

Contemporary Issues in Sport Consumer Demand

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Introduction

- M.S. & Ph.D. from the University of Illinois in Recreation, Sport and Tourism.
- Assistant Professor in Sports and Recreation Administration at the University of Mississippi (Ole Miss).
- Published in venues such as: *Journal of Sport Management*, *International Journal of Sport Finance*, *Oxford Handbook of Sports Economics Research*, etc.
- Currently serve on the Editorial Board for: *Journal of Sport Management*, *Journal of Issues in Intercollegiate Athletics*, and *Managing Sport and Leisure*.
- I also worked for three years for the Chicago Fire of Major League Soccer.

Overview

- History and theoretical basis of sports economics and sport demand research.
- Pricing and empirical issues.
 - The current approach to try and understand the complexities of the various pricing systems used in sport.
 - Overview of our research on price dispersion.
 - Future research and where we are headed.
- Pay-for-play and the NCAA.
 - The antitrust argument and why it has survived for so long.
 - New changes in the system that has allowed us to provide an economic test.
 - Results from our initial research
- Wrap up

Research Focus

- As far back as 1956, economists have noted that the demand for sport is a driving factor for **revenue generation** in the sport industry (Rottenberg, 1956).
- Considering the importance of demand for sport products for organizations to achieve goals of maximizing revenue or attendance, my research has specifically examines the demand for various sport products.
- My approach in this is to understand demand for sport to understand interest from fans/consumers.



“Free market economics is the process of driving enterprises out of business. Sports League economics is the process of keeping enterprises in business on an equal basis. There is nothing like a sports League. Nothing..”

-Former NFL Commissioner Paul Tagliabue

Theoretical Basis

- Theoretical understanding of sport demand research (Borland & Macdonald, 2003), can be condensed to five important determinants of demand.
 - **Consumer Preferences** – age of club, habit, etc...
 - **Economics** – price, income, market size, etc...
 - **Quality of Viewing** – quality of seats, stadium quality, stadium size, etc...
 - **Characteristics of the Sporting Contest**, competitive balance, team strength, etc...
 - **Supply Capacity** – stadium seating capacity.

These determinants serve as guidance in helping to construct research questions and models for economic based studies.

Pricing in Sport

- Pricing in sport has been considered from a variety of perspectives, including: **economics, marketing, management, and consumer behavior** (e.g., Coates & Humphreys, 2007; Drayer, Rascher & McEvoy, 2012; Fort 2004; Rische & Mondello, 2004; Soebbing & Watanabe, 2014).
- Price is also one of the important parts of the marketing mix and is **highly flexible** and can be changed due to fluctuations in the economy (Smith, 2008).

Pricing in Sport

- Price has been employed in scores of sport demand research, with most research employing price in one of two forms.
 - Average Price
 - Lowest Price
- However, **average price may not be an actual price.**
- Lowest price is representative of what is often the **smallest and least desirable seating area** of a stadium.
- Data collection for price is difficult (Borland & Macdonald, 2003, Watanabe et al., 2013).

Pricing in Sport

- Sport provides a very unique context in regards to pricing, because the way leagues **operate and behave restrict the ability to change prices.**
- Due to heavy governance through regulations and policies, most professional sport leagues require member franchises to set prices for games over half a year in advance.
- Thus, they **began selling tickets at different prices** (price dispersion) to try and capture more segments of the market.
 - i.e. – they want to **capture consumer surplus.**

Pricing Tickets

- In sport, the practice of selling tickets at different prices is also referred to as “variable ticket pricing.” (Soebbing & Watanabe, 2014).
- The practice of selling tickets to a single event at multiple prices has been shown to be beneficial for revenue generation for sport franchises (Rascher, McEvoy, Nagel, & Brown, 2007).
- This leads into the concept of price dispersion/discrimination

Price Dispersion

- Price dispersion is generally defined as **“selling a good at more than a single price level to consumers in a market.”** (Humphreys & Soebbing, 2012).
- In the context of sport, price dispersion can be seen in the practice of pricing tickets to sporting events.
- When you go to attend a sporting event, you are paying different prices in order to sit in different sections of the stadium.

Zone Section



All tickets

Lowest price Best value **Best seats**

Section	Row	Price	Value
Floor BBB	5	\$448.00 /ea	
1 ticket	UPS		
Floor BBB	15	\$1,397.76 /ea	
2-4 tickets	UPS		
Floor BBB	17	\$290.00 /ea	
1-6 tickets	Electronic		
Floor AAA	6	\$239.50 /ea	
2 tickets	Electronic		

Price Dispersion Literature

- While price dispersion is found in many industries, there is sparse research examining the sales of goods at multiple prices.
- Theoretical understanding of price dispersion based in this line of research has noted that the practice comes about because of a **lack of information about prices** (Courty, 2003) as well as **uncertainty of the demand for a good** by a firm (Dana Jr., 2001).
- Early theater price dispersion research has found that **the practice has greatly increased revenue** (Huntington, 1993; Leslie, 2004).

Price Dispersion in Sport

- Is traced to the work of Humphreys & Soebbing (2012), who examined how pricing practices fluctuated based on team performance.
- However, this initial work only scratched the surface of attempting to understand the importance of selling tickets at multiple prices.
- From this literature, I have developed a line of research which seeks to advance the understanding of pricing practices.

My Lineage of Pricing Studies

Study 1

- Relationship between pricing practices and StubHub/Digital Content.

Study 2

- Relationship between pricing practices and the demand for MLB attendance.

Study 3

- Relationship between pricing and organizational revenue at MLB games.

Study #1

- Watanabe, N.M., Soebbing, B.P., & Wicker, P (2013). Examining the Impact of the StubHub Agreement on Price Dispersion in Major League Baseball. *Sport Marketing Quarterly*, 22(3), 129-137.
- This research study consider the **effects of the secondary ticket market (the re-selling of tickets) and technology on pricing practices in MLB.**

Research Question

- We asked the question: Is the StubHub agreement with MLB related to the pricing of tickets?
- Hypothesis:
 - H₁: Due to an increase in information available to MLB teams prior to setting regular season ticket prices with its agreement with StubHub, price dispersion will increase.

Data

- All prices at which tickets were sold for each MLB franchises was gathered from the Red and Green books.
- These media guides released by MLB between 1975 and 2011 included all ticket prices.
 - Media guides were purchased through 2008, when MLB switched to electronic format.
 - 2009 data was not available for this research, as MLB password protected the file.
- Thus, the research employed all ticket prices from 1975 to 2008, as well as the 2010 season.

Data Cleaning

- The sample employed within this research was cleaned for two reasons.
- First, the Canadian market teams were removed from the dataset as noted by Soebbing (2008), because of uncertainty of what currency prices were listed in.
- Second, ticket prices were not published for the Baltimore Orioles in 1979 and the Washington Nationals in 2005.
- We eliminated these observations providing us with 899 team-season observations.

From: Watanabe, Soebbing, & Wicker (2013) – *Sport Marketing Quarterly*

Table 1 Team Ticket Price Summary Statistics

Team name	Average no. of prices	Smallest no. of prices offered	Largest no. of prices offered	Average prices (\$)	Minimum price (\$)	Maximum price (\$)	SD of price	Average Gini price
Arizona	14	8	15	37.27	1.14	229.27	35.99	0.43
Atlanta	6	4	10	19.78	1.11	74.65	13.88	0.27
Baltimore	8	4	13	21.59	3.43	85.31	13.95	0.22
Boston	6	4	7	27.44	4.76	133.30	22.49	0.22
California	7	3	12	21.63	5.10	159.96	20.45	0.22
Chicago Cubs	6	4	10	21.18	4.74	62.01	12.94	0.20
Chicago White Sox	5	3	8	20.37	6.32	55.37	10.65	0.17
Cincinnati	6	4	11	18.00	4.23	83.05	13.03	0.21
Cleveland	6	4	12	20.67	3.52	70.54	14.88	0.26
Colorado	12	8	15	18.58	1.30	52.04	12.37	0.35
Detroit	6	4	11	21.14	5.33	100.00	16.74	0.25
Florida	8	4	10	27.94	2.67	110.73	20.90	0.31
Houston	7	5	12	18.72	1.11	55.45	12.52	0.25
Kansas City	6	4	9	18.36	3.57	178.67	17.55	0.21
Los Angeles	5	3	13	24.82	4.27	221.46	28.21	0.19
Milwaukee	8	5	11	19.38	1.14	94.12	12.18	0.24
Minnesota	5	2	9	18.50	5.06	113.04	12.29	0.22
New York Mets	4	3	6	22.67	4.18	79.72	14.26	0.19
New York Yankees	6	3	14	42.46	3.20	442.93	62.62	0.25
Oakland	6	4	9	24.87	4.61	227.77	31.70	0.26
Philadelphia	5	4	9	18.47	4.76	53.32	9.67	0.18
Pittsburgh	6	3	12	18.30	5.05	57.58	10.08	0.20
San Diego	6	3	12	18.93	5.33	66.85	12.97	0.20
San Francisco	6	4	13	24.84	2.53	101.31	19.87	0.24
Seattle	6	4	12	21.50	3.31	66.85	14.88	0.24
St. Louis	6	4	13	23.75	5.10	94.12	17.03	0.23
Tampa	10	9	11	55.53	2.07	274.67	63.97	0.52
Texas	7	4	13	21.38	2.55	94.05	16.32	0.24
Washington	14	12	18	51.64	5.33	346.57	57.81	0.40

From: Watanabe, Soebbing, & Wicker
(2013) - *Sport Marketing Quarterly*

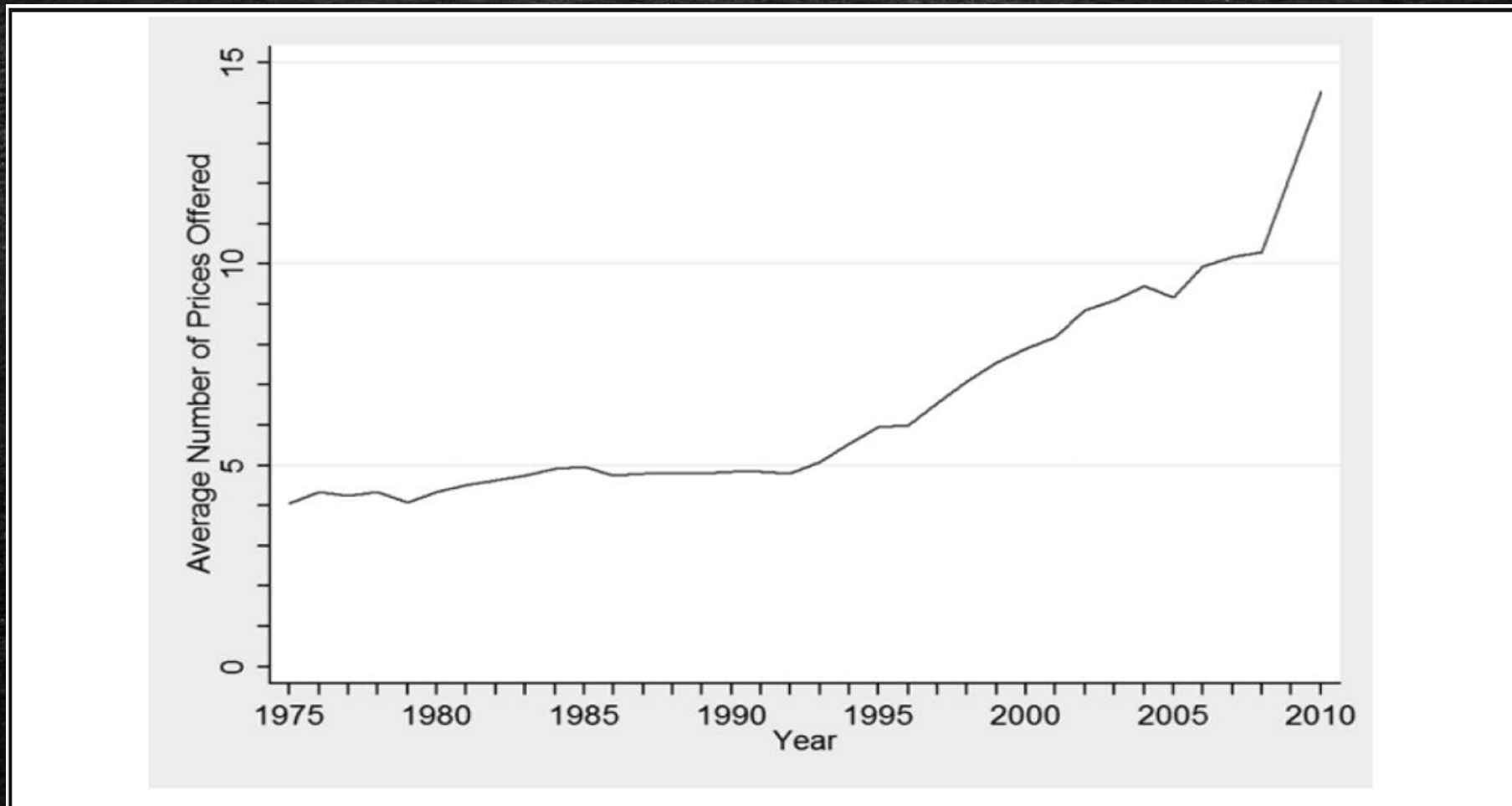


Figure 1. Average Number of Ticket Prices Offered Per Season: 1975-2010 (except 2009)

From: Watanabe, Soebbing, & Wicker
(2013) - *Sport Marketing Quarterly*

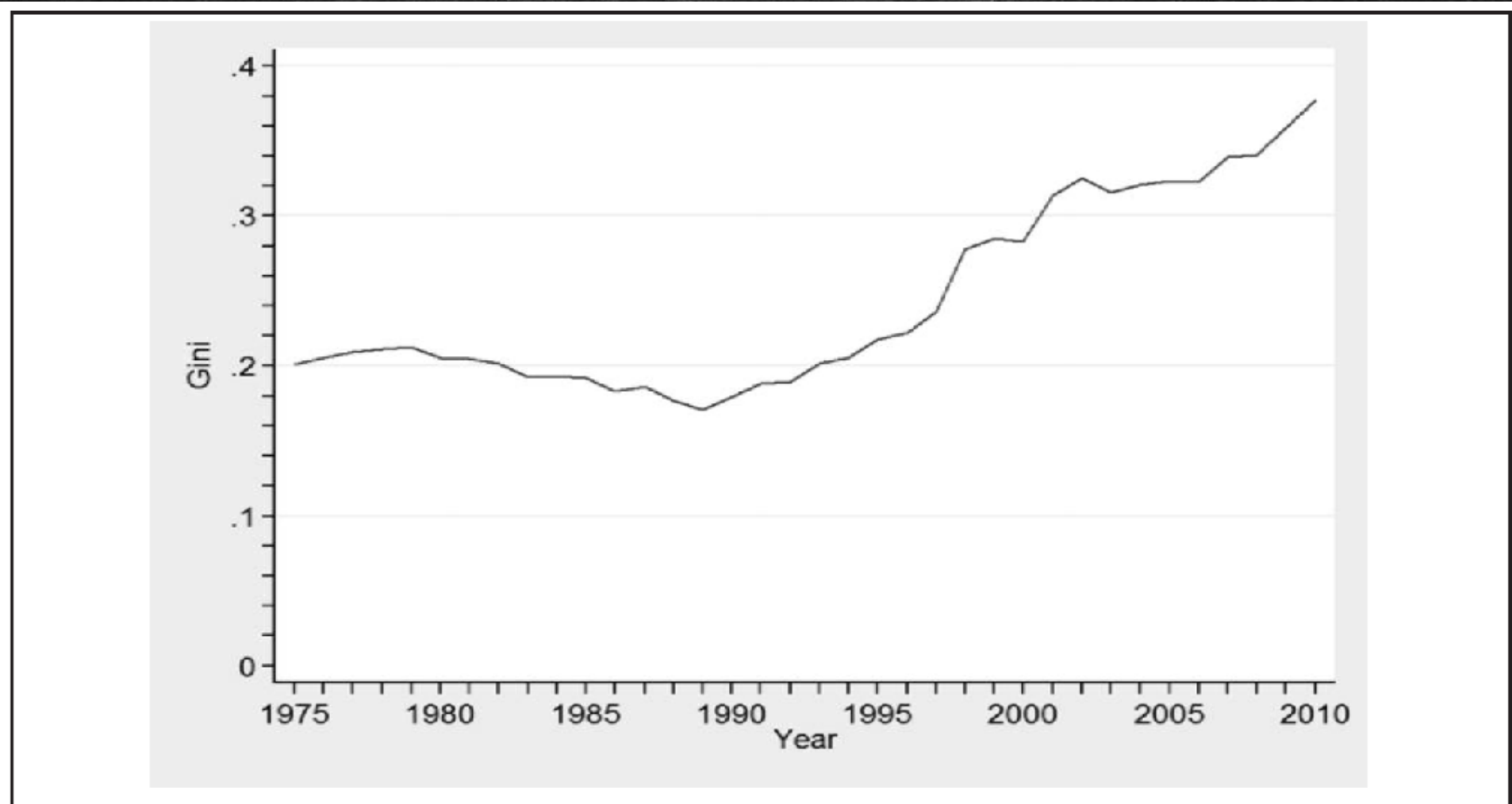


Figure 2. Average Gini Coefficient of Ticket Prices Per Season: 1975-2010 (except 2009)

Measures and Variables

- For the purpose of this research, two different dependent variables were employed.
- The first is the **number of price levels (PLN)** that tickets were sold at for each team in each season. This is a basic measure of price levels for teams.
- The second DV is the **Gini Coefficient (Gini)** of those ticket price levels.
- The Gini Coefficient is a widely used **measure of distribution**, thus the Gini of price levels looked at how ticket prices were distributed.

Variables

- **StubHub** – A dummy variable measuring the presence of the StubHub agreement with MLB.
- **MLBAM** – A dummy variable measuring the existence of MLB Advanced Media.
- **Perf** – Standard Deviation of Team Winning percentages, measures the competitive balance of the league.
- **NewStad** – Variable measuring stadiums less than 10 years old.
- **Classic** – Measures teams over 47 years old (McEvoy et al., 2005).
- **StadCap** – Supply Capacity of a teams stadium.
- **Trend** – Variable measuring time trend from 1975 through 2010.

Method

- The variables are placed in an Ordinary Least Squares (OLS) regression, taking the form of:
- $$Ticket_{it} = \alpha + \beta_1 StubHub_t + \beta_2 MLBAM_t + \beta_3 Perf_{it} + \beta_4 NewStad_{it} + \beta_5 Classic_{it} + \beta_6 StadCap_{it} + \beta_7 Trend_t + \varepsilon_{it}$$
- In this, i indexes teams, t indexes seasons, α is an MSA fixed effect controlling for region specific coefficients, and ε is the error term.

Estimation Issues

- Two potential issues are multicollinearity and standard error correction.
- First, for multicollinearity the correlation coefficients are under the threshold of 0.9 (Tabachnick & Fidell, 2007). Additionally, the variance inflation factors (VIF) were all less than or equal to 4 (where 6 is the established threshold – Keith, 2007).
- Thus multicollinearity is **not an issue**.
- There was some issue with standard error correction, so after testing models we transform PIn to its natural log (logPIn)

From: Watanabe, Soebbing, & Wicker (2013) – *Sport Marketing Quarterly*

Table 2
Summary of Regression Results

DV	Gini		Pln		logPln	
	<i>coeff.</i>	<i>p</i>	<i>coeff.</i>	<i>p</i>	<i>coeff.</i>	<i>p</i>
StubHub	0.036 (0.015)	0.019	2.476 (0.506)	<0.001	0.182 (0.045)	<0.001
MLBAM	0.066 (0.010)	<0.001	1.713 (0.277)	<0.001	0.205 (0.040)	<0.001
Perf	-0.248 (0.110)	0.027	-5.683 (3.237)	0.086	-0.735 (0.441)	0.102
NewStad	0.032 (0.009)	0.001	0.922 (0.233)	<0.001	0.092 (0.033)	0.009
Classic	0.042 (0.017)	0.020	1.047 (0.483)	0.035	0.129 (0.070)	0.072
StadCap	0.000 (0.001)	0.599	-0.025 (0.019)	0.191	-0.004 (0.003)	0.135
Trend	0.001 (0.000)	0.035	0.109 (0.013)	<0.001	0.019 (0.002)	<0.001
R^2	0.644		0.732		0.739	
Fixed Effects	MSA		MSA		MSA	
SE Cluster	Facility		Facility		Facility	

Note: Displayed are the unstandardized coefficients, standard errors in brackets. Dependent variable is the Gini Coefficient of a team.

Results

- The three estimated models explained between 64 and 74 percent of the observed variation in the dependent variables.
- In all three models, the StubHub variable is positive and significant. This indicates that with the inclusion of StubHub, **MLB teams continued to increase the number of prices they sold tickets at, as well as further disperse them.**
- MLBAM also was positive and significant, meaning that teams also continued to increase prices even when accounting for time.

Results Continued

- Results from the competitive balance variable found that performance has a negative effect on ticket price inequality, similar to prior research by Humphreys & Soebbing (2012).
- Price levels do not seem to be impacted by individual team performance.
- Classic and NewStadiums were also related to ticket price inequality. **Teams with new or classic stadiums tended to offer more price levels.**

Implications

- StubHub agreement has significant and positive impact on price dispersion.
 - **Thus, teams should enter into agreements with second-hand ticket sellers to generate revenue.**
- Teams in MLB have offered significantly more price levels since the StubHub agreement.
 - **Teams with fewer levels, should be encourage to offer more prices.**
- The inequality amongst ticket price levels has significantly increased since the StubHub agreement.
 - **Second hand ticket market can be used to increase variation of prices.**
- Second-hand ticket market has increased the complexity of pricing behavior of MLB teams.
 - **Need for more price dispersion research.**

The next step

- Soebbing, B.P., & Watanabe, N.M. (2014). The Effect of Price Dispersion on Major League Baseball Team Attendance. *Journal of Sport Management*, 28, 433-446.
- This research specifically examines the **demand for MLB games** in relation to price dispersion.
- *Hypothesis 1: An increase in price dispersion leads to an increase in attendance at MLB regular season games.*

Demand approach

- This study uses similar data and theoretical backing, but employs an economic demand approach.
- An economic demand model takes the form of the equation:
- $$\text{AvgAttend}_{it} = \beta_0 + \beta_1 \text{PD}_{it} + \beta_2 \text{Winpct}_{it} + \beta_3 \text{Winpct}_{i(t-1)} + \beta_4 \text{Post}_{i(t-1)} + \beta_5 \text{TeamAge}_{it} + \beta_6 \text{StadAge}_{it} + \beta_7 \text{Classic}_{it} + \beta_8 \text{WorkStp}_t + \beta_9 \text{Interlge}_t + \beta_{10} \text{Comp}_{it} + \mu_{it}$$

Econometrics

- Demand equations have issues when using an OLS regression, especially in regards to endogeneity problems.
- A two-stage instrumental variable approach (Greene, 2000) is often recommended.
- Because of the panel nature of the data, the two-stage approach is replaced with a two-step General Method of Moments (GMM) estimator (Coates & Humphreys, 2007).

From: Soebbing & Watanabe (2014) – *Journal of Sport Management*

Table 4 GMM Regression Results: Dependent Variable Is Team Average Attendance Per Game

Variable	Model 1			Model 2		
	Coefficient	SE	<i>p</i>	Coefficient	SE	<i>p</i>
<i>Gini TP</i>	-80,054	18,089	< 0.001	—	—	—
<i>PL#</i>	—	—	—	-2,504	493	< .001
<i>Winpct</i> *100	477	31	< .001	423	32	< .001
<i>Winpct</i> _(<i>t</i>-1) *100	250	40	< .001	234	39	< .001
<i>Post</i> _(<i>t</i>-1)	3,064	695	< .001	2,910	685	< .001
<i>TeamAge</i>	745	46	< .001	954	69	< .001
<i>StadAge</i>	-244	38	< .001	-231	33	< .001
<i>Classic</i>	15,308	2,828	< .001	12,336	2,395	< .001
<i>WorkStp</i>	-1,189	485	.014	-1,209	460	.009
<i>Interlge</i>	1,861	1,499	.214	397	1,124	.724
<i>Comp</i>	-1,068	538	.047	-1,094	475	.021
<i>R</i> ²	.600	—	—	.604	—	—
First-stage <i>F</i> statistic	15.01	—	—	23.09	—	—
Hansen <i>J</i> statistic	5.36	—	.068	1.02	—	.601

Notes. *SE* = standard error. *Gini TP* = Gini coefficient of the dollar value for each of the collected price levels for the most common price offering. *PL#* = number of price levels. *Winpct**100 = winning percentage. *Winpct*_(*t*-1)*100 = winning percentage in the previous season. *Post*_(*t*-1) = 1 (the team participated in the previous postseason) or 0 (the team did not participate in the previous postseason). *TeamAge* = number of years that the team has been located in the metropolitan statistical area. *StadAge* = age of the stadium. *Classic* = 1 (stadium ≥ 48 years old) or 0 (stadium < 48 years old). *WorkStp* = 1 (year of work stoppage or the three subsequent years) or 0 (no work stoppage). *Interlge* = 1 (interleague play occurred) or 0 (interleague play did not occur). *Comp* = number of other major professional sports teams (i.e., football, basketball, or hockey) that play in the metropolitan statistical area.

Findings

- Results show that there is not a positive relationship between attendance and increasing the number of dispersion of ticket prices.
- This runs counter to previous research which argued that increasing price levels and distribution may bring more fans.
- Empirical results indicate that the pricing practices of MLB may not be focused on maximizing attendance, but rather maximizing organizational revenue.

Study #3

- **The Impact of Price Discrimination on Major League Baseball Team's Revenue.**
 - (Currently Under Review).
- In this, the work examines how tickets being sold at different numbers of price levels and the disparity between those ticket price levels in MLB can influence the revenues for these franchises.
- This study is unique as it looks at the impact on price discrimination based on facility age.

Research Question

- What is the effect of price dispersion on revenues in Major League Baseball?
- What is the role of facilities in this dynamic?

The model

- Equation 1 presents the formal revenue model:

- $$\begin{aligned} \text{LogRevenues}_{it} = & \vartheta_i + \beta_1 \text{Discrim}_{it} + \beta_2 \text{Dispers}_{it} + \beta_3 \text{NewStad}_{it} + \\ & \beta_4 \text{ClassicStad}_{it} + \beta_5 \text{Discrim} * \text{NewStad}_{it} + \beta_6 \text{Dispers} * \text{NewStad}_{it} + \beta_7 \\ & \text{Discrim} * \text{Classic}_{it} + \beta_8 \text{Dispers} * \text{Classic}_{it} + \beta_9 \text{SingleUse}_{it} + \\ & \beta_{10} \text{LuxurySuitesPct}_{it} + \beta_{11} \text{ClubSeatsPct}_{it} + \beta_{12} \text{Winpct}_{it} + \beta_{13} \text{Perf3}_{it} + \\ & \beta_{14} \text{AllStars}_{i(t-1)} + \beta_{15} \text{TeamAge}_{it} + \beta_{16} \text{Pop}_{it} + \beta_{17} \text{PCPI}_{it} + \beta_{18} \text{MLBAM}_t + \\ & \beta_{19} \text{CB}_{it} + \beta_{20} \text{CB}^2_{it} + \beta_{21} \text{Trend}_{it} + \mu_{it} \end{aligned}$$

From: Soebbing, Watanabe, and Seifried
(Under Review)

- RESULTS REMOVE PENDING PUBLICATION

Findings

- Price Dispersion (and Price Discrimination) did not impact team revenues.
- Price discrimination in new facilities did increase team revenue.
- Mathematically, we can show that **single use stadiums increased revenues by around 20%**
- At the same time, **practicing increased price dispersion in a new stadium increases team revenues by about 95%** for every unit increase in price dispersion measures.
- Curiously, increasing the number of price levels (discrimination) has a small and negative effect on revenues for teams.
- The findings seem to **indicate the importance of amenities in new stadiums as an important source of increasing organizational revenue.**
- Surprisingly, the number of **luxury seats did not have a significant impact** on total franchise revenue.

Conclusion

- These three studies provide an advancement in the understanding demand and pricing in a sport context.
- Specifically, they advance the understanding of the practice of price dispersion from both a theoretical and empirical standpoint.
- That is, from these studies, we can see that the practice of price dispersion in North America is beneficial to organizations, but more along the lines to increase revenues.

The Future

- Analyzing the economics of the demand for MLB team Twitter accounts
 - *Journal of Sport Management* (2015, 2016).
- Employed economic modeling to understand **determinants of demand for team Twitter account following.**
- This study bridges **communication, management and economics.**
- Day-by-day factors were not significant, however large scale performance variables and the **development of content were important in increasing fan interest in MLB team accounts.**
- The next stage is to relate this back to organizational revenue, especially those generated by MLB Advanced Media, and see if Twitter following is related to digital/organizational revenues.

The Commercial Value of Amateurism

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The Commercial Value of Amateurism: An Examination of the Procompetitive Presumption by Measuring Consumer Interest in NCAA Football

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Amateurism and the NCAA

- Perhaps one of the biggest issues being debated in sport is the “amateur” status of student-athletes.
- College sport has long been connected with the idea of students participating in athletic events out of their love of the sport.
- However, it is also important to note that the idea of using college sporting events as a business to attract consumers has also been around for pretty much the same amount of time.
- If we go back to the first collegiate sporting event, the Harvard – Yale Regatta in the 1800’s, we can find the event was sponsored by the Boston-Montreal Railroad, and that all of the athletes competing were provided free trips on the railroad, meals, travel expenses, etc.
- The idea was by hosting this competition, the railroad would get individuals to travel in greater numbers to see these competitions.

Amateurism and the NCAA

- Additionally, it is also worth noting that while the discussions of pay-for-play, or paying student-athletes is considered to be something which has emerged in recent years as the NCAA's revenue generation has grown, student-athletes have long been fighting for various forms of compensation.
- For example, in the 1930's there was a number of "protests" by players in college football.
- There were several instances of players demanding proper compensation for their services.
- In one case, a team refused to participate in the Rose Bowl until they were provided with better compensation for playing in the game.
 - The impetus of this strike was that in the previous year, their University had made \$200,000 from participating in the game, while the football players were only given around \$100 (for the entire team) for participating.
 - There was also the demand for watches as gifts for playing, as other teams had received such items for their participation.

Defining Amateurism

- In the landmark 1984 case of the NCAA vs Board of Regents of the University of Oklahoma, the University (along with the University of Georgia) argued that the NCAA was violating antitrust laws by placing restrictions on broadcasts of college football games.
- At the time, schools were capped in regards to the number of times they could appear on television in a season, which top programs saw as hampering their ability to generate revenue.
- In this case, the courts ruled against the NCAA, which opened up the television market for college football games – this is why your television is dominated by the sport on Saturdays.
- However, in the ruling, Judge Stevens noted that rules which preserved the “academic tradition” were an essential part of the NCAA product.
- Thus, the NCAA was able to use this ruling to help make the argument that amateurism is an important part of the product of collegiate sport in future legal cases.

Recent Challenges

- There have been a number of recent attempts by both current and former NCAA student-athletes to try and gain compensation for playing in college athletics.
- Recently, players at Northwestern University attempted to unionize, in a similar way that graduate students have in private academic institutions.
- The hope was that the union would be certified by the National Labor Relations Board (NLRB), and hence provide players at private schools with the designation of being employees, and thus be provided with a salary.
- However, the attempt to certify as a union failed as a strong legal challenge was put up by Northwestern.

O' Bannon v. NCAA

- The biggest case to date was brought forth by former UCLA basketball player Ed O'Bannon, who sought compensation for student-athletes based on the use of player likeness in video games and other media.
- In hearing the case, the Ninth Circuit found that the NCAA's justification of amateurism could be accomplished through less-restrictive approaches.
- That is, it was argued that the limits on compensation could be increased to include a calculated "cost-of-attendance" for student-athletes.

Procompetitive Justification

- Typically, courts require market-based evidence for a procompetitive justification
 - Yet, there is no evidence supporting the procompetitive presumption that consumer interest in the NCAA's products depends on preservation of "amateurism."
- In *O'Bannon* (2015), the Ninth Circuit rejected testimony that consumer demand for tennis, rugby, and the Olympics did not change when athlete payments were permitted.
 - Found that the uniqueness of the NCAA's products rendered those sports as unfit analogues.
- Ninth Circuit also statement from the NCAA's witness that consumer interest would not be harmed by \$5,000 payment to athletes.
 - Court found that amount of payment was irrelevant as consumers would lose interest if any payments that are "untethered" to education were provided to student-athletes.

Research Motivation

- To fill the gap in the literature on consumer interest in amateurism with a direct investigation of the relationship between payments to student-athletes and the demand for NCAA sport contests.
 - Study follows the reasoning in *O'Bannon* by being the first to directly test the strength of the procompetitive presumption through an examination of the effect that an increase in stipends has on consumer interest in NCAA football.
- Study like this is now possible because the NCAA increased student-athlete compensation for the first time in almost 40+ years.
 - Also, cost-of-attendance is not a proper formula for limiting “amateurism.”
 - Athletes are free to use stipends for non-education expenses.
- If caps are “essential”, then a modification that increases compensation to include cash payments that students are free to use for non-academic purposes should produce a negative consumer response.

A Natural Experiment on Amateurism

- Recent changes in the compensation of college athletes based on the “cost of attendance” (COA) has allowed schools to increase the stipend amounts for the 2015-16 school year.
- Following the change in policy, many schools in the Football Bowl Subdivision (FBS) implemented increased stipends for student-athletes.
- Thus, as a large number of FBS schools provided significant increases in compensation for student-athletes, this situation provided a natural experiment through which to measure whether the increase in stipends had an impact on consumer interest.
- In order to empirically estimate these changes, there is need to develop a demand model following previous research studies (Ross & DeSarbo, 2014).

Background

- There is a long line of research which has focused on examining the economic demand for sport products (Borland & Macdonald, 2003), with most studies examining either live attendance (Groza, 2010; Mirabile, 2015; Paul, Humphreys, & Weinbach, 2012) or television viewership (Salaga & Tainsky, 2015).
- As this study specifically analyzes demand for college football, it follows the lineage of previous studies on NCAA demand (Falls & Natke, 2014; 2016, Salaga & Tainsky, 2015; Schofield, 1983; etc).
- Using Borland and Macdonald's (2003) taxonomy of determinants of demand as well as the previous literature, the following function is formed to estimate demand for NCAA football games:

$$D_{it} = f(Q_{it}, Q_{jt}, N_{it}, O_{it}, M_{it})$$

- In this function, D represents demand, the two Q's represent the home and away team strength, N accounts for consumer preferences, O represents quality of views, and M represents market characteristics.

Data and Variables

- In order to measure demand for NCAA football games, two dependent variables are used: game-level attendance and television viewership.
- Team strength is represented by the Massey rankings for the home and away team before the start of each game, as well as the number of wins and losses for the home team.
- Game time conditions are controlled for using the temperature, wind speed, presence of rain or snow, as well as the month of the year, and whether a game occurred on a weekday or weekend.
- Market characteristics are represented by the population, per capita income for the Metropolitan Statistical Area (MSA), the enrollment of the university, as well as the total revenue for the athletic department.
- Changes in stipend are measured with the SAStipend variable, which was gathered from schools who reported Cost of Attendance for both the 2014-15 and 2015-16 seasons.
- Lastly, control variables were included for the conference a team played in, the year the game was played, and stadium capacity.

Methodology

- To begin with, due to the panel nature of the data, we ran both fixed and random effects regressions.
- A Hausman test was run to check whether there is any significant difference between the coefficients from the fixed and random effects models.
- The results found no significant difference between the coefficients from the models, this process was repeated for both the live-attendance and television viewership models.
- Due to the results of the Hausman test and the time-invariant nature of several variables, a Generalized Least Squares (GLS) regression with random effects was used to estimate results.
- Additionally, as there may be issues in estimating live-attendance because of the percentage of games which are sold out in college football, an additional model was estimated using a Tobit regression.

Results

- Results from the GLS regression for live attendance and television viewership both found no significant impact on demand based on the change in stipend provided to student-athletes.
- On the other hand, the Tobit regression found a positive impact from the change in stipend, indicating that when controlling for other factors, attendance actually increased when stipend levels for student-athletes was increased.
- Overall, the findings find no evidence of a negative impact on demand for college football based on providing an increased stipend for college athletes.

Implications

- At a minimum, the results from this study validate the Ninth Circuit's less-restrictive-alternative in *O'Bannon*.
 - Cost-of-attendance increases did not harm consumer interest in college football in a way that is less restrictive than the limits imposed by grant-in-aid.
- Inferences can also be drawn that rebut the procompetitive presumption
 - First, if consumers perceive student-athlete compensation limits as essential to the creation of the NCAA's products, then a significant increase in student-athlete compensation should have produced a negative consumer reaction.
 - Instead, the results revealed a correlation between increases in payments to student-athletes and increases in attendance at football games.
 - Second, the results contradict determination in *O'Bannon* that consumer demand for college football would be irreparably harmed by schools providing student-athletes with cash sums that are untethered to educational costs.
 - The cost-of-attendance stipends (payments for discretionary spending) should have harmed consumer interest in the NCAA's products.
 - Yet, schools with higher stipend amounts saw larger increases in attendance.

Conclusion

- The results provide direct evidence for the influence of amateurism on consumer interest in the NCAA's products.
- They do not, however, preclude the existence of a financial breaking point at which the amounts provided through stipends to student-athletes harm consumer interest in the NCAA's products.
- However, courts should rely on empirically-produced research, rather than assumptions, in determining the procompetitive value of amateurism.
 - Place the burden on the NCAA to demonstrate, with actual market-based evidence, that a set limit on student-athlete compensation is needed to preserve consumer interest in its products.
- Without actual evidence of consumer harm, courts in pending cases like *Jenkins v. NCAA* and *Alston v. NCAA* should not recognize a procompetitive justification for the NCAA's rules that restrict student-athlete compensation.
 - Like Justice Holmes said, legal applications should not persist "out of blind imitation of the past."

*Thank You For
Attending!!!*

Questions?
