The Price of Stardom: Investigating the Link Between Star Power and Pro Sports Ticket Costs

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Introduction

- It has been questioned whether team performance (winning) or having a star player contributes more to team demand
- The purpose of this project is to attempt to investigate what drives ticket prices for professional sports teams
- Team performance or star power a bigger driver

Literature Review

- Previous studies have investigated the impact between star power and demand through attendance
  - MLS data on higher paid players driving attendance - limited effects that diminished over time (Jewell, 2017)
- Adler analyzes the differences in talent and how higher talented players are paid higher amounts (Adler, 1985)
- Chen found an increase in attendance after close wins (Chen et al., 2020)
- Langhorst investigated MLB data to conclude that fan bases are unique and responded differently to performance, payroll, and ticket price factors (Langhorst, 2014)

Method

- Data collection
  - 124 cases across the NBA, NFL, NHL, and MLB
  - Attendance and championship data compiled from Sports Reference
  - Ticket pricing data collected from the Fan Cost Index
  - Salary information from Spotrac
- Data analysis through a hierarchical regression model using IBM SPSS

Table 1.
Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
AvgTicketPrice	22.12	186.23	77.658	35.872
HomeGmAvgAtten	9,155	78,309	31,481.48	21,121.588
TotalChampionships	0	27	2.83	4.284
TitlesWithin5Years	0	1	.12	.327
PrevSeasonWin/Pt%	17.6	76.5	51.299	13.352
StarPower	0	1	.14	.345

- Average ticket price used as the dependent variable
- Predictors TitleWithin5Years and StarPower are binary
- StarPower is operationalized to account for the top 5 players in each professional league based off average salary

Results

- The addition of the team performance variables into Model 2 accounted for a statistically significant amount of the incremental variance in average ticket price
- Performance related variables explained an additional 5.2% of the variance in ticket price
- Star power only explained .5% of the incremental variance in ticket price

Table 2.
Hierarchical Regression Analysis Results

Predictor Variables	Model 1	Model 2	Model 3
Attendance Related			
HomeGmAvgAtten	.001 (5.963)**	.001 (6.05)**	.001 (5.973)**
Performance Related			
TotalChampionships		1.38 (2.084)*	1.271 (1.884)
TitleWithin5Years		10.543 (1.191)	10.47 (1.181)
PrevSeasonWin/Pt%		.206 (.949)	.177 (.807)
Player Related			
StarPower			7.399 (.882)
F-statistics	35.558	11.46	9.307
R^2	.226	.278	.283
ΔR^2	.226**	.052*	.005

Note: Unstandardized coefficients reported; t-values in parentheses; * $p < .05$; ** $p < .01$

Implications

- Make filling the arena the primary focus
  - Marketing and fan events could be key
- Data only across one season
  - Challenge in quantifying star power
- Future projects could expand data collection
- Input a scale for star power