

League Expansion, Relocation and Venue Extortion

Year	X/R	League/Club	Fee ^a	League	DMA ^b	Venue ^a	Public%
<i>National Football League</i>							
1995	X	Carolina Panthers (NFC)	140	29	1.09	248	24.6
	X	Jacksonville Jaguars (AFC)	140	29	.66	^c 141	85.8
	R	Los Angeles Raiders back to Oakland	...	30	2.42	^c 128	100.0
	R	Los Angeles Rams to St. Louis	^f 29	30	1.24	299	100.0
1996	R	Cleveland Browns to Baltimore Ravens	^f 29	30	1.10	229	87.3
	R	Houston Oilers to Nashville	^f 29	30	.97	292	75.7
1999	X	Cleveland Browns (AFC)	530	31	1.53	314	74.8
2002	X	Houston Texans (AFC) ^e	700	32	2.05	449	70.6
2016	R	St. Louis Rams back to Los Angeles	500	32	7.46	1,800	0.0
<i>Major League Baseball</i>							
1993	X	Colorado Rockies (NL)	95	27	1.48	231	82.3
	X	Florida Marlins (NL)	95	28	1.54	^c ...	...
1998	X	Arizona Diamondbacks (NL)	130	29	1.80	354	66.9
	X	Tampa Bay Devil Rays (AL)	130	30	1.78	218	100.0
2005	R	Montreal Expos to Washington Nationals (NL)	450	30	2.31	611	100.0
<i>National Basketball Association^g</i>							
1995	X	Toronto Raptors	125	28	2.60	180	^d 0.0
	X	Vancouver Grizzlies	125	29	1.33	120	^d 0.0
2001	R	Vancouver Grizzlies to Memphis	30	30	.67	250	93.6
2002	R	Charlotte Hornets to New Orleans	30	30	.60	^c 122	100.0
2004	X	Charlotte Bobcats	300	30	1.09	265	91.3
2008	R	Seattle Super Sonics to OKC Thunder	30	30	.73	121	100.0
<i>National Hockey League</i>							
1991	X	San Jose Sharks	50	22	2.42	133	82.1
1992	X	Ottawa Senators	50	23	.60	160	21.3
	X	Tampa Bay Lightning	50	24	1.78	153	62.1
1993	R	Minnesota North Stars to Dallas Stars	...	24	2.44	420	^d 29.8
	X	Anaheim Mighty Ducks	50	25	5.65	120	100.0
	X	Florida Panthers	50	25	1.54	212	87.3
1995	R	Quebec Nordiques to Colorado Avalanche	...	26	1.48	170	^d 0.0
1996	R	Winnipeg Jets to Phoenix Coyotes	...	26	1.80	220	81.8
1997	R	Hartford Whalers to Carolina Hurricanes	...	26	1.04	158	87.3
1998	X	Nashville Predators	80	27	.97	144	100.0
1999	X	Atlanta Thrashers	80	28	2.31	213	^d 20.2
2000	X	Columbus Blue Jackets	80	29	.91	179	19.2
	X	Minnesota Wild	80	30	1.71	190	74.7
2017	X	Las Vegas?	500	31	.73		

X= Expansion R= Relocation

^a Venue cost and expansion/relocation fees in \$millions

^b DMA 2007-08 Nielsen Media Designated Market Area in million households

^c Renovations; ^d Joint NBA-NHL arenas

^e Seattle Seahawks switched from AFC to NFC in 2002 realignment of eight divisions of 4 teams.

^f Relocation fee is share of PSL payments to Ravens (\$65 million), Titans (\$71 million) and Rams (\$78 million).

^g NBA added Charlotte Hornets, Miami Heat (1988); Minnesota T-Wolves, Orlando Magic (1989) fee of \$37.5 million.

Table III. Franchise Expansion and Relocation in Major League Baseball

Date	Relocation (R) or Expansion (X) Franchises	Expansion Fee (\$mil)
1953	R Boston Braves to Milwaukee (NL)	—
1954	R St. Louis Browns to Baltimore Orioles (AL)	—
1955	R Philadelphia Athletics to Kansas City (AL)	—
1958	R Brooklyn Dodgers to Los Angeles (NL)	—
	R New York Giants to San Francisco (NL)	—
1961	X Expansion Los Angeles Angels (AL)	2.18 ^a
	X Expansion Washington Senators (AL)	2.15
	R Washington Senators to Minnesota Twins (AL)	—
1962	X Expansion New York Mets (NL)	1.80 ^b
	X Expansion Houston Colt 45's (NL)	1.85
1965	R Los Angeles Angels to Anaheim (AL)	—
1966	R Milwaukee Braves to Atlanta (NL)	—
1967	R Kansas City Athletics to Oakland (AL)	—
1969	X Kansas City Royals (AL)	5.25 ^c
	X Seattle Pilots (AL)	5.25
	X Montreal Expos (NL)	10.00
	X San Diego Padres (NL)	10.00
1970	R Seattle Pilots to Milwaukee Brewers (AL)	—
1972	R Washington Senators to Texas Rangers (AL)	—
1977	X Expansion Seattle Mariners (AL)	6.25 ^d
	X Expansion Toronto Blue Jays (AL)	7.00
1993	X Expansion Colorado Rockies (NL)	95.00 ^e
	X Expansion Florida Marlins (NL)	95.00
1998	X Expansion Arizona Diamondbacks (NL)	130.00 ^f
	X Expansion Tampa Bay Devil Rays (NL)	130.00

a. In an expansion draft the Angels and Senators selected 28 players at \$75K each; the Angels chose another 3 and Senators, 2 at \$25K. The average player salary in 1961 was about \$15K.

b. The Mets and Colt 45's each drafted 16 players at \$75K; the Mets took 2 and the Colts, 3 at \$50K and both chose 4 players at \$125K.

c. The Royals and the Pilots selected 30 players at \$175K apiece; the Expos and Padres chose 30 players for a flat fee of \$10M. The average player's salary in 1969 was \$25K.

d. The Mariners and Blue Jays received no TV share from 1977–9 (\$3M). Each selected 30 players at \$175K apiece. Average MLB salary in 1976: \$50K.

e. The Rockies and Marlins received no TV share in 1993 (\$13M). Each drafted 36 players from both leagues for flat fee of \$95M: \$21M to 14 AL clubs and \$74M divided among 12 NL clubs. Average MLB salary in 1992: \$1.1M.

f. The Diamondbacks and Devil Rays receive \$5M less of a TV share in 1998–2003 (\$25M).

270 games were being locally televised, including 231 home games for the three New York clubs in 1957.¹⁹ Due largely to the double occupancy of the Baltimore-Washington market, the Washington Senators moved to a smaller Minneapolis market in 1961 for \$320K more in media rights fees. In a second move, the Braves left the confinement of the tripled Milwaukee-Chicago area in 1966 for Atlanta, a city the same size as Milwaukee, for \$800,000 more in annual media reve-

19. Another important drawing factor was the prospects of playing in new stadia. The Braves went to a \$5 million County Stadium in Milwaukee in 1953 with a rent of \$1,000 per year for the first two years and five percent of the gross thereafter, and then jumped to the \$18 million 50K-seat Fulton County Stadium in Atlanta in 1966 with \$500,000 in moving costs. The Dodgers traded minor league Wrigley Field for 300 acres in Chavez Ravine, and Los Angeles provided \$2 million infrastructure. The Senators were "guaranteed" an average 750K attendance for the first five years to move into the enlarged Metropolitan stadium. According to the referee, who is familiar with the Twins, rent was not due until the club drew 3.75 million. "The Twins did receive an escape clause in the contract they signed when they moved to the Metrodome, however, and will exploit this to the full in their demands for a new baseball-only stadium." The Rangers (Senators II) were charged \$1 per year rent in Texas until they drew 1 million fans.

Table IV. Franchise Expansion and Relocation in National Football League

Date	Relocation (R), or Expansion (X) and Suburban (S)	Expansion Fee (\$mil)
1960	X Expansion Dallas Cowboys (NFL)	.60 ^a
	R Chicago Cardinals to St. Louis (NFL)	—
1961	X Expansion Minnesota Vikings (NFL)	.60 ^a
	R Los Angeles Chargers to San Diego (AFL)	—
1963	R Dallas Texans to Kansas City Chiefs (AFL)	—
1966	X Atlanta Falcons (NFL)	8.50 ^b
	X Miami Dolphins (AFL)	7.50
1967	X New Orleans Saints (NFL)	8.50 ^b
	X Cincinnati Bengals (AFL)	8.00
1970	X AFL-NFL merger (ten AFL clubs)	18.00 ^c
1971	S Boston (New England) Patriots to Foxboro, Massachusetts	—
	S Dallas Cowboys to Irving, Texas	—
1973	S Buffalo Bills to Orchard Park, New York	—
1975	S Detroit Lions to Pontiac, Michigan	—
1976	X Expansion Seattle Seahawks (AFC)	16.00 ^d
	X Expansion Tampa Bay Buccaneers (NFC)	16.00
	S New York Giants to East Rutherford, New Jersey	—
1980	S Los Angeles Rams to Anaheim, California	—
1982	R Oakland Raiders to Los Angeles	—
1984	R Baltimore Colts to Indianapolis	—
	S New York Jets to East Rutherford, New Jersey	—
1988	R St. Louis Cardinals to Phoenix, Arizona	—
1995	X Expansion Carolina Panthers (NFC)	140.00 ^e
	X Expansion Jacksonville Jaguars (AFC)	140.00
	R Los Angeles Raiders to Oakland, California	—
	R Los Angeles Rams to St. Louis	—
1996	R Cleveland Browns to Baltimore Ravens	—
	R Houston Oilers to Nashville, Tennessee	—
1997	S Washington Redskins to Landover, Maryland	—

a. The Cowboys and Vikings each selected 36 expansion draft players at \$15K apiece.

b. The Falcons, Dolphins, Saints and Bengals each selected 42 players at \$200K apiece.

c. Ten clubs merged from the AFL: Boston Patriots, Buffalo Bills, Cincinnati Bengals, Denver Broncos, Houston Oilers, Kansas City Chiefs, Oakland Raiders, Miami Dolphins, New York Jets, San Diego Chargers. Nine AFL clubs paid \$2M per club indemnity to the two NFL clubs that were doubled: the New York Giants and the San Francisco 49ers. The Bengals paid the expansion fee of \$8M. AFC clubs did not receive a share of 1967 expansion proceeds. The original AFL expansion fee was \$25K in 1959.

d. The Seahawks and Buccaneers received full TV shares. Each paid \$3M in 1974–5, \$2M in 1976–80 plus 4 percent of unpaid balance.

e. The Panthers and Jaguars each receive half TV shares in 1995–9 (\$48.75M). Each pay the league \$42M in 1993, \$28M in 1994, and \$17.5M in 1995–8 plus 6 percent of unpaid balance.

enced minor dual-market adjustments. The Chicago Cardinals relocated to St. Louis in 1960 with a side payment of \$500,000 made by the Chicago Bears, the Los Angeles Chargers moved to San Diego in 1961 and the original cornerstone of the AFL, the Dallas Texans, became the Kansas City Chiefs in 1963. As the two leagues battled, player costs escalated and competitive expansion was pushed into marginal sites of Atlanta (NFL) and Miami (AFL) in 1966, and New Orleans (NFL) and Cincinnati (AFL) in 1967.³⁴ The leagues reached a merger agreement in 1966, where all clubs

34. QF observe that the threat of AFL expansion into Chicago in 1966 may have convinced George Halas, the owner of the Chicago Bears “to bring his considerable influence to bear (*sic*) to end the war” [10, 350].

Table 1. National Football League TV Right Fees

Term	Years	Clubs	Total Rights	Annual Rights	Broadcast				Cable		Satellite DirecTV
					ABC	CBS	NBC	FOX	ESPN	TBS	
American Football League											
1960-64	5	8	10.6	2.1	2.1	...	...	...	...	...	...
1964-69	5	10	42.5	8.5	...	...	8.5	...	...	...	...
National Football League											
1960-61	2	14	.6	.3	...	.3	...	...	...	...	...
1962-63	2	14	10.5	5.3	...	4.7	.6	...	...	...	...
1964-65	2	14	32	16	...	16	...	...	...	...	...
1966-69	4	16	98	24.5	...	24.5	...	...	...	...	...
1970-73	4	26	188	47	8	22	17	...	...	...	...
1974-77	4	28	218	55	13	24	18	...	...	...	...
1978-78	4	28	646	162	60	54	48	...	...	...	...
1982-86	5	28	2,100	420	115	120	107	...	...	...	...
1987-89	3	28	1,428	476	125	165	135	...	51	...	...
1990-93	4	28	3,600	900	225	265	188	...	111	111	...
1994-97	4	30	4,388	1,097	230	...	217	395	131	124	...
1998-05	8	31	19,600	2,600	550	500	...	550	600	...	400
2006-11	6	32	22,410	3,735	...	623	600	713	1,100	...	700
2012-13	2	32	8,130	4,065	...	620	603	743	1,100	...	1,000
2014-22	9*	32	58,820	6,580	...	1,080	1,050	1,150	1,900	...	1,400

DirecTV "Sunday Ticket" extended at \$4 billion four years 2011-14, and expected \$1.4 billion 2015-2022; ESPN 8 years \$15.2 billion 2014-21.
TV Rights in other leagues: MLB \$803 million annually (7 years 2007-13); NBA \$930 million annually (8 years 2008-16); NASCAR \$560 million annually (8 years 2007-14). Total TV revenues in Big 5 European Leagues \$4.45 billion 2008-09

Table 1. Ranking NA TV Households by Designated Market Area (DMA in millions)

Rank	Designated Market Area (DMA)	TVHH	NFL	MLB	NBA	NHL	MLS	TOTAL
1	New York	7.461	2	2	2	3	2	9
2	Los Angeles	5.666	0	2	2	2	2	6
3	Chicago	3.534	1	2	1	1	1	5
4	Philadelphia	2.964	1	1	1	1	1	4
5	<i>Toronto</i>	2.957	0	1	1	1	1	3
6	Dallas-Ft. Worth	2.655	1	1	1	1	1	4
7	San Francisco-Oakland-San Jose	2.519	2	2	1	1	1	6
8	Boston	2.433	1	1	1	1	1	4
9	Washington, DC	2.412	1	1	1	1	1	4
10	Atlanta	2.375	1	1	1	0	1	3
11	Houston	2.289	1	1	1	0	1	3
12	Detroit	1.856	1	1	1	1	0	4
13	Phoenix	1.855	1	1	1	1	0	4
14	Seattle-Tacoma	1.848	1	1	0	0	1	2
15	Tampa-St. Pete	1.828	1	1	0	1	0	3
16	Minneapolis-St. Paul	1.748	1	1	1	1	0	4
17	Miami-Ft. Lauderdale	1.663	1	1	1	1	1	4
18	Denver	1.575	1	1	1	1	1	4
19	<i>Montreal</i>	1.526	0	0	0	1	1	1
20	Orlando-Daytona Beach	1.490	0	0	1	0	1	1
21	Cleveland-Akron	1.485	1	1	1	0	0	3
22	Sacramento	1.388	0	0	1	0	0	1
23	<i>Vancouver</i>	1.329	0	0	0	1	1	1
24	St. Louis	1.255	1	1	0	1	0	3
25	Portland, OR	1.185	0	0	1	0	1	1
26	Pittsburgh	1.182	1	1	0	1	0	3
27	Raleigh-Durham	1.165	0	0	0	1	0	1
28	Charlotte	1.158	1	0	1	0	0	2
29	Indianapolis	1.097	1	0	1	0	0	2
30	Baltimore	1.095	1	1	0	0	0	2
31	San Diego	1.081	1	1	0	0	0	2
32	Nashville	1.043	1	0	0	1	0	2
33	Hartford - New Haven	1.000	0	0	0	0	0	0
34	Kansas City	0.942	1	1	0	0	1	2
35	Columbus, OH	0.929	0	0	0	1	1	0
36	Salt Lake City	0.921	0	0	1	0	1	1
37	Milwaukee	0.917	1	1	1	0	0	3
38	Cincinnati	0.908	1	1	0	0	0	2
39	San Antonio	0.906	0	0	1	0	0	1
40	Greenville	0.849	0	0	0	0	0	0
41	West Palm Beach	0.810	0	0	0	0	0	0
42	Grand Rapids -Kalamazoo	0.734	0	0	0	0	0	0
43	Austin	0.733	0	0	0	0	0	0
44	Oklahoma City	0.730	0	0	1	0	0	1
45	Las Vegas	0.726	0	0	0	0	0	0
46	Harrisburg	0.725	0	0	0	0	0	0
47	Birmingham	0.719	0	0	0	0	0	0
48	Norfolk	0.719	0	0	0	0	0	0
49	Greensboro	0.705	0	0	0	0	0	0
50	Albuquerque-Santa Fe	0.691	0	0	0	0	0	0
51	Jacksonville	0.676	1	0	0	0	0	1
52	Louisville	0.675	0	0	0	0	0	0
53	Memphis	0.672	0	0	1	0	0	1
54	New Orleans	0.652	1	0	1	0	0	2
55	Buffalo	0.634	1	0	0	1	0	2
<i>Totals</i>		1.482	32	30	30	26		122

Source: Nieslen Media and BBM Canada . DMAs are multi-county areas with > 50% viewership.

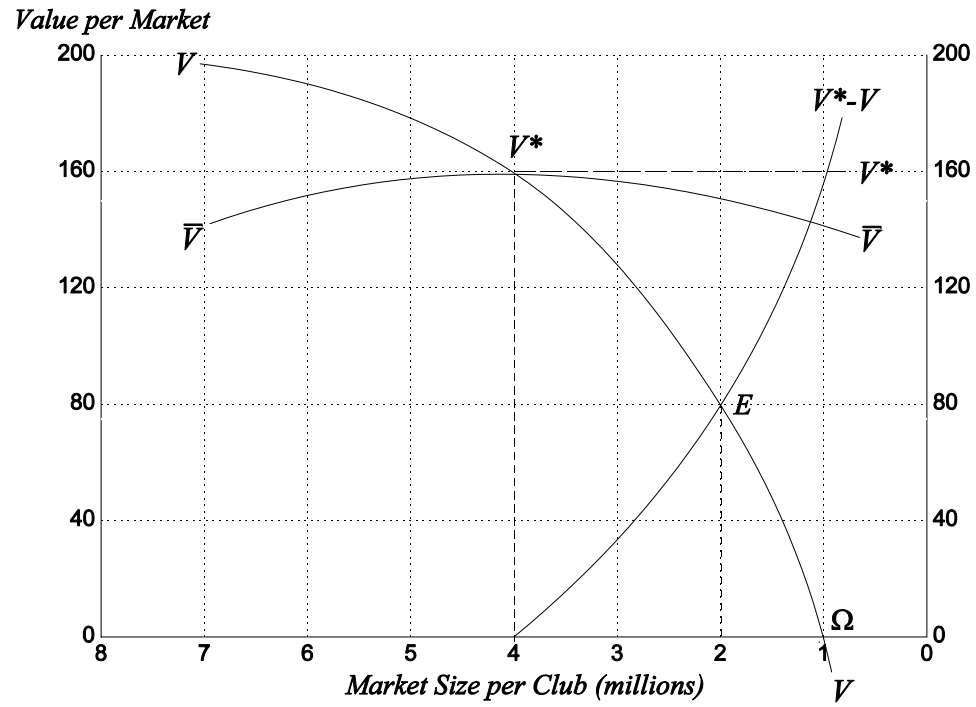


Figure 1. Optimum League Expansion (after Buchanan)

The Cost of NHL Southern Expansion Strategy

In 1993-94 the league spent 57 percent of league revenues for player salaries. That year the player's salaries took up \$414 million of the league's \$732 million in revenues. Player costs approached 76 percent of revenues at the time of the lockout in 2004-05. Beginning in 2005-06 the NHL salary cap sets the player cost limit at 57 percent of "Hockey Related Revenue."

NHL Cost Squeeze before the 2004-05 Lockout

	1993-94	2002-03
Average Player Salary	\$558,000	\$1,790,000
Total NHL Revenues	\$732 million	\$1.93 billion
Total Player Salaries	\$414 million	\$1.46 billion
Player Cost Squeeze	56.6%	75.6%

Source: John Vrooman and NHL

NHL Player Salaries "Southern Strategy"

Season	Avg. Salary
1990-91	\$276,000
1991-92	\$368,000
1992-93	\$465,000
1993-94	\$558,000
1994-95	\$733,000
1995-96	\$892,000
1996-97	\$981,000
1997-98	\$1,167,713
1998-99	\$1,288,974
1999-00	\$1,356,380
2000-01	\$1,434,885
2001-02	\$1,642,590
2002-03	\$1,790,209
2003-04	\$1,830,126
2004-05	Lockout
2005-06	\$1,460,000

Source: John Vrooman and NHL

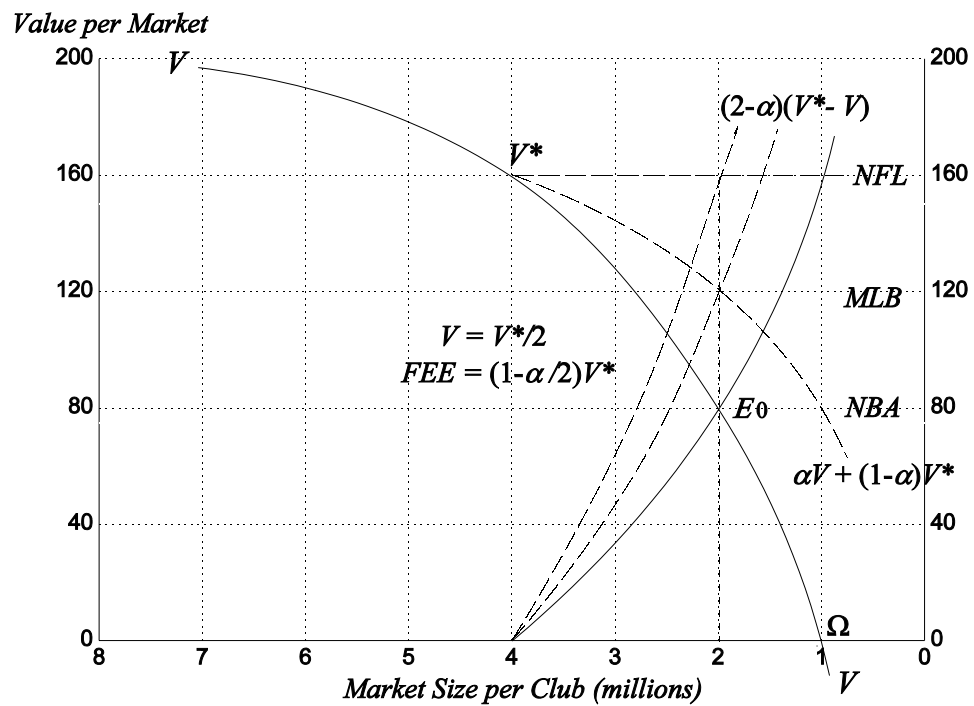


Figure 2. General Optimum Expansion

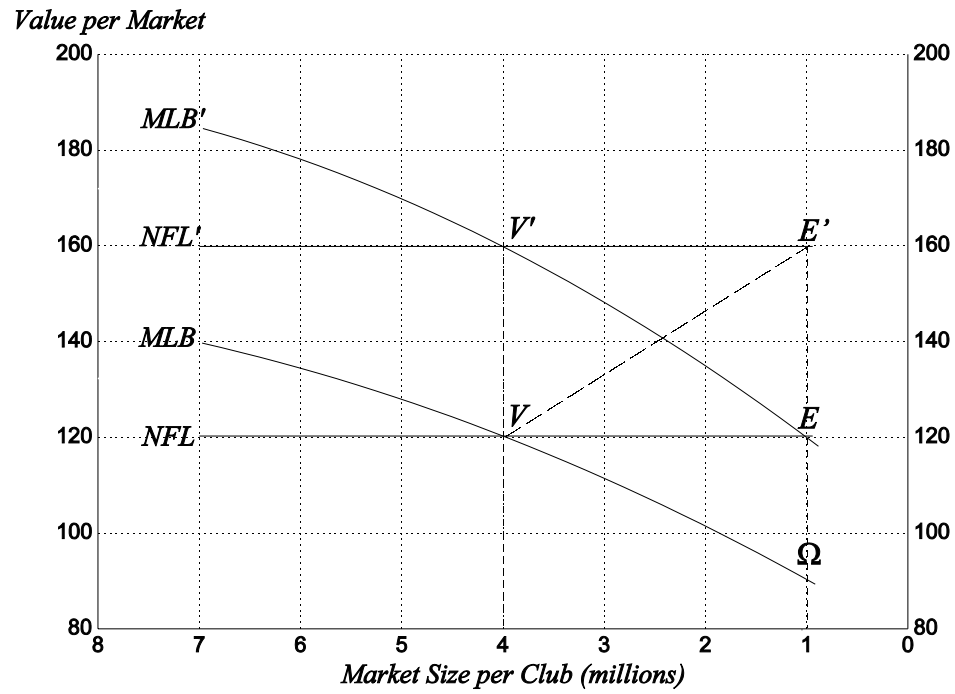
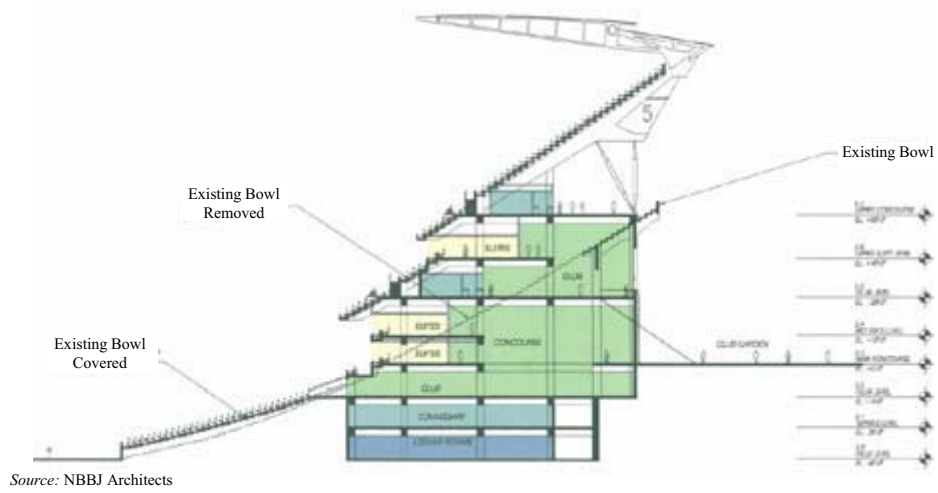
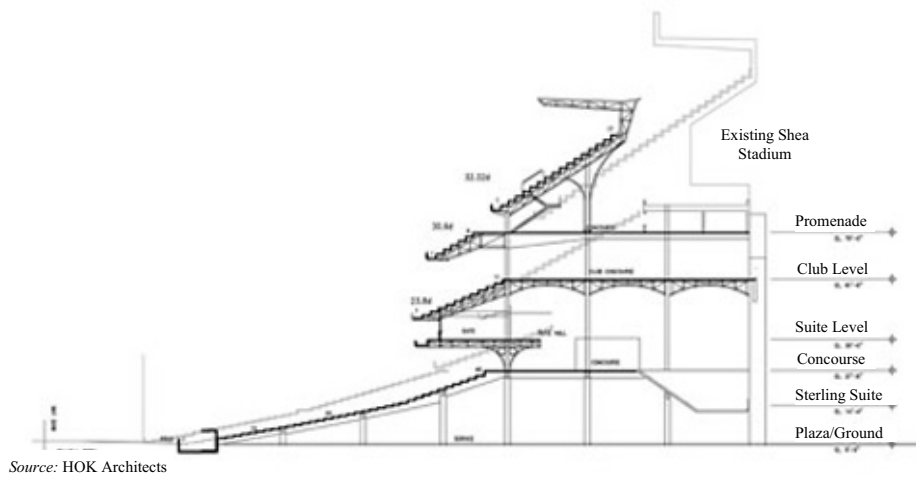


Figure 5. The Extortion Triangle



Source: NBBJ Architects

Figure 1. L. A. Coliseum Proposed Renovations



Source: HOK Architects

Figure 5. N.Y. Mets Citi Field and Shea Stadium

Source: John Vrooman

NFL Venue Revolution since 1995 Expansion

Franchise	Stadium	Year Open	Total Seats	Luxury Suites	Club Seats	PSL Seats	G-3/4 Loan	PSL Fees	Total Cost	Private Cost	Public Cost	Private Share	Public Share
Relocation-Extortion													
Jacksonville Jaguars	EverBank Field†	1995	73.0	85	11.2	...	...	...	\$141	\$20	\$121	14.2%	85.8%
St. Louis Rams	Edward Jones Dome	1995	65.3	124	6.2	53.5	...	\$78	\$299	\$0	\$299	0.0%	100.0%
Oakland Raiders	McAfee Coliseum†	1995	63.1	143	6.3	39.0	...	\$68	\$128	\$0	\$128	0.0%	100.0%
Carolina Panthers	Bank of America Stadium	1996	73.4	158	11.4	62.5	...	\$122	\$248	\$187	\$61	76.3%	24.6%
San Diego Chargers	Qualcomm Stadium†	1997	71.5	113	7.8	...	...	...	\$78	\$18	\$60	23.1%	76.9%
Washington Redskins	FedEx Stadium	1997	91.7	284	15.0	...	...	...	\$251	\$180	\$71	72.0%	28.3%
Baltimore Ravens	M&T Bank Stadium	1998	69.3	108	7.9	60.2	...	\$65	\$229	\$29	\$200	12.7%	87.3%
Tampa Bay Bucs	Raymond James Stadium	1998	66.3	195	12.3	...	...	...	\$169	\$15	\$154	8.9%	91.1%
Tennessee Titans	LP Field	1999	67.7	143	9.6	58.2	...	\$71	\$292	\$71	\$221	24.3%	75.7%
Cleveland Browns	First Energy Stadium	1999	73.2	147	8.8	57.0	...	\$25	\$314	\$79	\$235	25.2%	74.8%
Cincinnati Bengals	Paul Brown Stadium	2000	65.6	114	7.6	58.0	...	\$26	\$458	\$44	\$414	9.6%	90.4%
Pittsburgh Steelers	Heinz Field	2001	64.5	129	6.6	45.0	...	\$37	\$284	\$113	\$171	39.8%	60.2%
Houston Texans	NRG Stadium	2002	69.5	191	8.3	44.0	...	\$50	\$449	\$132	\$317	33.1%	70.6%
Extortion Totals	13 Venues		70.3	149	9.2	53.0	\$0	\$542	\$3,340	\$888	\$2,452	26.6%	73.4%
G-3/4 Loan Program													
Denver Broncos	Sports Authority Field	2001	76.2	124	8.2	...	\$48	...	\$401	\$100	\$301	24.9%	75.1%
New England Patriots	Gillette Stadium	2002	68.8	80	6.0	...	\$141	...	\$412	\$340	\$72	82.5%	17.5%
Detroit Lions	Ford Field	2002	64.4	132	8.6	...	\$100	...	\$500	\$375	\$125	75.0%	25.0%
Seattle Seahawks	CenturyLink Field	2002	67.0	82	7.7	8.3	\$63	\$17	\$430	\$130	\$300	30.2%	69.8%
Philadelphia Eagles	Lincoln Financial Field	2003	67.6	172	10.8	29.0	\$125	\$70	\$518	\$330	\$188	63.7%	36.3%
Chicago Bears	New Soldier Field	2003	61.5	133	8.6	27.5	\$100	\$70	\$632	\$200	\$432	31.6%	68.4%
Green Bay Packers	Lambeau Field†	2003	71.0	167	6.3	58.0	\$13	\$93	\$295	\$126	\$169	42.7%	57.3%
Arizona Cardinals	University of Phoenix	2006	63.4	88	7.5	...	\$42	...	\$455	\$147	\$308	32.3%	67.7%
Indianapolis Colts	Lucas Oil Stadium	2008	63.0	142	7.1	...	\$33	...	\$675	\$100	\$575	14.8%	85.2%
Dallas Cowboys	AT&T Stadium	2009	80.0	320	15.0	66.0	\$76	470	\$1,200	\$850	\$350	70.8%	29.2%
Kansas City Chiefs	Arrowhead Stadium†	2010	77.1	133	10.0	...	\$43	...	\$375	\$125	\$250	33.3%	66.7%
New York Giants/Jets	MetLife Stadium	2010	82.5	217	10.0	55.5	\$300	\$800	\$1,600	\$1,600	\$0	100.0%	0.0%
San Francisco 49ers	Levis Stadium (G-4)	2014	68.5	170	9.0	68.5	\$200	\$312	\$1,310	\$1,196	\$114	91.3%	8.7%
Minnesota Vikings	US Bank Stadium (G-4)	2016	65.4	131	8.0	49.0	\$200	\$151	\$1,027	\$529	\$498	51.5%	48.5%
Atlanta Falcons	Mercedes Benz Stadium (G-4)	2017	71.0	180	7.5	71.0	\$200	\$200	\$1,400	\$600	\$800	42.9%	57.1%
G-3/4 Totals	15 Venues		69.8	151.4	8.7	48.1	\$1,684	\$2,183	\$11,230	\$6,748	\$4,482	60.1%	39.9%
Grand Total	28 Venues		70.1	150.2	8.9	50.6	\$1,684	\$2,725	\$14,570	\$7,636	\$6,934	52.4%	47.6%

Following the aborted move of New England Patriots to Hartford Connecticut in 1999, the League established the G-3 loan program for venue construction (Amendment 1999 G-3 NFL Bylaws). Using a debt facility backed by TV revenues, the NFL loaned up to 50 percent of private stadium contribution for top six TV markets (\$150 million maximum) and up to 34 percent of the private share for smaller markets (\$100 million maximum). G-3 loans are repaid from visiting team share of club-seat premiums. The G-3 program ended in 2007 and after the 2008 financial crisis it was replaced by the G-4 program (\$200 million maximum) in 2011.

*Private cost includes G-3/4 League loans and PSL fees as the present value of season ticket discounts over time. †Stadium renovations

Source: Vrooman Sports Economics

MLB Parks since Camden Yards									
MLB Franchise	Ballpark	Open	Seats	Suites	Club	Cost \$M	Team \$M	Public \$M	Subsidy
Toronto Blue Jays	Rogers Centre	1989	50.5	161	5.7	\$510	\$180	\$330	64.7%
Chicago White Sox	US Cellular Field	1991	40.6	103	1.8	\$199	\$0	\$199	100.0%
Baltimore Orioles	Camden Yards	1992	48.2	72	4.6	\$234	\$24	\$210	89.7%
Cleveland Indians	Progressive Field	1994	43.4	126	2.1	\$230	\$70	\$160	69.6%
Texas Rangers	Globe Life Park in Arlington	1994	48.9	126	5.7	\$192	\$48	\$144	75.0%
Colorado Rockies	Coors Field	1995	50.4	62	4.4	\$231	\$41	\$190	82.3%
Atlanta Braves	Turner Field	1997	50.1	64	5.4	\$260	\$51	\$209	80.4%
Anaheim Angels	Angel Stadium of Anaheim*	1997	45.1	68	5.1	\$118	\$88	\$30	25.4%
Arizona Diamondbacks	Chase Field	1998	49.0	69	4.4	\$354	\$117	\$237	66.9%
Tampa Bay Devil Rays	Tropicana Field	1998	41.3	70	2.8	\$218	\$0	\$218	100.0%
Seattle Mariners	Safeco Field	1999	47.4	69	4.3	\$517	\$139	\$378	73.1%
Detroit Tigers	Comerica Park	2000	41.1	102	3.0	\$360	\$225	\$135	37.5%
Houston Astros	Minute Maid Park	2000	41.0	63	4.8	\$299	\$70	\$229	76.6%
San Francisco Giants	AT&T Park	2000	41.6	65	5.3	\$319	\$304	\$15	4.7%
Milwaukee Brewers	Miller Park	2001	42.4	75	3.4	\$414	\$90	\$324	78.3%
Pittsburgh Pirates	PNC Park	2001	38.4	72	3.4	\$262	\$40	\$222	84.7%
Cincinnati Reds	Great American Ball Park	2003	42.1	57	4.2	\$330	\$60	\$270	81.8%
Philadelphia Phillies	Citizens Bank Park	2004	43.5	72	6.6	\$346	\$172	\$174	50.3%
San Diego Padres	Petco Park	2004	42.5	55	5.0	\$449	\$146	\$303	67.5%
St. Louis Cardinals	Busch Stadium III	2006	44.0	62	5.0	\$388	\$300	\$88	22.7%
Washington Nationals	Nationals Park	2008	41.0	66	2.5	\$686	\$85	\$601	87.6%
New York Mets	Citi Field	2009	45.0	54	7.8	\$771	\$324	\$447	58.0%
New York Yankees	New Yankee Stadium	2009	51.8	67	4.3	\$1,005	\$524	\$481	47.9%
Minnesota Twins	Target Field	2010	42.0	60	4.0	\$522	\$130	\$392	75.1%
Kansas City Royals	Kauffman Stadium*	2010	37.9	40	2.5	\$250	\$25	\$225	90.0%
Florida Marlins	Marlins Park	2011	37.0	47	3.0	\$640	\$155	\$485	75.8%
Atlanta Braves	SunTrust Park	2017	41.5		4.0	\$672	\$280	\$392	58.3%
MLB Average 27 Clubs			44.1	75	4.3	\$399	\$137	\$263	65.8%
MLB Totals 27 Clubs						\$10,776	\$3,688	\$7,088	65.8%

Source: John Vrooman, Vanderbilt University

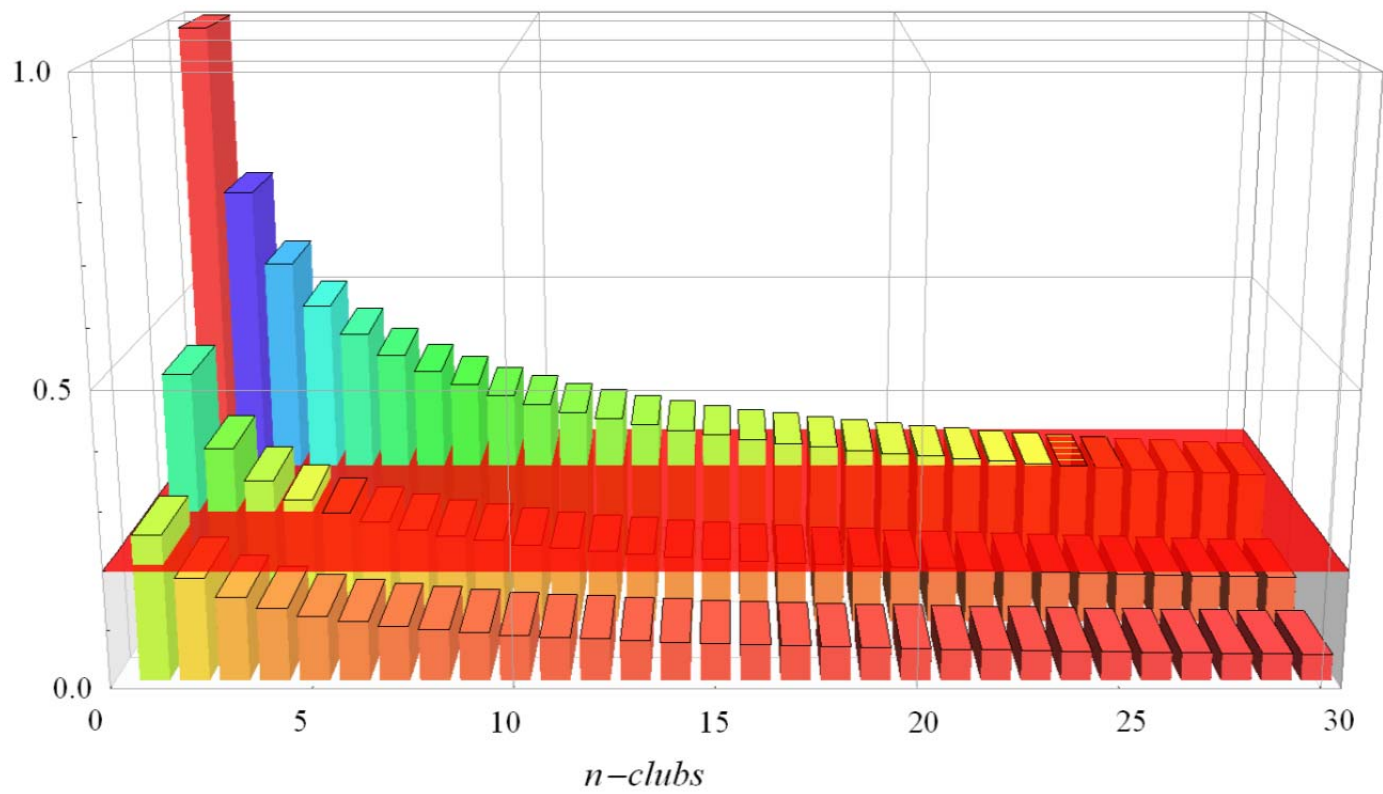


Figure 1. Vrooman's Law