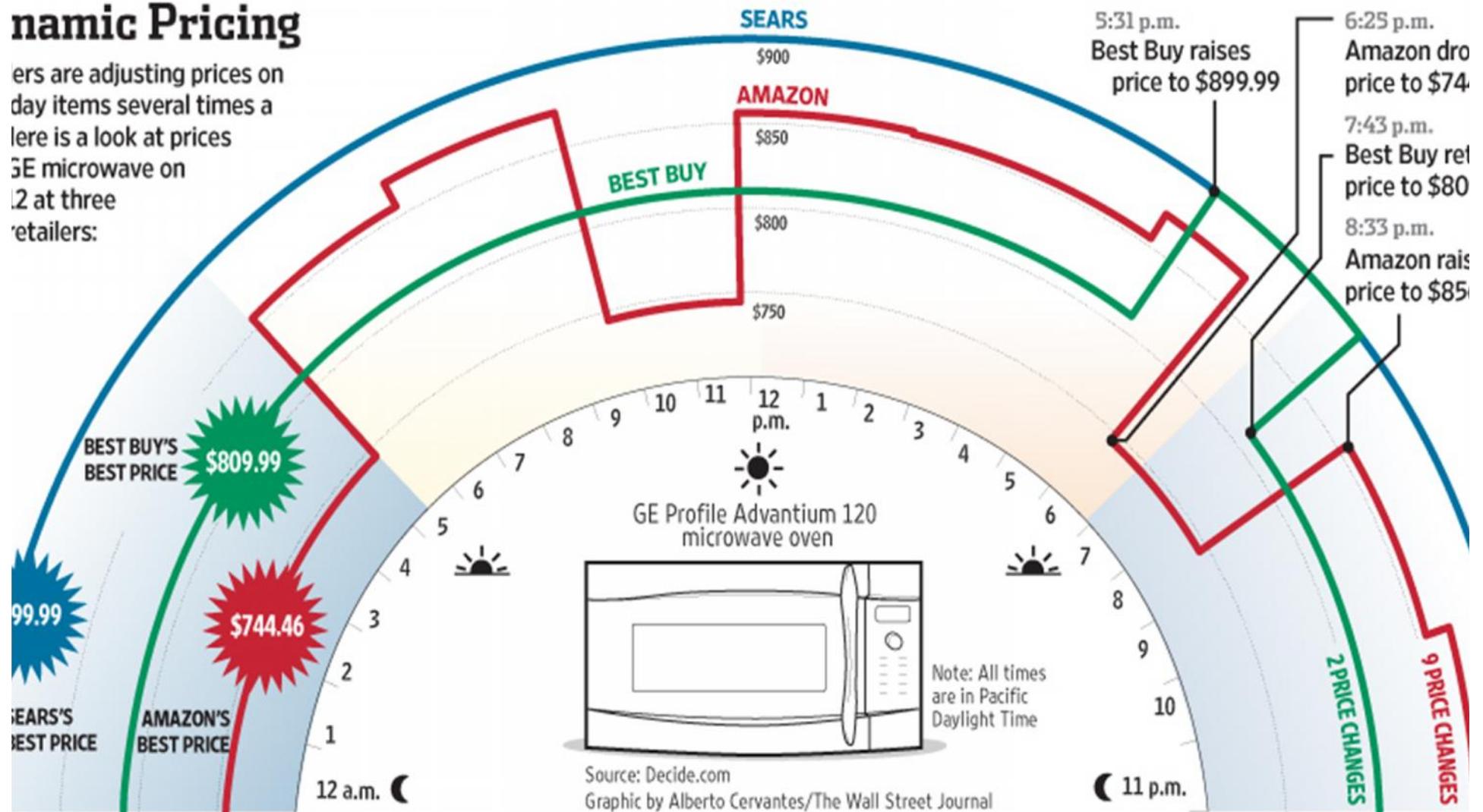
1. About 35 Hurt in Prague G

2. Opinion: Exempting Congress From

# Other ways of doing the same thing?

## Dynamic Pricing

Retailers are adjusting prices on everyday items several times a day. Here is a look at prices for a GE microwave oven sold at three retailers:





# The Tradeoff

- Leakage
  - Some of the consumers would have purchased anyway (at the higher price) now get a discount.
- This is a fundamental tradeoff that will come up over and over again
  - You want to drop price for people that will shift to buying your product, not necessarily those that already are

# Other Reasons for Price Drops?

- Loss Leaders
  - Fixed costs of going to the store
- Create consumer switching costs
  - Once they try a product “tend” to stick with it.
- Clear excess inventory

# Concerns with Price Promotion

- Make customers more price sensitive, less brand-focused
  - High-valuation customers might become low-valuation customers!
- Consumers may change reference points
- Easily copied by competition, leading to price wars
- Consumers simply substitute forward / stockpile

# Takeaways: Price Promotions

- Promotions are a way of separating consumer types
  - Sometimes these separations happen naturally
    - Turkey during Thanksgiving, Pizza during the Super Bowl
  - Strategically shift the consumers that show up to your door
    - Charge different WTP depending on the elasticity of responding consumers

# Different Consumers, Different Prices

- Directly:
  - Charge each person a different price
  - Identify consumers with the “right” characteristics and directly change the price for them
    - Senior citizen discounts
    - Student tickets
    - **Targeted coupons**
- Indirectly:
  - Provide a menu of similar products and consumers self-select into their preferred option
    - Time of day / year (lunch vs. dinner at restaurants)
    - Location (Outlet malls)
    - Purchase Time – Airline tickets

# The Holy Grail

- Know every customer's WTP and charge them that exact amount
- Generally, considered very hard to do in consumer markets
  - Very data intensive
- Examples?

# Direct Price Discrimination

- Amazon:
  - “In September 2000, Amazon.com outraged some customers. One buyer reportedly deleted the cookies on his computer that identified him as a regular Amazon customer. The result? He watched the price of a DVD offered to him for sale drop from \$26.24 to \$22.74.”

# Direct Price Discrimination: 3 Ways

- Know exact WTP, charge that.
  - Very difficult
- Find clear demographic predictors of WTP and charge that way
  - Senior or student discounts
- Use past purchase history to target different WTP.
  - Targeted coupons



# Different Segments



# Example: Pricing Hotel Rooms

PSYCHOLOGY OF MONEY

## Orbitz Shows Higher Prices to Mac Users

By Martha C. White | June 26, 2012 | Add a Comment

Share

Like 28

Tweet 12

+1 7

Share

Send to Kindle



JUSTIN SULLIVAN / GETTY IMAGES

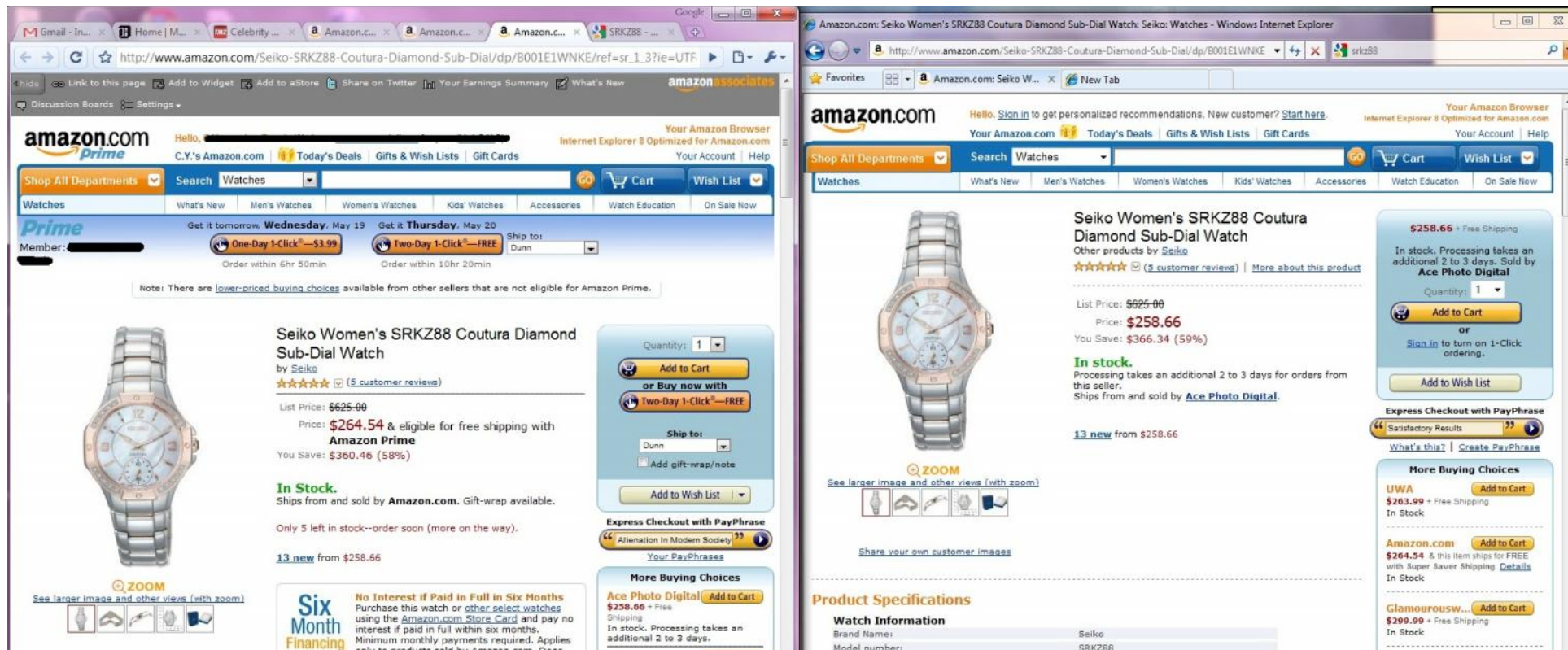
Imagine going for an oil change and finding out that the auto shop charged you a higher price just because you had a luxury car, so they figured you could afford it. You'd probably get ticked off and find another mechanic, right? According to the *Wall Street Journal*, travel website Orbitz.com has begun engaging in an online version of this, showing more expensive hotel offers to people accessing the site from Macintosh computers — a group of customers that spend as much as 30% more on their hotel rooms, according to the company's research.

### RELATED

On Orbitz, Mac Users Steered to Pricier Hotels *The Wall Street Journal*

Orbitz Shows More Expensive Options to Mac Users *USA Today*

# Different Groups?



The image displays two screenshots of the Amazon.com website, showing the product page for a Seiko Women's SRKZ88 Coutura Diamond Sub-Dial Watch. The left screenshot shows the product details, price, and shipping options. The right screenshot shows the product details, price, and shipping options, along with a 'More Buying Choices' section.

**Product Details:**

- Product Name:** Seiko Women's SRKZ88 Coutura Diamond Sub-Dial Watch
- Brand:** Seiko
- Model Number:** SRKZ88
- Price:** \$258.66 (List Price: \$625.00, You Save: \$366.34 (59%))
- Shipping:** \$258.66 + Free Shipping
- Availability:** In stock. Processing takes an additional 2 to 3 days for orders from this seller. Ships from and sold by Ace Photo Digital.
- Customer Reviews:** 4.5 stars (3 customer reviews)

**More Buying Choices:**

| Seller        | Price    | Shipping      | Availability |
|---------------|----------|---------------|--------------|
| UWA           | \$263.99 | Free Shipping | In Stock     |
| Amazon.com    | \$264.34 | Free Shipping | In Stock     |
| Glamorousw... | \$299.99 | Free Shipping | In Stock     |

**Product Specifications:**

| Brand Name:   | Seiko  |
|---------------|--------|
| Model Number: | SRKZ88 |



# Searching for a Flight

SEARCH FLIGHTS → CHOOSE FLIGHTS → TRIP ITINERARY → TRAVELER INFORMATION → COMPLETE PURCHASE → CONFIRMATION

## Select Departing Flight



**Round Trip** ([Start New Search](#))  
 Depart **Chicago, IL (ORD - O'Hare)**  
 Arrive **Milan, Italy (MXP)**  
 Date **Sat., Jul. 11, 2015** Time **Anytime**  
 Cabin **Economy** Travelers **1**

**\$ OUR LOWEST FARES**  
 Buy Now — limited tickets  
 at our lowest price

|   |  |
|---|--|
| <b>With Stops</b><br>from<br><b>\$1,550</b> | <b>Flexible Fare</b><br>from<br><b>\$2,368</b> |
|---|--|

United's **FareLock** service allows you to hold your itinerary and fare for 72 hours or seven days, for a fee, and is available on select flights. So go ahead and book your flight while you complete and confirm your travel plans. Our FareLock service will guarantee an available fare for the time you booked your reservation.

Fares listed are for the entire trip per person and include [taxes and fees](#). [Additional bag charges may apply](#).  
 The fare displayed is the lowest available for the dates requested; however some flights may not be in the cabin you requested.  
 United flights include those operated by our Express partners.

| Price  | Departing  | Arriving  | Travel Time  | Distance*   |   |
|--|--|---|--|---|---|
| <b>United Flights with stops from \$1,550</b>  |  |   |  |   |   |
| from<br><b>\$1,550</b><br>2 tickets<br>at this price<br><a href="#">Select</a><br><br><b>FareLock</b> | Depart:<br><b>11:00 a.m.</b><br><b>Sat., Jul. 11, 2015</b><br>Chicago, IL (ORD - O'Hare)         | Arrive:<br><b>2:11 p.m.</b><br><b>Sat., Jul. 11, 2015</b><br>New York/Newark, NJ (EWR - Liberty)  | Flight Time:<br>2 hr 11 mn                                       | Distance:<br><b>719 miles</b>                                     | Flight: <b>UA712</b><br>Aircraft: <b>Airbus A319</b><br>Fare Class: <b>United Economy (L)</b><br>Meal: <b>Snacks for Purchase</b><br><b>No Special Meal Offered.</b><br><a href="#">See On-Time Performance</a><br><a href="#">View Seats</a> |
| <b>Change Planes.</b> Connect time in New York/Newark, NJ (EWR - Liberty) is 4 hours 19 minutes.   |  |   |  |   |   |
|  | Depart:<br><b>6:30 p.m.</b><br><b>Sat., Jul. 11, 2015</b><br>New York/Newark, NJ (EWR - Liberty) | Arrive:<br><b>8:40 a.m. +1 Day</b><br><b>Sun., Jul. 12, 2015</b><br>Milan, Italy (MXP)            | Flight Time:<br>8 hr 10 mn<br>Travel Time:<br><b>14 hr 40 mn</b> | Distance:<br>4,010 miles<br>Total Distance:<br><b>4,729 miles</b> | Flight: <b>UA968</b><br>Aircraft: <b>Boeing 777-200</b><br>Fare Class: <b>United Economy (L)</b><br>Meal: <b>Dinner</b><br><a href="#">See On-Time Performance</a><br><a href="#">View Seats</a>  |
| from<br><b>\$1,550</b><br><a href="#">Select</a><br>  | Depart:<br><b>8:00 a.m.</b><br><b>Sat., Jul. 11, 2015</b><br>Chicago, IL (ORD - O'Hare)          | Arrive:<br><b>11:04 a.m.</b><br><b>Sat., Jul. 11, 2015</b><br>New York/Newark, NJ (EWR - Liberty) | Flight Time:<br>2 hr 4 mn  | Distance:<br><b>719 miles</b>                                     | Flight: <b>UA394</b><br>Aircraft: <b>Airbus A319</b><br>Fare Class: <b>United Economy (L)</b><br>Meal: <b>Snacks for Purchase</b><br><b>No Special Meal Offered.</b><br><a href="#">See On-Time Performance</a><br><a href="#">View Seats</a> |

# Searching for a Flight 2

KAYAK

HOTELS FLIGHTS CARS PACKAGES

Login

Advice: **BUY** Confidence: 57%  
Prices may rise within 7 days

**Stops** Show all

☐ nonstop

☒ 1 stop \$1116

☐ 2+ stops \$1290

**Times**

Take-off **Chicago (ORD)**  
Sat 5:00a - 11:00p

Take-off **Milan (MIL)**  
Sat 12:30a - 10:30p

Show landing times

**Airports**

☐ Depart/Return same

Chicago  
☒ ORD: O'Hare Inte... \$1116

Milan  
☒ BGY: Orio Al Serio \$1946

ORD ↔ MIL

Jul 11 Saturday → Jul 18 Saturday

Economy cabin

1 traveler

Change

Sort by: price (low to high)

120 of 1751 flights

show all

Round-trip | Segment **NEW**

Milan \$655 RoundTrip

[www.cheapoair.com/Milan-Cheap-Flights](http://www.cheapoair.com/Milan-Cheap-Flights)

Low Fares to Milan Available. Book Discounted Fares Today & Save!

\$1374

United

11:00a ORD → 8:40a MXP 14h 40m 1 stop (EWR)

10:40a MXP → 4:35p ORD 12h 55m 1 stop (EWR)

Select

Show details

Only 2 seats left at this price

Economy

\$1374

United

11:00a ORD → 8:40a MXP 14h 40m 1 stop (EWR)

10:40a MXP → 5:40p ORD 14h 00m 1 stop (EWR)

Select

Show details

Only 2 seats left at this price

Economy

\$1374

United

8:00a ORD → 8:40a MXP 17h 40m 1 stop (EWR)

10:40a MXP → 4:35p ORD 12h 55m 1 stop (EWR)

Select

Show details

Economy

and the beauty that surrounds its streets.

Compare Sites vs. KAYAK

ORBITZ

Compare

cheapOair

Compare

Airfare.com

Compare

priceline.com

Compare

travelocity

Compare

Expedia

Compare

62

# Utility Functions

- Mac user, PC user, WTP for hotel rooms:
  - $U = 300 - p$
  - $U = 200 - p$
- Different types of hotel rooms (or not knowing which hotel):
  - $U_1 = 300 - p, U_2 = 150 - p$
  - $U_1 = 200 - p, U_2 = 125 - p$
- Assume  $MC=0$
- Think about priceline here
  - Destroying some of the surplus to make more money

# Targeted Coupons

- Begin with your target segment
- Chop it into groups of similar characteristics with different WTP
- Issue coupons to those people

# Types of Consumers

- Brand Loyalists
  - Already loyal to you
  - Loyal to your competition
- Brand Switchers
- How do you know who to target?
  - “Even the information contained in observing one purchase occasion boosts net couponing revenue by 50%”



## Coupons for lifetime value or immediate gains?

- What in the data would you want to see?
- Immediate value:
  - Consumers who switch back and forth across products (whoever is cheapest)
- Longterm value:
  - Consumers who *look like* people that purchase your product but haven't yet purchased it.

# Direct Price Discrimination: Summary

- Best possible scenario:
  - Target individual people based on their WTP
- Not quite as good:
  - Target consumer groups based on observable WTP
  - Often done with targeted coupons
    - Past purchase data is a rich source of information
  - Be clear. Couponing for lifetime value or short-term gains.
    - Different target groups for these different cases.

# Indirect Price Segmentation

- Relies on consumers self-selecting into the product / price pair that they most prefer
- Two types:
  - 1) Find something that is correlated with WTP and segment based on that
  - 2) Offer different prices for similar (but not identical) products such that higher WTP customers are charged more

# Using Correlation in Preferences



# Different Products

- The most common way of doing this is either with quality or quantity
  - Offer a menu of different quality products aimed at different consumer types
  - Offer different package sizes aimed at different consumers

## Compare our product features

|  | Federal Free Edition  | Deluxe  | Premier  | Home & Business   |
|--|---|---|--|---|
| Simple tax returns (1040EZ/1040A)                                    | File for \$0<br>\$0 federal<br>\$0 state <small>NEW</small> | Maximize your tax deductions<br>Start for Free<br><del>\$54.99</del> \$34.99*<br>State additional | Investments and rental property<br>Start for Free<br><del>\$79.99</del> \$54.99*<br>State additional | Small business owner or sole proprietor<br>Start for Free<br><del>\$104.99</del> \$79.99*<br>State additional |
|  |   | MOST POPULAR*   |  |   |
| Easy prep, print and efile   | ●   | ●   | ●  | ●   |
| Imports your W-2 income  | ●   | ●   | ●  | ●   |
| Transfers last year's TurboTax return                                |   | ●   | ●  | ●   |
| Covers simple tax situations, including itemized deductions          |   | ●   | ●  | ●   |
| Covers miscellaneous income and some related expenses (1099-MISC)    |   | ●   | ●  | ●   |
| Online access to all tax returns on file                             |   | ●   | ●  | ●   |
| Searches 350+ tax deductions and credits (Schedule A)                |   | ●   | ●  | ●   |
| Extra help to maximize mortgage/property tax deductions (Schedule A) |   | ●   | ●  | ●   |
| Includes ItsDeductible™ for donations                                |   | ●   | ●  | ●   |
| Covers sale of stock, bonds and mutual funds (Schedule D)            |   |   | ●  | ●   |
| Automatic calculation of cost basis (Schedule D)                     |   |   | ●  | ●   |
| Covers rental property income and tax deductions (Schedule E)        |   |   | ●  | ●   |
| Includes small business income and expense reporting (Schedule C)    |   |   |  | ●   |

# Different Quality Products



Nissan Altima:  
\$19,910



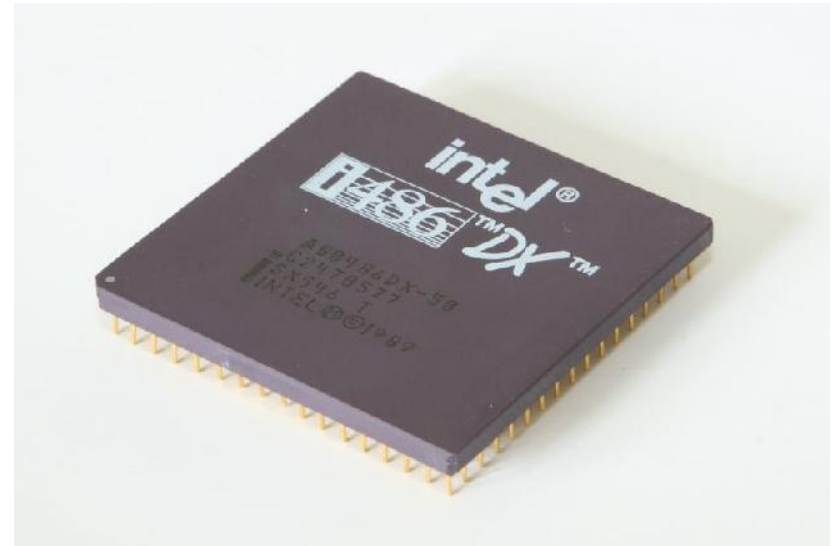
Infiniti G25:  
\$32,400

# Different Quality Products

- Consumer type 1:
  - $U = 22,000*v - 1.1*p$
- Consumer type 2:
  - $U = 25,000*v - p$
- $V = \{1, 1.2\}$ 
  - This is the quality of the car
- $MC = \{\$10000, \$10000\}$
- The problem is satisfying “consumers choosing their most preferred bundle”
  - Incentive compatibility



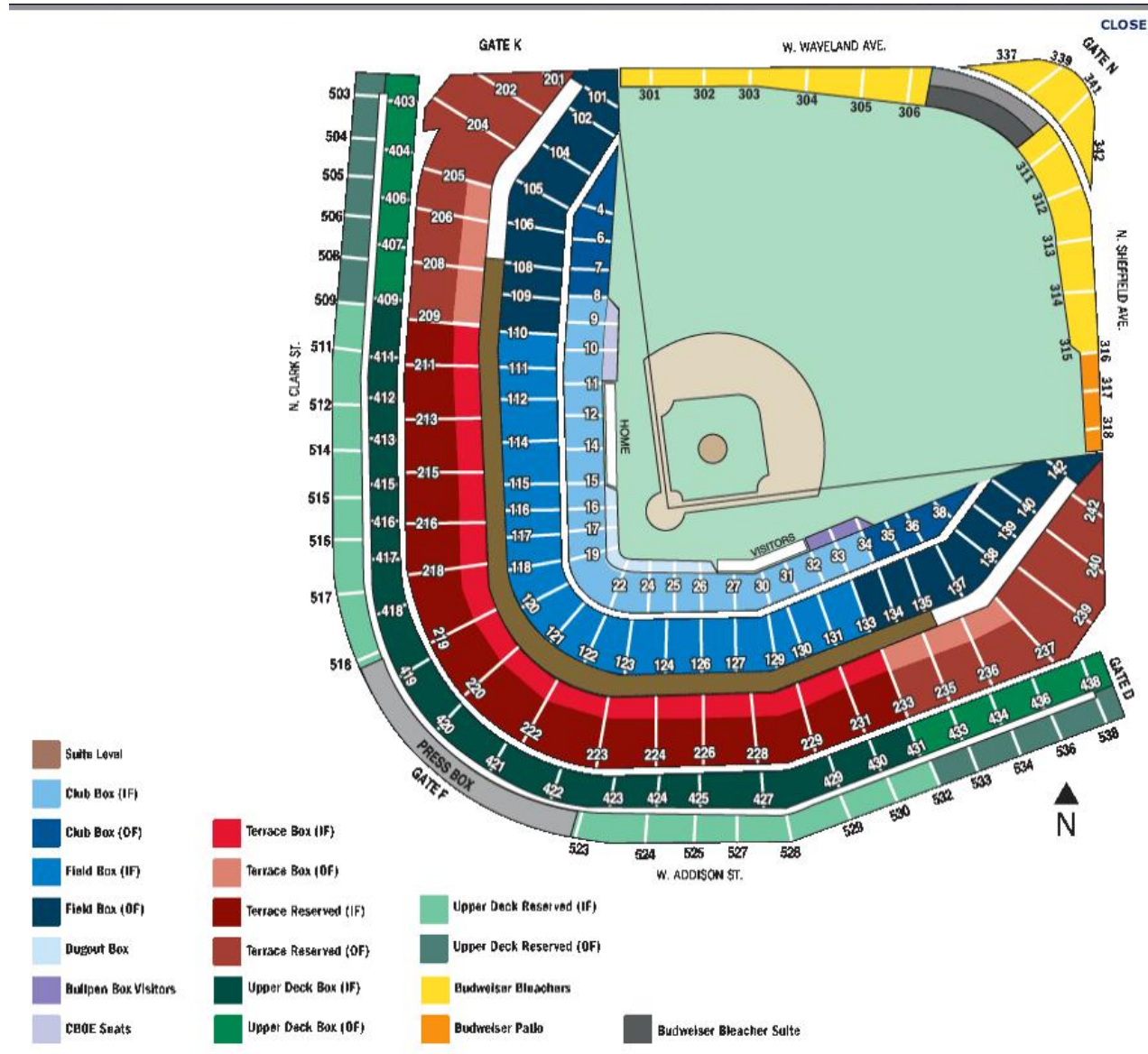
# Example: Damaged Goods



# Bringing it together: MLB Tickets

- How do MLB teams segment consumers by charging different prices?

# Different WTP for better seats



# Different WTP for different games

**2013 Single Game Ticket Prices - Bowl Seating**

| Section Color | Section Name                   | Marquee | Platinum | Gold | Silver | Bronze |
|---------------|--------------------------------|---------|----------|------|--------|--------|
|               | Club Box (Infield)             | \$114   | \$102    | \$96 | \$75   | \$60   |
|               | Club Box (Outfield)            | \$106   | \$91     | \$74 | \$63   | \$45   |
|               | Field Box (Infield)            | \$108   | \$91     | \$71 | \$63   | \$45   |
|               | Field Box (Outfield)           | \$82    | \$72     | \$57 | \$49   | \$37   |
|               | Terrace Box (Infield)          | \$80    | \$65     | \$56 | \$45   | \$29   |
|               | Terrace Box (Outfield)         | \$59    | \$51     | \$46 | \$39   | \$23   |
|               | Upper Deck Box (Infield)       | \$77    | \$65     | \$56 | \$46   | \$26   |
|               | Upper Deck Box (Outfield)      | \$56    | \$48     | \$40 | \$34   | \$17   |
|               | Terrace Reserved (Infield)     | \$50    | \$43     | \$33 | \$26   | \$17   |
|               | Terrace Reserved (Outfield)    | \$46    | \$34     | \$29 | \$20   | \$14   |
|               | Upper Deck Reserved (Infield)  | \$32    | \$28     | \$23 | \$14   | \$10   |
|               | Upper Deck Reserved (Outfield) | \$29    | \$25     | \$20 | \$13   | \$9    |

# Different prices across time

## How dynamic ticket pricing works



By Evan Grant/reporter

[egrant@dallasnews.com](mailto:egrant@dallasnews.com)

2:45 pm on January 8, 2013 | [Permalink](#)



[comments \(0\)](#)

Here's a look at how dynamic ticket pricing works:

The Rangers are making their largest block of seats – approximately 9,600 – in the upper reserved locations available via dynamic ticket pricing. What this means is that the price for individual tickets for an individual game will fluctuate from the announced price of \$19 for regular games and \$22 for premier games.

For a mid-week July game against the New York Yankees, already designated a premier game and usually a sellout, prices will likely rise sharply from the \$22 base as the game approaches and inventory dwindles. On the other hand, an early season Monday game against a team that doesn't draw well, like Oakland, could drop prices off the \$19 face value. The ticket price, however, can't drop below \$12, which is the price season ticket holders pay. The intent is to protect the value of being a season-ticket holder.

# Tickets: Other Agendas

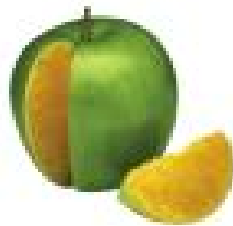
- Do you think ticket prices are set at their optimal level?
  - “When the Disney star Miley Cyrus (aka Hannah Montana) first toured the US in 2007-2008, tickets with a face value of at most \$64 sold out in approximately twelve minutes, and were then immediately posted on secondary-market venues such as eBay and StubHub at prices that in some instances exceeded \$2,000”
- Other goals:
  - Full stadiums
  - Concessions / t-shirts / parking
  - Products outside of the stadium



# Going too far?

- Coke and changing price based on hot weather

# Going too far?



## Victoria's Not-So-Secret Price Discrimination

Sometimes price discrimination can end up being costly not just to consumers, but also to producers. In 1996 Denise Katzman of New York City sued Victoria's Secret for gender discrimination and asked for millions of dollars in damages. In alleging gender discrimination, Katzman didn't object to the catalog's pages of scantily clad women. Rather, she pointed to the promotional coupon on the catalog's back page.

The problem? While Ms. Katzman's catalog offered her \$10 off an order of \$75, an almost identical catalog for a male friend offered \$25 off the same amount. Was her catalog out of date? Nope. The folks at Victoria's Secret were just engaging in a little "naked" price discrimination.



# Going too far

- When do consumers get upset with price discrimination?
  - Targeted prices for individuals
  - Immutable characteristics
    - Victoria's secret sued for charging a lower price to men
  - “Exploitation”
    - Snow shovels in a snow storm. Bottled water in a hurricane.
  - *Raising* prices for the same exact product
    - People don't seem to mind a discount
    - Prospect theory...

# Some thoughts

- Price based on group characteristics
- Tie benefits to higher-priced “products”
- Justify changes in price with changes in costs
- Use self-selection
  - Indirectly segmenting rarely seems to upset people because they could have selected the other bundle



Example: Costco



Example: Instacart

The Instacart logo is displayed in a green, rounded, cursive-style font. The word "Instacart" is written in a single line, with the 'i' at the end having a small leaf-like flourish on top.

# The Role of Competition

- Competition constrains your ability to charge different prices.
- Can think of this as adding an additional constraint into the consumers optimal choice
- In general, not a well-developed theory
- Interaction with CLV (Borenstein & Rose 1994)

# A More Complicated Pricing Example

MEDIA & MARKETING

## In Music, the Money Is Made Around the Edges

In Pre-Grammy Tradition, Executives Seek Ways to Boost Profits With Freebies, Interactive Videos

Email

Print

Save

5 Comments



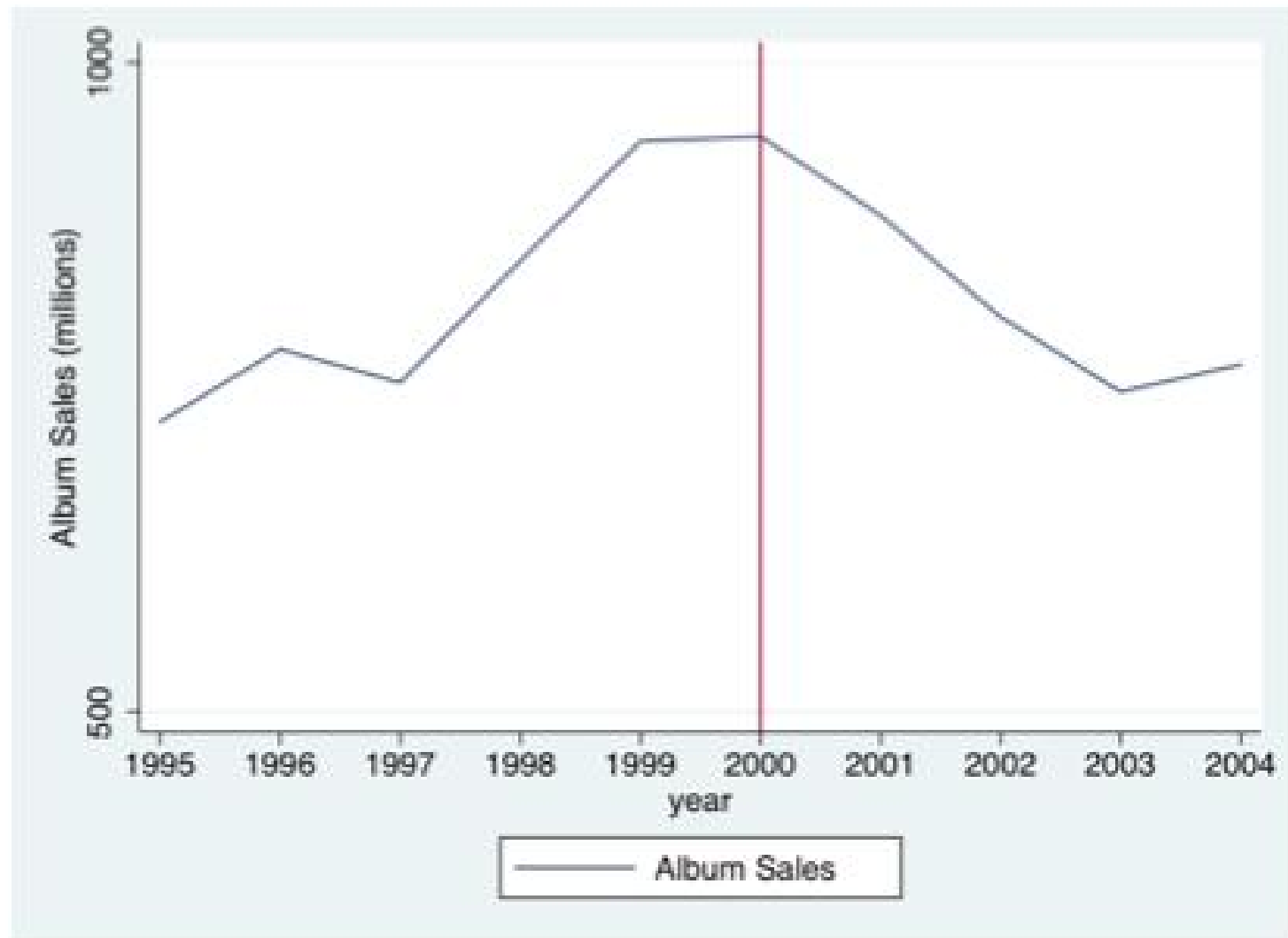
By HANNAH KARP [CONNECT](#)

Updated Jan. 27, 2014 2:47 a.m. ET

LOS ANGELES—While much of the music industry was busy last week feting Grammy nominees, several dozen artist managers, technologists and record-label executives met for breakfast at a private club on the Sunset Strip to discuss a more urgent matter: how to make more money.

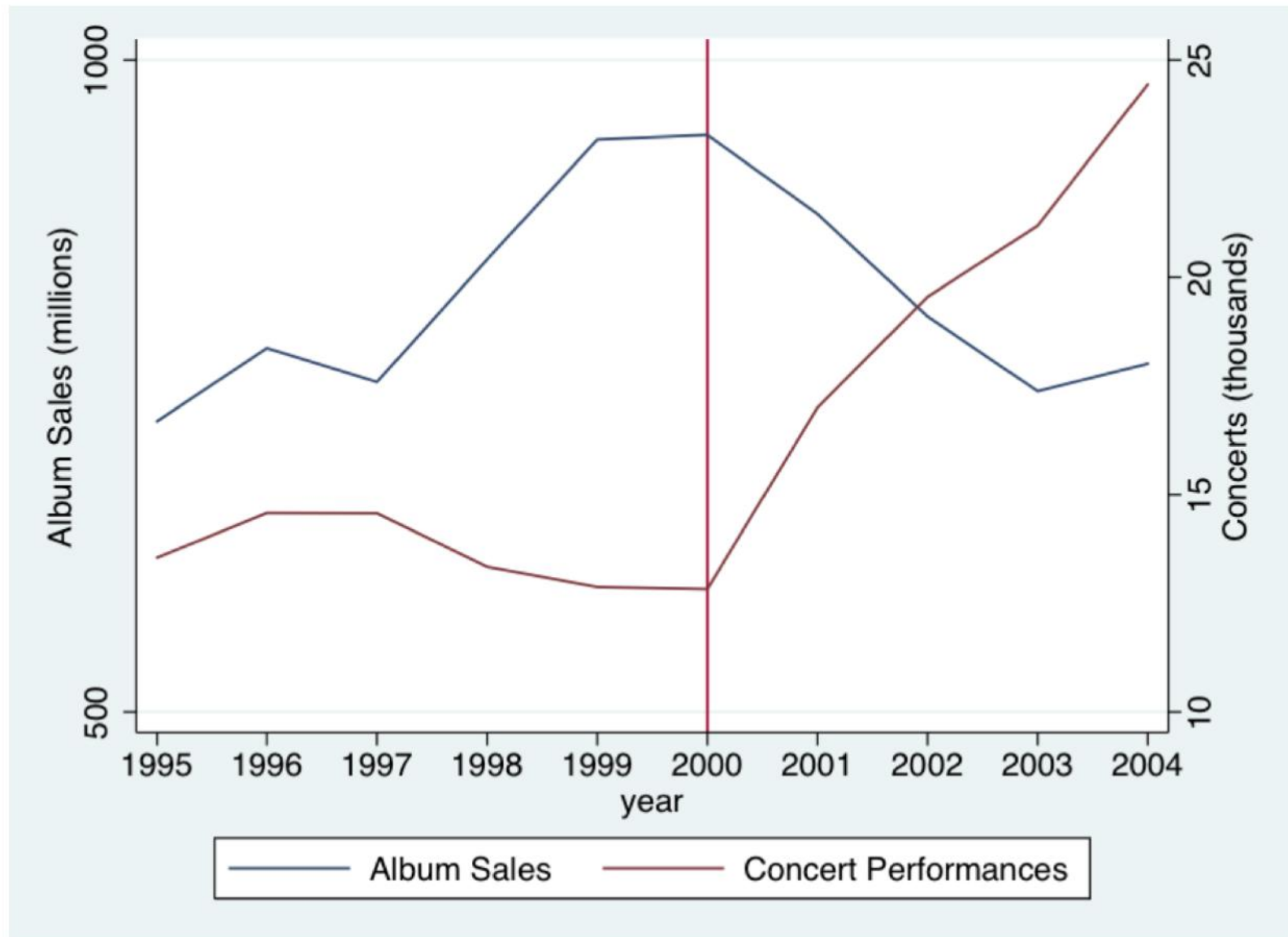
A pre-Grammy tradition that started several years ago known as the Big Bang Forum, the tech-focused discussion highlighted an uncomfortable reality: While Grammy wins and performances still boost record sales and exposure, the glory is increasingly muted as record sales make up a shrinking piece of most artists' income.

# Album Sales



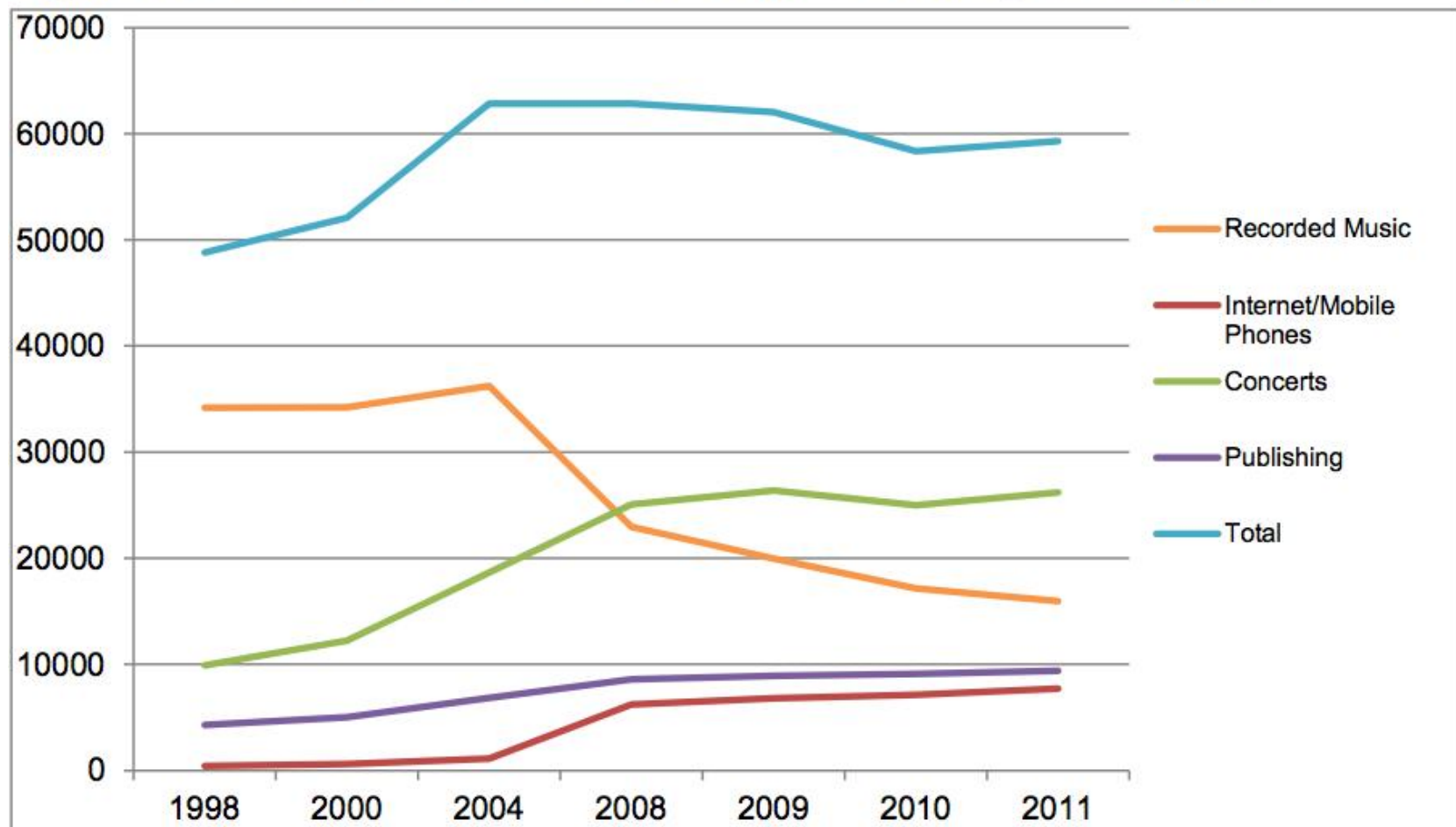


# Album Sales + Concerts



# The Music Industry

**Figure 1: Trends in Total Revenue of the Music Industry, USD Million**



# Price Discrimination in Music Industry

- **“Google’s Mr. Quirk said his vision to make money in music involved catering to three different groups:**
  - Only want free music
  - Small WTP for rental (stream)
  - Superfans – almost unlimited WTP for particular music
- **“The trick, Mr. Quirk said, is to market to all three groups at once.”**

# Summing Up

- Behavioral Pricing II
- Skimming & Penetration
- Price Promotions
- Direct Price Discrimination
- Indirect Price Discrimination

# Summing Up – Behavioral Pricing II

- Sunk Costs
  - Fixed fee + low prices
- Hyperbolic Discounting
  - Target the consumer's optimistic view of herself
  - Offer benefits now with the costs later

# Summing Up –New Product Dynamics

- Durable goods:
  - Skim when high WTP is correlated with high discount factor.
  - If not, commit to a high price and only serve high WTP consumers
  - If impossible, just price low.
- Non-durable goods:
  - Penetration pricing if there is state-dependence
  - Want the “right” customers to try

# Summing Up: Promotions

- Promotions are a way of separating consumer types
  - Sometimes these separations happen naturally
    - Turkey during Thanksgiving, Pizza during the Super Bowl
  - Strategically shift the consumers that show up to your door
    - Charge different WTP depending on the elasticity of responding consumers

# The Tradeoff

- Leakage
  - Some of the consumers would have purchased anyway (at the higher price) now get a discount.
- This is a fundamental tradeoff that will come up over and over again
  - You want to drop price for people that will shift to buying your product, not necessarily those that already are nor those who will not repeat



# Summing Up: Direct Price Discrimination

- Senior/Student Discounts
- Past purchase tracking/individualized prices
- Examples:
  - Amazon with past purchase info/prime status
  - Airlines with search engine used

# Summing Up: Indirect PD

- Consumers self-segment themselves
- 1) Find correlation between WTP and a targeting characteristic
- 2) Create multiple similar products that appeal to different consumer groups
  - Correlation between quality and WTP
- Be aware of consumer reaction to segmentation schemes

# Conclusion

- One of the toughest questions in marketing is how to set “fair” prices
  - Price changes over time
  - Different prices to different people
- This is just the tip of the iceberg in terms of one of the most interesting problems in marketing.
- I highly suggest you take “Pricing” from Prof. Dube

# Next Week

- Case discussion: Uber
- Major Case Write-up: Uber
- Lecture: New Products & Product Line Decisions