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Assessing Major League Soccer's Efficiency

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Keywords: MLS, soccer, efficiency, major league

Assessing Major League Soccer's Efficiency

The United States and Canada have fostered four major professional sports leagues, being Major League Baseball, the National Football League, the National Basketball Association, and the National Hockey League. Strictly referring to when the leagues stood alone (including going through mergers with competing leagues), as the NHL was the last to conspire, the four leagues have been in stand alone operations from anywhere between 1901 (MLB) and 1979 (NHL) (Liponski, 2010). What league then has the promise of turning the well-established “Big Four” into the “big five”? This report assesses the potential of Major League Soccer to become a major league sport in America based on the league's current level of operation.

Founded in 1996, the MLS has subsisted half as long as the NHL, the youngest league in the “Big Four” (Lipinski, 2010). Celebrating its fifteenth season, MLS is potentially at its most pivotal point of existence in foreshadowing its future as a league. The MLS predecessor, the North American Soccer League, was a successful American soccer league of the 1970s. The league, however, failed dramatically in 1984 after seemingly being an established league (Crowder, 2006). The NASL was aged at sixteen seasons in 1984, which serves as a concern for MLS if it is going to be the first American soccer league to last longer than sixteen seasons.

In 1967, there were two professional soccer leagues in America; the United Soccer Association and the National Professional Soccer League. One year later, they merged to form the North American Soccer League, the NASL (Crowder, 2006). In the documentary film *Once In A Lifetime*, directed by Crowder (2006), the NASL's quick rise to prominence in America was tracked through the eyes of the league's top team, the New York Cosmos. The film illustrates the success of the league to expand to 24 teams in the first ten years, attempt to fill Giants

Stadium for playoff games, a capacity of over 77,000, and to attract international talent like Brazilian forward, Pelé.

As tremendous as these accomplishments were, especially when considering the duration of the NASL existence, they contributed to its eventual downfall. Of the 24 teams that once competed in the NASL, only two teams won more than one league championship, Chicago twice and the New York Cosmos five times (Crowder, 2006). Giants Stadium may have been filled to capacity on more than one occasion, but each of these seemingly popular games involved the New York Cosmos. Recognizable names like Pelé and Germany midfielder Franz Beckenbauer may have been lured to the growing NASL, but in the ends of their careers, and all to the New York Cosmos (Crowder, 2006).

MLS was founded twelve years after the fall of the NASL, but it is still its immediate successor, and inherently must accept comparisons. The central problem of the NASL was the sole exponential growth of the New York Cosmos, attracting the top players, winning the most championships, and subsequently being the most watched team both in stadiums and on television. MLS has made a publicly known effort not to over expand the league too quickly, reaching 18 teams in 2011. Nine of the current 18 teams have won a MLS championship, including four repeat champions (Liponski, 2010). MLS efficiency was tested once before following the 2000 season. Since Dieter Haas' study of MLS efficiency, two expansion teams have won a combined three championships (Liponski, 2010), further reinforcing the idea that MLS has improved on the NASL in terms of maintaining competitive balance.

While the importing of England national team star David Beckham in 2007 seemed like a reoccurrence of Pelé's New York Cosmos' signing in 1975, MLS implemented a salary cap rule in 2007 to prevent a sudden influx of foreign talent. Large salary players are known as

Designated Players, and each team can declare two players as such, with an option to purchase a third. These players' contracts count as \$415,000 against the team salary cap no matter what amount they are signed for (Major League Soccer, 2011). Since 2007, only three more prominent foreign stars have been signed to MLS teams, dispersing the now four players over three teams.

The final piece of comparison between the leagues is television viewership ratings. The NASL's rapid success gained the attention of television giant ABC in 1979 (Crowder, 2006). The league had 24 teams and the New York Cosmos had won the last two championships at the time of the television contract (Liponski, 2010). The league received a 2.7 rating (watched in 2.7% of TV equipped homes) for the 1979 season, with the majority of the airtime dedicated to Cosmos' games. The competition amongst the league had become too diluted and the fans began to express their disinterest in the Cosmos' dominance (Crowder, 2006). In contrast to the NASL's one season on the air, MLS has had televised games since its 1996 founding. MLS currently holds television contracts with ESPN and Fox Soccer Channel, as well as full schedule broadcasting on Direct Kick (MLS, 2011).

With the many similarities and differences between the NASL and MLS, a research study testing the viability of MLS holds great relevance to its prospect of lasting longer than the NASL. Haas' (2003) study tested efficiency based on absolute attendance, points awarded, team roster and head coach salary, and revenues. A similar study done on the English Premier League analyzed points awarded, team roster salary, and team revenues (Barros and Leach, 2006). This research takes three of these factors, excluding team revenue, plus the added factor of television viewership into account to determine efficiency of MLS teams, and the league as a whole, as of

the completed 2010 season. It is made clear by the successes and failure of the NASL that these criterion overlap and experience dependent relationships.

Literature Review

Considering the lifespan of the American major professional leagues, MLS is a relatively new spectrum of sport, and the underwhelming amount of research studies in comparison to those of MLB, for example, attests to that fact. There is, however, the ability to lay comparisons based on the theories used to test efficiency of the American “Big Four”, as well as the European soccer leagues that have also more than doubled MLS’ lifespan.

Barros and Leach (2006), Francis and Zheng (2010), and Haas (2003) are all published authors of studies analyzing the efficiency of American professional sports leagues. Their criterion for measurement included fan attendance of games, team performance on the field, and each team’s expenses. These factors, combined with television viewership numbers of the league are used and cross-examined with plausible external influences to determine the true efficient teams of MLS. Contributing factors, outside of the four variables tested, considered in this study include the “stadium novelty effect”, player and event “honeymoon effects”, and past professional soccer leagues.

It is possible that a “stadium novelty effect” creates a boom in attendance for a team with a new stadium (Howard & Crompton, 2003). This phenomenon will also be referred to in this study as a “honeymoon effect.” There is evidence across sports that attendance receives a boost in the years immediately following a stadium upgrade or move, before falling back to equivalent numbers from before the move (Howard & Crompton, 2003; Zygmunt & Leadley, 2005).

Howard and Crompton’s study (2003) shows that average attendance increased 22.2% in the first

year for a team in the “Big Four” sports in a new stadium, but 63% of the teams then experienced a decline in attendance during the second year.

There are also contradictory results from Wilkinson and Pollard (2006) that state attendance actually experiences a decline immediately. Their study argues a 2% decline in mean home attendance average across 40 teams from MLB, the NBA, and the NHL in the first season of a stadium move between 1987 and 2002. The study continues to show mean home attendance experiences an incline beginning in the second season, across all three sports. This research contests this phenomenon’s effect on efficiency within MLS, mainly its recent expansion teams.

In MLS, a greater impact on fan attendance has been the signing of high profile players like Freddy Adu (DeSchrive, 2007) and David Beckham (Lawson, Sheehan, & Stephenson, 2008), and the effect of international soccer events such as the European teams’ tour in the United States (Brown, 2005) and the FIFA World Cup (Markovits & Hellerman, 2003). The signing of David Beckham increased ticket sales 32.7% when his name simply appeared on the roster for the game, and an extra 24.3% increase occurred when he played (Lawson et al., 2008). There is also a connection between increased American interests in soccer associated with worldwide events, most repetitively the FIFA World Cup. During the 2002 World Cup in Germany, MLS games went from being viewed in 75,000 homes nationwide before the tournament, to 162,000 homes during the tournament (Markovits & Helerman, 2003).

Another integral part of understanding the current stature of MLS on an efficiency scale is to understand the past failures of American professional soccer leagues. The NASL was the most successful and the most compared example in past research. Francis and Zheng (2010) use MLS and its predecessor, the NASL, to test the ability of learning from prior mistakes in similar business ventures. The 2010 article results with four factors of managing efficiency and a two-

step guide to avoiding inefficiency. Two of the four factors resemble those being used in this study, players (wages) and media relations (television viewership), and the concluding two-step guide serves as the base point to framing the results of this study.

This study aimed to answer the question of how efficient MLS is in maximizing its returns on its product output. The efficiency of each MLS team was examined through absolute attendance, television viewership, points awarded, and price of labor. The factors were then analyzed to determine plausible obstacles and/or illusions of effectiveness such as the “honeymoon effect.”

Method

There are multiple approaches possible when attempting to assess a sports league’s efficiency and potential. For the purpose of this study, the league’s success was defined as the sum of the successes of its 16 teams that competed in 2010. This research was primarily exploratory, as MLS had only been assessed once before, using the 2000 season. Past studies on professional soccer league’s efficiency have tested four factors, while this research added a new, untested factor in television viewership. The final four factors used by this study to define MLS team efficiency were: absolute attendance, television viewership, points awarded, and price of labor in the form of total team salary (Barros & Leach, 2006; Francis & Zheng, 2010; Haas, 2003).

Sample

The sample used for this research is the 16 teams of the MLS that started the 2010 regular season. This study excludes the two 2011 expansion teams of the Vancouver Whitecaps FC and Portland Timbers who do not have existing statistics to satisfy the needs of the analysis of teams. As done in the Haas study (2003), the 16 teams were evaluated by the four factors of efficiency

and then deemed either efficient or inefficient. Efficiency is defined by the four factors of absolute attendance, television viewership, points awarded, and total team salary.

Measurement

Absolute attendance measures the attendance of games as compared to maximum amount of seating available at the stadiums. Therefore, the absolute attendance factor is presented as a percentage of seat capacity filling ability (Haas, 2003). According to Haas (2003), the absolute attendance better captures a team's success in entertaining the fans, and is not skewed due to the equal drawing potential of all represented markets.

The second influence on the efficiency of MLS teams tested was television viewership ratings. This is the factor this study is the first to include, and its addition serves to balance and strengthen efficiency measurement from fan reaction and involvement, traditionally set solely by attendance numbers. The Nielsen TV ratings were used to measure this factor with each team's rating representing the regional ratings for games participated in on a television broadcast. Nielsen ratings are measured as ratings points per share. A single national ratings point represents one percent of the total number of TV-equipped households. Due to Toronto F.C. being a Canadian team, their regional ratings by United States measurement were unable to be used in this study and are scored a zero.

The next criterion of efficiency directly relates to the team's on field performance, measured by the points awarded at season's end. Standardized at three points for a win and one for a draw across international league rules (Fédération Internationale de Football Association, 2011), this criterion was easily manageable and applicable when referencing studies conducted on English (Barros & Leach, 2006) or Spanish (Guzmán, 2006) professional leagues. Efficiency and inefficiency based on points awarded are judged on the least amount of total points from the

teams that did qualify for the playoffs. Ability of each team to qualify, or not qualify, for the playoffs, by scoring more or less than that established cut off, is the mark of efficiency or inefficiency in this factor alone (Haas, 2003). The final qualifying team for the 2010 postseason finished with 46 total points.

Total team salary/wages is the fourth factor of efficiency. Barros and Leach (2006) found a direct correlation between player wages and team performance in rankings. Total team salary includes all players on the active roster. Designated Players' salaries are included as their full terms of contract beyond the MLS salary cap inclusion of only \$415,000.

Research Design

Data collection

This research was done with exploratory purposes. With little previous research on MLS, and the available research being outdated, this study explored new possibilities in the area of testing efficiency of a professional soccer league in America. Secondary data from MLS league publications was used to satisfy the research objectives. Data on the four factors exists in prior research mentioned previously in this paper, databases of MLS, or government databases. The secondary data collected comes from the 2010 season.

Formula

To evaluate the efficiency of the 16 teams, a formula was created to measure each team's results for the four factors previously mentioned as compared to a league average for that specific category. Absolute attendance is used as a percentage of total possible attendance for all home games in the 2010 season. This style of reporting attendance was first used by Haas (2003) to avoid any differences based on drawing potential of larger cities over small market teams.

Television viewership for the season was used directly. It is this researcher's belief that television ratings are an enhancement of what absolute attendance measures as fan consumption. Therefore, each teams' TV ratings will be added to their absolute attendance percentage number.

Points awarded will be presented as each teams' final points divided by 46. The number 46 was used, as it is the points awarded for the last team that qualified for the playoffs, and will therefore reflect efficiency in the sense of ability to make the playoffs. The ratio of 2010 points over minimum playoff qualifying points places the playoff teams over one and the eliminated teams under one, giving teams that extend their season and product life for their consumers the advantage over those that do not. This portion of the formula will also provide for a difference in that advantage among the playoff teams. Teams closer to a 1.0 variable of points awarded were those closest to the benchmark of 46 points to qualify for the playoffs.

The efficiency formula features total team salary as the counterbalancing input that seeks the combined most productive outputs in the factors above. Total team salary also exhibits the widest ranging results from each team, reflecting Designated Players and various individual salaries. To compose a percentage, the 2010 salary cap will be accounted for in the formula. The 2010 salary cap was \$2,550,000 for a teams' 20-player senior team roster (Morse, 2010). However, the total team salary reflects a roster of up to 30 players. Added to the 20-player salary cap then will be 10 players at the 2010 average pay amount of \$138,169 (Bell, 2010) to bring the full roster salary cap to \$3,931,690. Each teams' team salary will be divided by the 2010 salary cap to generate a comparative sample.

The formula will read as such:

$$\text{efficiency} = \frac{(\% \text{ of attendance} + \text{television viewership}) * \text{Points Awarded}/46}{\text{Total Team Salary} / \text{Maximum 30-Player Salary Cap}}$$

The resulting number shall place each team either greater than or less than one. This ratio defines whether or not the teams' outputs outweigh the inputs, suggesting that the team is indeed operating efficiently in the means of return on their investment.

Results

The immediate results of data collection, as seen in Table 1, placed the Seattle Sounders first in attendance and television viewership, the Los Angeles Galaxy on top of points awarded, and the New York Red Bulls atop total team salary. On the other end of the spectrum, Sporting K.C. was last in attendance, D.C. United last in points, Chivas USA in salary, and Toronto last in TV ratings by default. The diversity of teams leading the four factors of efficiency provided prospect for multiple teams being deemed successful, while the variety of teams at the bottom countered the idea just as quickly. This research sought to put forth fully tested MLS efficiency rather than results seen on the surface.

After testing the 16 teams with the efficiency formula, eight returned efficient figures while the other eight teams were deemed inefficient (Table 2). The efficient teams of 2010 are Colorado, Columbus, Dallas, Houston, Philadelphia, Salt Lake, San Jose, and Seattle. The Seattle Sounders topped both the attendance and television viewership categories showing high output out of their modest input. Philadelphia tied for the highest absolute attendance percentage, selling their seats at 100% capacity. Of the eight efficient teams, none failed to fill less than 50% of their stadium's season capacity and only Houston and Philadelphia failed to qualify for the playoffs. Every efficient team was also under the 2010 maximum 30-player salary cap that this study established to be \$3,931,690, thereby creating low inputs.

Compared to Haas' results, every efficient team of this study differs from those found efficient in 2000. This suggests that Chicago, Los Angeles, and Kansas City's efficiency of 2000

relied heavily on their total team revenues for efficiency, the factor used by Haas that was not tested in this research. Los Angeles and Chicago recorded the two highest team revenues for that year (Haas, 2003). The inefficient teams in this 2010 study included Los Angeles and Chicago, as well as other large market cities New York and Washington D.C.. Of the eight total inefficient teams, five had at least one Designated Player and four exceeded the maximum salary cap, contributing the four highest input figures. New York and Los Angeles had multiple Designated Players and the two highest team salaries. The two largest markets were also the only of the eight to make the playoffs, with Los Angeles recorded the highest total points awarded during the regular season. Only three teams succeeded in filling at least 75% of season attendance capacity. The inefficient teams also made up four of the bottom five in television viewership. This includes Toronto, which was given a 0.0 in ratings due to lack of data available.

There have been six new teams added to MLS since the 2000 season that Haas used in his research. Houston, Philadelphia, Salt Lake, and Seattle are the efficient teams among those tested for the first time by this study. This data is encouraging to the testament that MLS is a stable and diverse league, with expansion teams able to achieve high stature and strong performance. This is only further supported by the fact that three of the ten Championships awarded since 2000 have been to these expansion teams. In contrast, only one of the efficient teams, the San Jose Earthquakes, is one of the original ten teams founded with MLS in 1996. Although this can be considered a concern, this researcher attributes this statistic more to the balance of the league. As the original teams succeed more in Championships, the expansions are producing more on all levels in order to cement their presence.

This research had a secondary mission of discovering any possible anomalies in results that may suggest inaccuracy in the efficiency ratings. The proposed influential external factors included the signing of high profile players, the stadium novelty effect, and worldwide events. High profile player signings seems to be a main contributing factor to a result of inefficiency; New York signed Thierry Henry and Los Angeles signed David Beckham, and both teams are inefficient overall (MLS, 2010). However, Seattle and Salt Lake also have high salary Designated Players on their roster and are on the efficient side.

As for influence of new stadiums, it is stated that affects on attendance are seen in the first two seasons following a venue change (Howard & Crompton, 2003; Zygmunt & Leadley, 2005; Wilkinson & Pollard, 2006). In the 2009 and 2010 season, only two new stadiums were introduced. New York and Philadelphia both moved into new stadiums in 2010, and were ranked fourth and fifth respectively in attendance figures. In absolute attendance percentage, Philadelphia ranked first with 100% capacity filling ability. This suggests that the honeymoon effect for PPL Park in Philadelphia may have skewed the team's standing as efficient. Nevertheless, Toronto tied with Philadelphia for 100% absolute attendance in a stadium that opened in 2007 and testifies that Philadelphia's efficiency rating cannot be discredited unless there is a decline in the team's second season attendance (Howard & Crompton, 2003).

The third external factor taken into consideration was the occurrence of worldwide events such as the 2010 FIFA World Cup. Although not deeply investigated, this research fails to find any significant anomalies in data that suggest influence of the worldwide event on the domestic league's season. This could be in large part due to the decision of MLS to suspend season play during the group stage of the World Cup, and not schedule any games during the semifinal and finals either. This was the first time MLS has ever taken these actions (Bell, 2009).

It is also noteworthy that six of the eight efficient teams are members of the Western Conference, including five of the six efficient teams that made the playoffs. This draws attention to the idea that climate may play a role in ability of MLS teams to achieve efficiency. This may also acknowledge a difference in popularity of the sport between the east and west coasts. Overall, Major League Soccer has been proven to be 50% efficient as a league when considered to be a sum of all its parts.

Conclusion

The purpose of this article was to evaluate the efficiency of the 16 MLS teams as of the 2010 season. It was also a goal of the researcher to update the Haas (2003) study that analyzed the league after the 2000 season. The four factors of efficiency used in this study were tested through a formula based on percentages against averages, analyzing input versus output of all 16 MLS teams. Where Haas found four teams to be efficient, this research found eight, satisfying the hypothesis that MLS has been improving.

The teams that Haas found efficient in 2000 were the Chicago Fire, Tampa Bay Mutiny, Kansas City Wizards, and Los Angeles Galaxy. Los Angeles and Kansas City (now Sporting Kansas City) were founded with MLS in 1996 and Chicago joined the league in 1998. The Mutiny no longer exist (Liponski, 2010). These three teams, as well as seven others have now been tested for efficiency twice. Six teams were tested for the first time. It will be important for MLS efficiency to be tested again in the future as two new teams will join for the 2011 season, one team will be added in 2012, and the league has promised to at least add a 20th team in the near future (Hay, 2011).

The biggest difference between results of this study and the past research of Dieter Haas is the impact of total team revenues. Haas' (2003) study used team revenue as an output factor

measuring efficiency, and in doing so found four teams to be operating efficiently. The results following the 2010 season present eight new efficient teams, without the output factor of team revenue. Such a difference of results contends that total team revenue is a large factor in MLS team operations. With large market teams Los Angeles and New York scoring in the bottom three in efficiency, due in large part to their high team salary inputs, it is clear that they rely on revenues to stay profitable and successful. In contrast, the eight efficient teams were able to generate greater return on their investments even without the inclusion of financial income. This is further testimony of the growth of the league towards being more stable and overall competitive when in 2000, with just four seasons completed, operating efficiently was seemingly based heavily on total team revenues.

In regards to the change in the league's structure over the past decade, it is important to revisit MLS team efficiency repeatedly in the future because of the potential of the league to evolve further. In the 2011 season Sporting Kansas City opened a new soccer specific stadium. The Houston Dynamo and San Jose Earthquakes will move into new soccer specific stadiums in 2012 and 2013 respectively. This shift to stadiums suited specifically for MLS teams is a growing fad across the league that is defining MLS permanence. New England Revolution and Seattle Sounders currently share their venue with an NFL team, which puts total capacity of the stadium up around 70,000 instead of an obtainable sell out goal set around 20,000 for soccer matches. When these teams are able to claim their own stadium as home, the mark of absolute attendance across the league becomes truly unbiased and will better represent measurement of fan acceptance and retention of professional soccer as a "major league."

Methods to reinforce the results of this study would include expanding the defining criteria. Past studies secured team revenue data as an additional output factor. Major League

Soccer will have three Canadian market teams as of the 2012 season that will require more universal measurements of the factors. Another method may be to compare teams that were founded with the league in 1996 to teams that were since added to structure an argument as to how long a team takes to reach efficiency. Finally, the formula used for this research was thought up by the researcher and holds no prior justification of use. Past studies, including Haas' from 2003 used a Data Envelopment Analysis to analyze their data that could be used to test these results.

Professional soccer has come a long way in America: from the NASL, to a twelve-year gap with no true professional league, finally to Major League Soccer. MLS has now been around for fifteen years and expanded from ten original teams in 1996 to sixteen in 2010. After the 2000 season just four teams were labeled efficient by a research study. This research found that ten years later, eight teams hold an efficient title. The growth of the league in number and competitive balance has nearly doubled. With the knowledge obtained by this study about the success of expansion teams in MLS, the future expansion plans for the league after 2010 hold strong favor. This researcher finds that the results of this study provide justifiable reason to state that MLS is now the biggest competitor of the "Big Four" leagues and will soon infiltrate the American sport industry as the fifth dominant professional major league.

References

- Barros, C. P., & Leach, S. (2006). Analyzing the performance of the English F.A. Premier League with an econometric frontier model. *Journal of Sports Economics*, 7(4), 391-407.
- Bell, J. (2009). M.L.S. to take a break during the World Cup. *Goal: The New York Times Soccer Blog*. Retrieved from <http://goal.blogs.nytimes.com/2009/09/16/mls-to-take-a-break-during-world-cup/>
- Bell, J. (2010). Players union releases 2010 M.L.S. salaries. *Goal: The New York Times Soccer Blog*. Retrieved from <http://goal.blogs.nytimes.com/2010/06/22/players-union-releases-2010-m-l-s-salaries/>
- Brown, S. (2005). Can European football spur interest in American soccer? A look at the Champions World™ series and Major League Soccer. *Soccer & Society*, 6(1), 49-61.
- Collins, S. (2006). National sports and other myths: The failure of US soccer. *Soccer & Society*, 7(2/3), 353-363.
- Crowder P, D. J. (Director). (2006). *Once in a Lifetime* [Motion Picture].
- DeSchrive, T. D. (2007). Much adieu about Freddy: Freddy Adu and attendance in Major League Soccer. *Journal of Sport Management*, 21(3), 438-451.
- Fédération Internationale de Football Association (2011). *About FIFA: Official documents*. Retrieved from <http://www.fifa.com/aboutfifa/documentlibrary/index.html>
- Francis, J., & Zheng, C. (2010). Learning vicariously from failure: The case of Major League Soccer and the collapse of the North American Soccer League. *Group & Organization Management*, 35, 542-571. doi:10.1177/1059601110383405
- Guzmán, I. (2006). Measuring efficiency and sustainable growth in Spanish football teams. *European Sport Management Quarterly*, 6(3), 267-287.

- Haas, D. J. (2003). Technical efficiency in the Major League Soccer. *Journal of Sports Economics*, 4, 203-215. doi:10.1177/1527002503252144
- Hay, R. (2011). Who will be the 20th MLS club? *MLS Talk: Major League Soccer News and Analysis*. Retrieved from <http://www.majorleaguesoccertalk.com/who-will-be-the-20th-mls-club-11374>
- Howard, D. R., & Crompton, J. L. (2003). An empirical review of the stadium novelty effect. *Sport Marketing Quarterly*, 12(2), 111-116.
- Jewell, R. T., & Molina, D. J. (2005). An evaluation of the relationship between Hispanics and Major League Soccer. *Journal of Sports Economics*, 6, 106-177.
doi:10.1177/1527002504263400
- Lawson, R. A., Sheehan, K., & Stephenson, E. (2008). Vend it like Beckham: David Beckham's effect on MLS ticket sales. *International Journal of Sport Finance*, 3(4), 189-195.
- Liponski, W. (2010). *Encyclopedia of world sports*. Poznan, Poland: Oficyna Wydawnicza ATENA.
- Major League Soccer (2011). *The game: 2011 MLS roster rules*. Retrieved from <http://www.mlssoccer.com/2011-mls-roster-rules>
- Markovits, A. S., & Hellerman, S. L. (2003). The “olympianization” of soccer in the United States. *American Behavioral Scientist*, 46, 1533-1549.
doi:10.1177/0002764203046011006
- MLS Player Salary Information. (2010). 2010 Salaries – By Club [Data File]. Retrieved from http://www.mlssoccer.com/salary_info.html?print=1
- Morse, R. (2010). MLS 101: Salary cap/roster rules. Retrieved from <http://www.portlandtimbers.com/news/2010/11/mls-101-salary-caproster-rules>

Wilkinson, T., & Pollard, R. (2006). A temporary decline in home advantage when moving to a new stadium. *Journal of Sport Behavior*, 29(2), 190-197.

Table 1
Data for the 2010 MLS Season

Team	Absolute Attendance		Total Points Awarded	Total Team Salary	Television Viewership
		(% of Total)			
C.D. Chivas USA	218,634	(54)	28	\$2,477,548.21	0.17
Chicago Fire	237,216	(79)	36	\$5,559,103.83	0.24
Colorado Rapids	229,580	(75)	46 (C)	\$2,710,113.89	0.28
Columbus Crew	229,950	(65)	50 (P)	\$2,808,203.67	0.6
D.C. United	217,978	(61)	22	\$2,881,530.44*	0.14
FC Dallas	194,932	(55)	50 (P)	\$2,924,318.33	0.19
Houston Dynamo	259,645	(68)	33	\$2,565,875.04	0.3
Los Angeles Galaxy	375,552	(82)	59 (P)	\$10,978,593.61***	0.3
New England Revolution	194,802	(58)	32	\$2,983,032.94	0.2
New York Red Bulls	299,455	(74)	51 (P)	\$15,666,639.41**	0.16
Philadelphia Union	288,810	(100)	31	\$2,886,399.58	0.31
Real Salt Lake	275,751	(86)	56 (P)	\$2,645,721.91*	0.18
San Jose Earthquakes	155,411	(84)	46 (P)	\$2,518,590.08	0.27
Seattle Sounders	578,121	(50)	48 (P)	\$3,118,103.54**	1.92
Sporting Kansas City	154,306	(13)	39	\$2,945,107.17*	0.36
Toronto F.C.	306,795	(100)	35	\$5,214,381.05*	0

Notes:

* -Indicates the team has one Designated Player

** - Indicates the team has two Designated Players

*** - Indicates the team has three Designated Players

P = Playoff

C = Champion

Table 2
Efficiency Scores of Percentages Against Averages

Team	Output Coefficient	Total Team Salary	
		Against Cap	Efficiency Coefficient
Seattle Sounders	2.5271	0.79	3.19
Columbus Crew	1.3622	0.71	1.91
Real Salt Lake	1.2682	0.67	1.88
San Jose Earthquakes	1.1146	0.64	1.74
Colorado Rapids	1.0303	0.69	1.49
Philadelphia Union	0.9103	0.73	1.24
Houston Dynamo	0.7029	0.65	1.08
FC Dallas	0.8000	0.74	1.08
New England Revolution	0.5427	0.76	0.72
C.D. Chivas USA	0.4321	0.63	0.69
Toronto F.C.	0.7781	1.33	0.59
Chicago Fire	0.8067	1.41	0.57
Sporting Kansas City	0.4169	0.75	0.56
Los Angeles Galaxy	1.4342	2.79	0.51
D.C. United	0.3582	0.73	0.49
New York Red Bulls	1.0012	3.98	0.25