Introduction and Ticket Pricing

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Sports economics spans the following economic sub-fields:

1. Labor economics (players are paid salaries, athletes win purses, teams hire players)
2. Industrial organization (most sports teams have some kind of market power, sports leagues have monopoly power)
3. Applied econometrics (sports has rich data with which we can conduct statistical analysis)

Today I will demonstrate how economics can explain many observed phenomena through the basic analysis of principles of microeconomics.

In particular we will learn a great deal about ticket pricing.
Ticket Pricing Illustrates Microeconomics

1. Supply and Demand: ticket sales
2. Demand elasticity: ticket pricing
3. Price Discrimination: why it costs me more to attend a game than you, or why tech-savvy consumers pay less than their non tech-savvy counterparts
Basic Assumptions About Sports Franchises (to be explored later)

Sports franchises are:

1. profit-maximizing (not a big stretch)
   - There is a big difference between profit-maximizing and revenue-maximizing: explains why NBA teams who could sell out arenas at high prices if they signed one more player choose not to sign that player, they’ll have to pay a luxury tax

2. fully rational (probably more of a stretch)
   - teams often subject to sunk-cost bias, which is why high first-round selections play disproportionately more than they should, or why teams frequently give roster spots to those with guaranteed contracts even though better players are unsigned
The Braves Have Market Power

Definition

**Market Power:** the ability for a firm to set price above marginal cost

- Turner Field has been built, and the marginal cost of a seat is very small (they are already there and haven’t been replaced in years) → marginal cost small
- Few substitutes for the Braves in Atlanta: those who want to see major league baseball don’t necessarily want to see college, etc.
- **barries to entry:** access to stadiums, television contracts
- Braves are not *perfectly competitive:* they are at the very least monopolistically competitive and some would classify them as monopolies
The Braves Intentionally Don’t Sell Out Their Games

- It is certainly possible for the Braves to sell out all of their games.
- The Braves have 50,096 seats in Turner Field.
- They could sell season tickets for their 81-game season at $81 each ($1 per ticket) for the upper deck, $162 each ($2 per ticket) for the lower deck, and $405 a ticket for the 1,000 or so best seats ($5 a seat).
- They would certainly sell out all of the seats in Turner Field: why wouldn’t they do this?
What The Braves Do Instead

picture credit: vividseats.com
Raising the Price May Raise Revenue: Demand Elasticity

- Recall from micro that demand curves have components that are:
  - inelastic: as price goes up, total revenue goes up, even though you sell fewer goods
  - elastic: as price goes down, total revenue goes up, even though you get a lower price for each good

- Consider the Suntrust seats (143 seats behind home plate with their own private club).
  - It would be pretty easy to sell these out at $100 a seat for the whole season ($100 \times 81 \times 143 = 1.1583 \text{ million})
  - But if you raised the price to $200 a seat for the whole season and only sold half as many seats you would have the same revenue as before.
  - If you raised the price to $500 a seat for the whole season you would only need to sell 29 seats to have the same revenue.

- But what determines how many people want to buy a seat at a given prices? consumer preferences
$MR = MC$ Sets the Price for SunTrust Seats

- Clearly if the Braves charge $1$ million per seat, that is too much.
- And clearly $0$ is too little.
- The Braves charge the unique price (or what they think is the unique price) that maximizes short-run revenue for the section.
- They set *marginal revenue* = *marginal cost*
Reminder: $MR$ Derived from Demand

- Technical note: total revenue is $P \times Q$. If you plug in the function for $P$ and differentiate the revenue function with respect to $Q$, you’ll get the marginal revenue function.

![Graph showing demand and marginal revenue functions with points labeled for elastic, unit elastic, and inelastic demand.](image-url)
The Braves Face Many Demand Curves

The Braves face a unique demand curve for each section of the stadium.

For example, Professor Boldt likes sitting in the outfield and has a higher willingness to pay for outfield seats compared to the upper deck behind home plate.

I am indifferent between the two but I am not indifferent between the outfield and the Suntrust seats.

What are your preferences for the Braves?

The Braves face unique demand curves from different types of consumers:

- Elderly consumers and students often receive discounts because they are living on fixed incomes.
- Consumers who use Stubhub receive deep discounts because they are probably more price-sensitive.
- Walkup consumers or those who use Ticketmaster do not receive discounts because they are arguably less price-sensitive.
Price Discrimination and Ticket Sales

- **first-degree price discrimination (perfect):** know customer’s exact willingness to pay, charge them exactly that number (not going to happen with tickets)

- **second-degree price discrimination:** charge people a lower quantity if they buy in bulk: EXAMPLE- season tickets; also distinguish based on quality, though it is probably better to think of these as different goods

- **third-degree price discrimination:** charge people different prices based on observable characteristics, happens all the time
Second-Degree Price Discrimination (Non-Linear Pricing): Why Season Tickets?

- Two types of demand curves, both downward-sloping ($MR = MC = 0$).
- One is really steep, other is really flat.
- Steep demand curve: represents consumers who want to go to maybe one or two games a year
- Flat demand curve: represents consumers who might go to more games but do not have a high willingness to pay for any one game.
- Opponents are all of similar quality and this is for the same section.
Comments About Graph

- Price per game (hypothesized): $20- to see this, $MR = MC$ at $Q = 2$, plug into demand curve to find $P$
- Price per five game block: $12.50$: same logic.
- Total revenue for per-game sales: equilibrium purchase of two tickets for $20 each
- Total revenue for bundle: $12.50 \times 5 = $62.50
- $MC$ kinked because stadium has fixed capacity.

![Graph showing demand and marginal revenue curves with equilibrium at $Q = 2$.]
Offering Different Menus Causes Consumers to Self-Select

- **2012-13 Full Season Tickets**: Best seats. Best prices. Great benefits!
  - CLICK HERE To select your seats or call 1.866.715.1500

- **2012-13 Individual Game Tickets**: Individual game tickets for the 2012-13 season are on sale now
  - CLICK HERE To purchase your tickets now

- **2012-13 Flex Plans**: 2012-13 flex plans offer fans an affordable way to get great seats to the biggest games of the season
  - CLICK HERE for full details

- **Group Tickets**: Take advantage of affordable, fun, flexible Hawks group packages and experiences that offer something for everyone.
  - CLICK HERE for details or call 1.866.715.1500 [press option 4]

**source**: hawks.com
Third Degree Price Discrimination

- This is practiced frequently in other settings but is also practiced in sports.
- Student tickets, college nights frequent for baseball, basketball
- Family nights: designed to draw in families, like kids’ menus at restaurants
Other Attempts at Third-Degree Price Discrimination: Dynamic Pricing

**Dynamic Deals**

Don't miss out on great ticket deals this season!

New for 2012 the Braves are introducing demand based pricing for all single game Outfield Pavilion and Terrace Outfield tickets at Turner Field. **Demand based pricing offers fans more value options than ever before.** Pricing is based on a variety of factors that will be used to decide whether prices should be adjusted, such things as opponent, team record, etc. These deals can change at any time, so fans are encouraged to plan ahead, buy early, and lock in the best deal and seat location!

For the best deal on your Braves tickets, purchase your seats in advance. Tickets purchased on the day of a game will incur an additional charge per ticket (Mon. - Thu. Games: $2, Fri. - Sun. Games: $4)

View Demand Pricing FAQs
Another form of price discrimination is the personal seat license (PSL), an idea that has been used by 16 NFL teams. This idea is extremely popular since NFL season tickets are serially underpriced and there are long waiting lines. Arthur Blank: “There will be some component of PSLs” - referring to the parameters of the Falcons’ new stadium. PSL: gives owners an opportunity to extract more of the consumer surplus by generating what is essentially a two-part tariff for season tickets for owners who want a specific seat.

also can be looked at as a down payment for the stadium

seat licenses give holders the right to buy tickets for exact seats in the stadium

no discount on season tickets and seat license is revoked if owner does not buy season tickets

However, there is a re-sale market for the PSLs, and there can be huge profits (or losses) for those who buy in early depending on how the team fares.
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Professional teams often claim that ticket prices go up because of increased salaries.

Player salaries do not affect marginal costs.

If anything, player salaries affect demand because they serve as cues that the team might be better.

Ticket prices and salaries are correlated but not through costs, rather through demand.

Superstars paid more in part because they affect demand in ways that non-superstars don’t.
Takeaway Points About Price Discrimination and Ticket Pricing

- Most professional and many college sports teams have market power.
- Think about McDonald’s, obviously it couldn’t force people to buy gift cards in large quantities to purchase their food, they would just go to Burger King or whatever you consider to be a substitute.
- We will talk more later about how sports teams maintain their market power, which is an important part of sports economics.
Secondary Ticket Markets

Ticket Markets

source: Courty 2003, Journal of Economic Perspectives
Ticket Resale, Scalping, Shortages, and Price Ceilings

- Because college tickets are frequently priced below equilibrium, there is incentive to create secondary markets for tickets.
- Similarly, when professional games are sold out at all price structures, there is incentive to create secondary markets.
- What gives rise to secondary markets?
  - Demand/profit-seeking motives
  - Scalping occurs because ticket sellers are unable to perfectly price-discriminate
  - Monopoly pricing leads to deadweight loss for sure compared to a competitive outcome
Price Ceiling Below Equilibrium

![Graph showing supply, demand, and box office price with a shortage and price ceiling labeled.]
Reasons Why Scalping Is Criticized

1. unfair: ticket re-sellers target popular events and buy all tickets to event, then mark event up

2. ticket re-sellers may use automated devices to take all tickets on internet, or may use “diggers” to stand in line and purchase as many tickets to event as possible

3. 27 states have some form of scalping laws, including Georgia.

4. to get around scalping, individuals are often forced to sell some trivial item along with the tickets and “give” the tickets away for free (forced bundling)

5. EX: Ohio State/Michigan tickets are frequently sold far above face value, and a $2 t-shirt or a pencil is what is actually being “purchased"
Do Economists Hate Scalping?

- because it is difficult to obtain perfect coordination in a market, frequently those who value something the most don’t get it when there are price ceilings
- think about not knowing when your favorite team is in town, then looking online and seeing that you missed the pre-sale for the event
- without the secondary market you would be unable to purchase a ticket despite the fact that you value it far more than a casual fan
- under this logic scalping is *welfare-enhancing*
- furthermore, price is a rationing tool: I would love to drive an Audi TT instead of my Honda Civic, but price gets in the way.
College tickets are often priced far lower and with far less price discrimination than professional games.

For example, the BCS Championship game has tickets with face value of $366-$434.

However, its professional analog, the Super Bowl, sells tickets for between $600 - $1200.

Similarly, face value to see the Kentucky Wildcats basketball team play is around $35-55 regardless of opponent, while the Hawks price discriminate based on opponent and how competitive the team is.

Why is college ticket pricing so different from professional pricing?