

An Evaluation of the Relationship between Hispanics and Major League Soccer

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Abstract

This paper examines the determinants of attendance in US professional soccer. We concentrate on the relationship between the potential Hispanic fan base and yearly attendance in Major League Soccer. US Hispanics have a long history of supporting professional soccer leagues in their home countries. In addition, the US Hispanic community is the fastest growing segment of the population. Although Major League Soccer has targeted the emerging US Hispanic market, our results indicate that teams located in areas with relatively more Hispanics have lower attendance. This brings into question the efficacy, as well as the direction, of league marketing. Not surprisingly, we find that teams with better records and teams located in more populated regions have higher attendance. However, we also find that local sports competition has a significant impact on attendance. These findings are important for the future viability of Major League Soccer.

I. INTRODUCTION

This paper is the first to evaluate the determinants of attendance in US Major League Soccer (MLS).¹ We concentrate on the relationship between the composition of the fan base and overall league attendance. As in other professional sports in the US, race and/or ethnicity are expected to play a role in MLS attendance. Unlike many other professional sports in the US where there is a strong black/white dichotomy in fan base composition, in soccer the Hispanic market is expected to compose a large part of the fan base.² While soccer is a relatively new professional sport in the US, it is the national past time in most of Latin America, where there is a long history of strong professional leagues. In addition, the US Hispanic community is the fastest growing segment of the population. This segment of the population is expected to be over 53 million by the year 2020, tripling its 1995 size (US Census, 1996). Consequently, having a strong Hispanic following could ensure US professional soccer large attendance numbers for years to come.

From its inception, MLS has targeted the Hispanic community in the US (Fatsis, 1996a). The league realized early on that getting a foothold in this community could guarantee long-run success. MLS has continually tried to increase its presence in the Hispanic market. This emphasis is clearly seen in the new MLS commissioner's goal of increasing MLS marketing to the Hispanic population (Wilbon, 2000). However, there is some concern that MLS has been unable to connect with the potential Hispanic fan base: Attendance was excellent in the league's first year, but per game attendance has decreased and attendance growth has stagnated since then. When considering the growth of US professional soccer and MLS, appealing to these prospective Hispanic fans is vitally important.

¹ The acronym MLS has caused some problems since many confuse it with Multiple Listing Services in the housing market.

² Throughout the paper, we use the term "white" to refer to non-Hispanic white individuals.

The study of fan attendance at professional sports has attracted the attention of economists for some time. Recently, several professional sports have been studied. These include, but are not limited to, international soccer (Baimbridge, 1997), English soccer, (Peel and Thomas, 1996; Baimbridge, Cameron, and Dawson, 1996), English rugby (Carmichael, Millington, and Simmons, 1999), US baseball (Kahane and Shmanske, 1997; Bruggink and Eaton, 1996), US football (Welki and Zlatoper, 1999), and US basketball (Kahn and Sherer, 1988; Burdekin and Idson, 1991). However, we are not aware of any academic research on attendance in US professional soccer (or football as it is known in most of the world outside of the US). The lack of research is not surprising since high-level, professional soccer is a recent phenomenon in the US. This paper is designed to complement past literature on attendance in professional sports, while introducing the reader to the economic issues most important to US professional soccer.

When measuring attendance as per game or yearly, studies have generally found that variables such as ticket prices, travel costs, population, income, team quality, player quality, game conditions, and competition from other sports or television affect attendance in professional sports. Studies using US data indicate that the racial composition of the team and the fan base are also important determinants of attendance. For instance, evidence from US professional baseball suggests that teams with more black players have lower attendance and revenue (Gwartney and Haworth, 1974; Scully, 1973; Sommers and Quinton, 1982). Also, Kahn and Sherer (1988) show that US professional basketball teams with more black players have lower attendance. Furthermore, Brown and Jewell (1994, 1995) show that fans of US college basketball teams pay a premium to see white players.

Since MLS recently began play in 1996, we also have an opportunity to analyze a newly-formed league, in contrast to most other research on more mature sports leagues. Game

attendance is extremely important to the league's potential growth since the MLS has yet to attract a major television contract. Consequently, teams have a stronger dependence on ticket revenues than in many other professional sports. Therefore, the league depends strongly on gate revenues for current profitability and must develop a loyal fan base to survive. The results presented here show that MLS teams located in cities with more Hispanics had lower attendance in the first four years of the league's existence. We discuss possible explanations for this result and the implications for the future of MLS. In addition, we find that the availability of other sports entertainment seems to have a large impact on MLS attendance. We also use our estimates to project the best path for MLS expansion.

II. A BRIEF HISTORY OF US PROFESSIONAL SOCCER

Professional soccer first began in the US with two rival leagues in 1967, the United Soccer Association and the National Professional Soccer League.³ After one year, they merged to form the North American Soccer League (NASL). Throughout the early 1970s, the NASL slowly grew in popularity, and the league expanded to 20 teams by 1975. That year, the signing of Brazilian soccer star Pelé by the New York Cosmos accelerated both the rise and the fall of the league. In order to remain competitive, other clubs began signing expensive international stars – such as George Best, Franz Beckenbauer, and Johan Cruyff. As a consequence, the quality of play and attendance both increased. The high point for the NASL came in 1980, when the league averaged 14,440 fans per game. Unfortunately for the league, player salaries outpaced the growth in attendance and revenues. The short-lived rapid increase in attendance prompted the league to expand to 24 teams by 1978. It was this over expansion and over spending that ultimately led to the league's demise. Under those conditions, teams in smaller markets soon

³ NASL history is from José (1989). MLS history is from the MLS website (mlsnet.com).

faced profitability problems. They dealt with revenue shortfalls by either moving on to other cities (on an almost yearly basis) or eventually just simply folding altogether. When the NASL folded in 1984, the league had been trimmed down to just 9 teams.

The rebirth of US professional soccer began when the Federation of International Football Associations (FIFA), the governing body of world soccer, awarded the 1994 World Cup to the US. Granting the event to the US was controversial, as it was the first time in history that FIFA had awarded the quadrennial event to a country without a Division 1 professional outdoor soccer league. The US Soccer Federation, in return for the award, indicated it would form such a league prior to the initiation of the World Cup. When it became apparent that the US would not meet this dateline, FIFA granted an extension, and on December 17, 1993, it was announced that MLS would begin play in the spring of 1995. However, due to various organizational problems, the league did not begin play until 1996. On April 6, 1996, MLS opened its inaugural season at San Jose's Spartan Stadium as the San Jose Clash hosted Washington (DC) United in front of 31,683 fans. The game was broadcast live to a national television audience.

Ten teams made up MLS in its inaugural season: Washington (DC), New England, New York/New Jersey, Tampa Bay, Columbus, Dallas, Kansas City, Colorado, Los Angeles, and San Jose. Two more teams, Chicago and Miami, were added in 1998. In the first four regular seasons, MLS teams drew over 10.6 million fans – an average of approximately 15,000 fans per game. However, attendance has stagnated since the first year; the league averaged 17,406 per game in 1996, 14,619 in 1997, 14,312 in 1998, and 14,282 in 1999.⁴ The attendance figures in 1996 were cause for optimism: The league founders' initially projected attendance of 10,000 to 12,000 per game in the league's first year. In addition, MLS attendance in 1996 was better than NASL attendance had ever been. Furthermore, the league projected losses of about \$20 million in 1996,

⁴ Complete attendance statistics by team and year are given in the appendix.

but actual losses were closer to \$15 million (Fatsis, 1996b). The attendance figures in the last three years are more troubling, with respect to the long-run profitability and the ultimate success or failure of MLS.

MLS is determined not to repeat the mistakes made by the NASL. To accomplish this, MLS features an ownership and operating structure different from that found in more-established professional sports in the US. Unlike other professional sports leagues that are confederations of individual franchise owners, MLS is structured as a single limited-liability company (single-entity).⁵ In this single-entity endeavor, team operators (franchise owners) own a financial stake in the league, not just their individual team. Team operators do not own the entire franchise, since the league owns 50 percent of each team. The two exceptions are Tampa Bay and Dallas, teams that are owned entirely by the league. MLS negotiates and owns all player contracts and is responsible for most player allocation decisions. Team operators have the right to 50 percent of gate revenue, and the remainder goes to the league to pay for player contracts.

MLS believes this single-entity structure enables it to avoid many of the pitfalls that doomed the NASL – and have plagued other professional sports leagues as well. In particular, since the league owns all player contracts, MLS can limit salary escalation. Since individual teams do not have the right to sign players, rich franchise owners cannot bid up player salaries to attract players from other teams. Thus, MLS has no large market vs. small market salary issues. MLS players recently sued the league over the non-competitive nature of the single-entity structure, believing that their salaries are artificially low. A federal judge ruled that the single-entity concept is legal (Associated Press, 2000a). Specifically, the MLS's single-entity structure does not violate antitrust laws by illegally holding down salaries.

⁵ A few other leagues have also tried this approach to avoid the general pitfalls of new sport enterprises, especially where the big vs. small markets issue could be a cause of failure. The Women's National Basketball Association (WNBA) is surviving, while others, like the American Basketball League and the Major Indoor Lacrosse League, did not survive. (Fatsis, 1997).

Another advantage of the league structure is that MLS can directly maintain greater homogeneity among the quality of the teams. The assumption is that an even distribution of talent among MLS teams will attract greater number of fans, since games will be more competitive. Past research indicates that the uncertainty of outcome (for both games and seasons) affects demand for professional sports (Cairns, Jennett, and Sloane, 1986; Peel and Thomas, 1996). The fact that Washington (DC) has won the MLS championship in three of the league's first four seasons indicates that perhaps homogeneity in the quality of teams has not been a complete success.

III. EMPIRICAL METHODS

Our data consist of 44 yearly observations for all teams in MLS from 1996 to 1999. In the 1996 and 1997 seasons there were 10 teams, and there were 12 in the 1998 and 1999 seasons. The dependent variable consists of yearly attendance for each team. The independent variables consist of performance information on each team and information pertaining to the area in which a team plays its games. All MLS data are obtained from the MLS official web site (mlsnet.com). County-level demographic information is found on the US Census web site (census.gov) and the Bureau of Economic Analysis web site (bea.doc.gov). In most other studies of US professional sports, the relevant demographic area is the US Census-defined Metropolitan Statistical Area (MSA). We use county-level demographic data due to data availability constraints. Data by county is available on percent Black and Hispanic population for each year from 1996 to 1999; this data is only available for 1990 at the MSA level.⁶ We believe the more recent county-level data is more informative, especially given the tremendous growth in the US Hispanic population.

⁶ Estimates of equation (1) using these 1990 numbers resulted in coefficients similar to those reported below.

We regress yearly regular season attendance on measures that are expected to affect a team's ability to draw fans. The regression takes the form of equation (1), where the subscript t indicates that this variable varies over the years 1996 to 1999.⁷ The variables are described below, and summary statistics are given in Table One.

$$(1) \ln ATTEND_t = \alpha_1 + \alpha_2 POINTS_t + \alpha_3 STARS_t + \alpha_4 YEAR97 + \alpha_5 YEAR98 + \alpha_6 YEAR99 + \alpha_7 EAST + \alpha_8 NFL + \alpha_9 NBA + \alpha_{10} MLB + \alpha_{11} NHL + \alpha_{12} ALL4 + \alpha_{13} POPSQ_t + \alpha_{14} PCINC_t + \alpha_{15} HISP_t + \alpha_{16} BLACK_t$$

$\ln ATTEND_t$ is the natural log of yearly attendance by team. $YEAR97$, $YEAR98$, and $YEAR99$ are dummy variables indicating the year of the observation for each team, with 1996 being the excluded year. Since attendance in the initial year (1996) was greater than the following years, it is necessary to control for any possible "novelty effect" of the league's first year. $EAST$ is a dummy variable equal to one if a team was in the Eastern Conference. This variable is utilized to control for any differences in the Eastern and Western Conferences. For the first two years of the league's existence, the Eastern Conference of MLS was comprised of Washington, Tampa Bay, New England, Columbus, and New York/New Jersey; the remaining teams were in the Western Conference. In 1998, Miami was added to the Eastern Conference, and Chicago was added to the Western Conference.⁸

A team's ability to draw fans depends partially on the amount of sports entertainment competition. We account for this by introducing several dummy variables. NFL is a dummy variable equal to one if a National Football League team was located in a team's MSA. NBA is a dummy variable equal to one if a National Basketball Association team was located in a team's

⁷ County-level data are used for all teams except Washington (DC). The county is much too small to measure fan base (61 square miles); thus, we use the MSA for this team only. Therefore, demographic data for the Washington (DC) area do not have the yearly variability found in the demographic data for other teams.

⁸ MLS changed to three divisions in 2000. We do not have 2000 data in our sample.

MSA. *MLB* is a dummy variable equal to one if a Major League Baseball team was located in a team's MSA. *NHL* is a dummy variable equal to one if a National Hockey League team was located in a team's MSA. We also include the dummy variable *ALL4*, which is equal to one if all four major professional sports were located in a team's MSA. We have no *a priori* expectations for the effect of other professional sports availability: Other professional sports could be substitutes for MLS games, or the existence of other professional sports could imply a greater demand for sports entertainment. With respect to *ALL4*, a positive and significant coefficient could signal a greater demand for sports entertainment, whereas a negative and significant coefficient could indicate a saturated market.⁹

We also include measures of a team's fan base. *POPSQ_t* measures population per square mile in the county. We expect that more populated areas will have more potential fans. *PCINC_t* measures per capita income in 1996 dollars. We expect that areas with higher incomes will have more potential fans. *HISP_t* and *BLACK_t* measure percent Hispanic and Black population respectively. The effect of the race variables is difficult to predict. In the case of *HISP_t*, one might expect that more Hispanics in a county would lead to more attendance since these fans have a history of supporting soccer. However, there remains some doubt as to whether the MLS has not done a good job of marketing to these fans.

Attendance should also be greater for better teams. We include two measures of team performance. First, *POINTS_t* measures the number of points a team accumulates in a season. A team gets three points for a "regulation win" and one point for a "shootout win." A regulation win occurs when a team outscores their opponent in regulation time (two halves of 45 minutes each). If the teams are tied after regulation, the teams go to the "shootout." The team that wins

⁹ With one exception, these dummy variables do not vary over years for MLS teams. The exception is the case of professional baseball in Tampa Bay; an expansion team, the Devil Rays, was added to Major League Baseball in 1998.

the shootout, which consists of each team taking turns one-on-one with the opposing goalkeeper, gets one point and the loser gets zero points. The shootout is similar to the international use of penalty kicks to determine a winner in a tie game. Thus, an MLS game can never end in a tie.¹⁰ Second, $STARS_t$ measures the number of players on a team who are chosen to play in the All-Star Game each year.

It may appear to the reader that we have omitted an important variable: *ticket price*. In the sports industry, there is often difficulty with price data since no single price exists for entry into a sporting event. In a review of the literature on the demand for professional sports, Cairns, Jennett, and Sloane (1986) discover most estimates of price elasticity are not significantly different from zero. The authors conclude that data problems limit a researcher's ability to identify the true relationship between ticket price and attendance. Some studies have included a measure of *average* ticket price, usually total gate revenue divided by attendance (e.g., Kahane and Shmanske, 1997). Due to the single-entity structure of MLS and the newness of the league, team revenues are not readily available. Repeated attempts to get this information from individual teams and the league office proved futile.

Some MLS ticket price data is available. However, nominal ticket prices have not varied much (if at all) during the period studied. The lack of variability in nominal prices implies that given annual inflation rates, the real price for most tickets decreased from 1996 to 1999. We re-estimate equation (1) including the nominal price of the lowest cost ticket and find an insignificantly positive result. Also, the inclusion of this nominal price measure leads to implausibly large signs on other variables. We also re-estimate equation (1) using the real price of the lowest cost ticket, finding a significantly positive effect. The positive signs in both

¹⁰ The rules for team points discussed are for games prior to 2000. MLS now uses an overtime period, allowing games to end in ties if no goals are scored in overtime. The shootout no longer exists, to the relief of most MLS fans.

estimations are unexpected and probably reflect the fact that teams in larger markets can charge higher prices. We conclude that available ticket price measures in MLS are inadequate; therefore, we exclude price from the estimation reported in this paper. Results including minimum ticket price are available from the authors.

IV. RESULTS

We present the results from a regression using the format of equation (1), the results of which are presented in Table Two. Equation (1) is a log/linear form, in which the dependent variable is the natural log of $ATTEND_t$ and the independent variables enter linearly. Therefore, the coefficients presented in Table Two can be interpreted as percent changes in yearly attendance given a one-unit change in the independent variables.

{INSERT TABLE TWO}

As shown in Table Two, the coefficients on $POINTS_t$ and $STARS_t$ are both positive as expected, but only the coefficient on $POINTS_t$ is significant. Better teams do seem to have greater attendance. From the means presented in Table One, average attendance is 241,228, or 15,077 per game. Based on this four-year average, a regulation win would be worth approximately 317 extra fans per game. Attendance is significantly lower in each year after 1996. The results show that attendance in 1997 is 16.48 percent less than in 1996, due simply to the downward time trend. This change drops attendance by 2,485 per game, based on the four-year average. Since the actual change in average attendance was 2,787, the dummy variable seems to be picking up most of the drop in attendance from the first to the second year. Thus, there was clearly a novelty effect in 1996. Eastern Conference teams have about 43 percent lower attendance than Western Conference teams, possibly due to less competition in the Eastern Conference. Only one team, Washington (DC), has won the Eastern Conference, while the

Western Conference has had three different champions from 1996 to 1999.

MLS teams sharing an MSA with an NFL franchise tend to have much lower attendance (almost 78 percent) than other teams. This suggests that American football and soccer may be substitutes in entertainment consumption. Given that the games differ considerably, this result may not be surprising. For instance, football has many stoppages of play, allows tackling, and has high-scoring games. Soccer on the other hand, is a sport with very few stoppages, in which tackles are penalized, and with low-scoring games. Alternatively, MLS teams who share an MSA with an NHL franchise tend to have much higher attendance. This sign could suggest that hockey and soccer are compliments in entertainment consumption, although it may merely indicate a greater demand for sports in cities that have professional hockey teams. The two sports have some obvious similarities: They both have a goalie, the scoring systems are similar, and both have relatively low-scoring games. The sports are also played at different times of the year: Hockey is played primarily in the winter, while soccer is played primarily in the summer. Hence, since they are similar in their game structure and do not compete head-to-head for fans, the two sports may provide fans with complementarity in sports entertainment.

The coefficients on *NBA* and *MLB* are positive and insignificant. When all four major sports are treated together, we find that MLS teams that have to compete in their MSA with all these sports tend to do much worse in terms of attendance. Since MLS placed some its teams in saturated sports markets, average attendance for the league has suffered. Taken together, these results with respect to other sports entertainment may indicate that MLS should take into consideration other sports in the area when making a decision to expand. Specifically, MLS has shown a willingness and desire to place teams in big media markets, but these markets may already be saturated with sports entertainment. It might be wiser for them to choose smaller cities with little or no sports competition.

Teams located in more highly populated areas, as measured by $POPSQ_t$, tend to have higher attendance. A population increase of 100 persons per square mile would increase attendance by 89 per game. On the other hand, per capita income seems to have no significant effect on attendance. The coefficients on $HISP_t$ and $BLACK_t$ provide interesting results. Turning first to $BLACK_t$, this coefficient may be negative since soccer is perceived as a “white sport” in the US: Many US soccer players are white, so more fans are white. The tendency for fans to attend games in which players of their own race are playing is referred to as “customer discrimination.” Customer discrimination has been discussed at length in other US sports. (Kahn, 1991). If more black athletes are drawn to MLS in the future, perhaps due to increased salaries, then we would expect this negative effect to decrease or disappear. As a long-run consideration, MLS may want to market their sport to the African-American community. However, in the short-run, the league might consider placing new franchises in areas with relatively few black inhabitants.

The coefficient on $HISP_t$ should be more troubling to MLS. Our estimation shows that a one percent increase in Hispanic population will *decrease* attendance by 3.90 percent, or 588 fans per game based on the four-year average. As discussed earlier, the MLS has made attempts to increase its presence in the Hispanic market. Due to the lack of publicly available Hispanic consumer surveys regarding the MLS, we are left to consider possible explanations for these somewhat unexpected results.¹¹ There may be many reasons for the negative and significant coefficient on $HISP_t$; we choose to concentrate on three possible explanations here. Our explanations deal with the composition of the Hispanic market and the efficacy of MLS marketing.

¹¹ One of the authors is currently helping an MLS team set up a market survey that may shed some light on this issue. Results should be available after the 2001 season.

First, according to the 1990 US Census, the vast majority of Hispanics in this country (60.4 percent) are of Mexican origin. Division 1 Mexican League games are widely available through two Spanish-speaking television networks in the US, Univision and Telemundo.¹² In addition, Mexican League teams often play each other in US cities (e.g., Chicago, Los Angeles, and Houston).¹³ Mexican League teams are generally better than MLS teams, and Mexican-Americans have a cultural heritage of supporting this league. Consequently, the negative sign may be due to the preferences of the largely-Mexican, Hispanic market: They prefer to watch teams from Mexico play rather than US teams, regardless of whether the preference is based on culture or game quality or both. The following piece of anecdotal evidence supports this argument. Several games into the 2000 season, MLS bought the contract of a star from the Mexican League and the Mexican national team, Luis Hernandez. The league placed him with the team seen as having the largest Mexican-American support, Los Angeles. In his home debut, attendance swelled to over 40,000 fans, which was more than double the average of previous games. It seemed that MLS had made an excellent decision when signing Hernandez.¹⁴ However, in the games that followed attendance fell back to the pre-Hernandez average of about 18,000. Presumably, Mexican-Hispanics, after attending the game for the excitement of seeing the new player, returned to watching the Mexican League play-off games on TV.

Second, the negative and significant coefficient of $HISP_t$ may be due to the remaining composition of US Hispanics. According to 1990 Census data, the next two largest Hispanic

¹² Univision and its cable channel Galavision broadcast the majority of the Mexican Division 1 League games. Telemundo broadcasts almost all others. Between the two, there is nearly 100 percent coverage of Division 1 league games in the US. With satellite service or dish, the coverage is 100 percent. See soccerTV.com for a complete listing of Mexican League games available in the US.

¹³ The MLS has had an on going disagreement with the US-Soccer Federation (the FIFA-approved umbrella organization for all soccer associations in the US, including MLS) for the number of Mexican Division 1 teams that are permitted to play games among themselves in the US (Trecker, 1999). MLS wants the number limited substantially since they might reduce attendance at MLS games; however, the US Soccer Federation sees the Mexican games as a source of revenue.

¹⁴ Although not confirmed by the league, the reported transfer fee paid for Hernandez was \$4 million, an MLS record (Associated Press, 2000b). Obviously, he was expected to increase attendance by a substantial amount.

groups, after Mexican-Americans, are Hispanics of Cuban and Puerto Rican descent (a combined 16.9 percent of Hispanics). While these individuals are clearly Hispanics, they come from countries where baseball, not soccer, is the national pastime. Therefore, these Hispanics may not be interested in soccer. Support for this argument can be found in the example of the MLS expansion team in Miami, nicknamed the Fusion. As of 1990, 56 percent of Hispanics in the Miami-Ft. Lauderdale MSA were of Cuban descent. In 1999, Miami had the next to lowest attendance (second only to Kansas City), and attendance was far below the other expansion team, Chicago. The observation that the Hispanic population is not homogenous when it concerns soccer has been discussed in the media (Davis, 2000). MLS obviously needs to reach out to Hispanics, but mostly to Hispanics who have an interest in soccer.

Third, another possible explanation for our finding is the fact that MLS may not have done a good job of marketing to Hispanics in the past. The league has recently terminated its contract with Univision and moved the games to Telemundo. Univision televised MLS games on Sunday afternoons, which created head-to-head competition with televised Mexican League games. In contrast, Telemundo now broadcasts games on Saturday afternoons, when Mexican League games are not likely to be played (Rusnak, 1999). The increased visibility may allow MLS to make inroads to the Hispanic market. The question remains, however, if it is possible to market US soccer to the Hispanic community. If our first two explanation have any validity, then MLS marketing strategies may need to be adjusted. One possibility would be to market directly to Central-American-origin Hispanics; these individuals come from countries in which soccer is a national pastime, and they do not have easy access to televised games from home. Another example illustrates this issue. Upon seeing their attendance drop significantly after 1996, the MLS team in Dallas went looking for ways to market to the local Hispanic market. They discovered that a concentration of Salvadorans lived in Dallas. These Hispanics were

accustomed to seeing professional soccer in El Salvador at a skill level that was comparable to MLS (Parker, 1999). The team decided to concentrate on fans such as these; while overall MLS attendance has decreased, average attendance in Dallas has increased each year since 1997. Clearly, more teams need to follow this course of action, and MLS may need to consider the composition of Hispanics when contemplating future marketing and expansion.

V. MLS EXPANSION

According to MLS, several cities – Seattle, Charlotte, Cleveland, Philadelphia, Rochester, San Diego, Houston, Portland, and Atlanta – have expressed interest in bringing professional soccer to their cities. MLS's current plans are to add two more expansion teams in 2001 or 2002, followed by an additional two clubs in 2003 or 2004, bringing the league to what is considered an ideal size of 16 teams. Thus, the league wants to add four new teams in the next four years. What cities should be chosen as expansion sites? Without questioning the wisdom of league expansion, we use the results from Table Two to predict what attendance would have been for the nine possible expansion cities listed above in two years covered by our data. The results are given in Table Three, listed from highest to lowest predicted attendance.¹⁵

Our results provide certain guidelines for MLS decision makers. First, the relationship between race and attendance is important for the future growth of professional soccer in the US. If soccer fans in the US are largely composed of whites, then the racial composition of the fan base is important in determining where MLS should place expansion teams. Specifically, in the absence of information on the composition of Hispanics, MLS should place teams where there are relatively few Hispanics. In any case, since Hispanics of Mexican, Cuban, and Puerto Rican

¹⁵ The values for *POINTS_t* and *STARS_t* are sample averages. The remaining values are county-level, which vary by year as in the actual sample and are collected from the same sources. Thus, we simulate attendance for an average team located in these new cities.

origin seem to comprise the bulk of US Hispanics, this might be a good rule-of-thumb. Also, if MLS does not actively recruit more black soccer players, the league should stay away from cities with relatively more blacks. Second, MLS should be careful about cities that already have several professional sports teams. It might be preferable for MLS to consider smaller markets that are less saturated with sports entertainment. Third, more populated cities will have more potential fans, but MLS should be aware of other negative influences on attendance that might be associated with larger sports markets.

{INSERT TABLE THREE}

We list our predictions for average per game attendance in 1996 and 1999. We choose 1996 since it will give an estimate of the initial fan reaction to an expansion team. We choose 1999 to give an estimate of attendance after the novelty of the new team wears off. Based on our predictions, the four best expansion cities for MLS are Portland, Rochester, Philadelphia, and Seattle. As expected, predicted attendance drops for all cities from 1996 to 1999. However, Portland and Rochester would have per game attendance of over 10,000 in either year. Philadelphia and Seattle would have attendance of over 8,000 in either year, which is comparable to MLS's teams with the lowest attendance, Kansas City and Miami. Portland has the highest predicted attendance. This result is largely due to the fact that the Portland area has a high concentration of white inhabitants. Portland had only 7 percent Hispanic and 1 percent black inhabitants in 1999. In addition, Portland has only one other professional sports team, the NBA Trailblazers. Portland's average attendance of 17,475 in 1996 would have put the team above the league average and ranked it fifth in total attendance.

The cities at the bottom of the list generally have high concentrations of minority inhabitants. Atlanta has a high concentration of blacks (54 percent in 1999), as does Charlotte (27 percent in 1999) and Cleveland (27 percent in 1999). The Philadelphia area also contains

many black inhabitants (43 percent in 1999), but this seems to be offset by a larger population and greater demand for sports entertainment. San Diego and Houston, on the other hand, have high concentrations of Hispanics (26 and 27 percent in 1999 respectively). It is worth pointing out that San Diego has the lowest predicted attendance, with figures that would trail all current MLS teams by a huge margin. The proximity of the Mexican border and the numerous Mexican League games played in San Diego further argue against MLS placing great hopes in the Mexican-American fans in San Diego.

VI. CONCLUSION

This paper is a first attempt to examine the determinants of yearly attendance in MLS. Our results highlight several important issues, especially regarding the future of the league. Although MLS has attempted to target the US Hispanic market as its fan base, our results show that teams in areas with relatively more Hispanics have lower attendance. This relationship between Hispanics and attendance means that MLS may want to rethink its Hispanic marketing policies. Not surprisingly, teams with better records and teams located in more populated regions have higher attendance. We also find that local sports competition affects MLS attendance: American football and soccer may be substitutes, and hockey and soccer may be compliments.

The league's success or failure will depend on its ability to create a loyal fan base. The league may want to consider issues of fan base composition when deciding on future growth. Our estimates generate predictions for the best expansion cities. In general, these cities will be those in medium-size media markets, with few other professional sports teams, a large concentration of white inhabitants, and possibly some Hispanics from a country with a rich soccer heritage (as long as it is not Mexico). Furthermore, MLS may need to change its current policy of targeting the Hispanic market.

We end with a short discussion of sample size. We have a relatively small data set, with only 44 observations. The small sample is a result of the newness of the league and the small number of MLS teams. It might be suggested that we simply increase our sample size by regressing individual game data on our independent variables. However, the paucity of per game information precludes this type of analysis. The small number of observations implies a restricted number of endogenous variables. Ideally, it would be nice to examine the effect of each group of Hispanics on attendance, but our sample size did not allow it.¹⁶ In addition, with few observational years, the estimation techniques available are reduced. Time series or panel data estimation would be preferable to simple OLS. Assuming MLS does not meet with the same fate as the NASL, additional years and teams may allow for a more complete analysis in the future. However, our findings provide a useful benchmark for future study of US professional soccer.

¹⁶ Data on the composition of the Hispanic population are unavailable for 1996 to 1999, so this might be a mute point. However, 1990 US Census data exists on the composition of Hispanics. We attempt to incorporate this data into our analysis; however, the results are disappointing. There is some evidence that areas with more Mexican-Americans have lower attendance, which supports one of our arguments put forth in the results section. However, we have little faith in these results: Our small sample size is probably too small to distinguish between groups of Hispanics. In addition, many of the coefficients are unbelievably large and the data is not recent. These results are available from the authors.

TABLE ONE
 Summary Statistics
 (N = 44)

	<u>Mean</u>	<u>Standard Deviation</u>
<i>ATTEND_t</i>	241,228	70,432
<i>POINTS_t</i>	40.86	10.75
<i>STARS_t</i>	3.70	2.12
<i>YEAR97</i>	0.227	0.424
<i>YEAR98</i>	0.273	0.451
<i>YEAR99</i>	0.273	0.451
<i>EAST</i>	0.500	0.506
<i>NFL</i>	0.818	0.390
<i>NBA</i>	0.727	0.451
<i>MLB</i>	0.773	0.424
<i>NHL</i>	0.818	0.390
<i>ALL4</i>	0.545	0.504
<i>POPSQ_t</i>	1950.1	1230.5
<i>PCINC_t</i>	19,897	5648.4
<i>HISP_t</i>	15.13	12.27
<i>BLACK_t</i>	14.86	8.21

TABLE TWO
 Log/Linear Attendance Regression:
 Dependent Variable is the natural log of *ATTEND_t*
 (N = 44)

	<u>Coefficient</u>	<u>Standard Error</u>
Constant	12.842***	0.3065
<i>POINTS_t</i>	0.0070*	0.0040
<i>STARS_t</i>	0.0113	0.0170
<i>YEAR97</i>	-0.1648**	0.0640
<i>YEAR98</i>	-0.1719**	0.0647
<i>YEAR99</i>	-0.1294*	0.0694
<i>EAST</i>	-0.4268**	0.1790
<i>NFL</i>	-0.7792***	0.2155
<i>NBA</i>	0.1371	0.1349
<i>MLB</i>	0.1934	0.1431
<i>NHL</i>	0.9804***	0.3402
<i>ALL4</i>	-0.4142***	0.1183
<i>POPSQ_t/1000</i>	0.0593**	0.0275
<i>PCINC_t/1000</i>	0.0069	0.0072
<i>HISP_t</i>	-0.0390***	0.0106
<i>BLACK_t</i>	-0.0226***	0.0048
Adjusted R ²	0.7698	

*** significant at 1 % level
 ** significant at 5 % level
 * significant at 10 % level

TABLE THREE
Predicted Per Game Attendance for Expansion Cities

<u>City</u>	<u>Predicted Attendance 1996</u>	<u>Predicted Attendance 1999</u>
Portland, Oregon	17,475	14,900
Rochester, New York	12,722	10,949
Philadelphia, Pennsylvania	12,180	9,943
Seattle, Washington	9,696	8,350
Cleveland, Ohio	7,263	6,195
Houston, Texas	6,968	5,731
Atlanta, Georgia	6,368	5,295
Charlotte, North Carolina	5,450	4,731
San Diego, California	3,688	3,017

APPENDIX

Total Regular Season Attendance for MLS Teams: 1996 – 1999
(Per Game in parenthesis)

Team	1996	1997	1998	1999	TOTAL
Chicago, IL*			286,190 (17,887)	256,261 (16,016)	542,451 (16,952)
Colorado (Denver)	163,413 (10,213)	189,355 (11,835)	236,995 (14,812)	224,459 (14,029)	814,222 (12,722)
Columbus, OH	303,202 (18,950)	240,680 (15,043)	196,394 (12,275)	283,129 (17,696)	1,023,405 (15,991)
Dallas, TX	256,173 (16,011)	154,845 (9,678)	175,162 (10,948)	195,381 (12,211)	781,561 (12,212)
Kansas City, MO	206,044 (12,878)	144,935 (9,058)	129,163 (8,073)	130,924 (8,183)	611,066 (9,548)
Los Angeles, CA (Pasadena)	462,650 (28,916)	330,015 (20,626)	348,549 (21,784)	282,113 (17,632)	1,423,327 (22,239)
Miami, FL* (Ft. Lauderdale)			164,548 (10,284)	139,021 (8,689)	303,569 (9,487)
New England (Foxboro, MA)	304,392 (19,025)	342,762 (21,423)	307,004 (19,188)	267,752 (16,735)	1,221,910 (19,092)
New York/New Jersey (East Rutherford, NJ)	382,360 (23,898)	270,388 (16,899)	264,316 (16,520)	235,301 (14,706)	1,152,365 (18,006)
San Jose, CA	275,712 (17,232)	217,546 (13,597)	218,450 (13,653)	239,350 (14,959)	951,058 (14,860)
Tampa Bay, FL	186,856 (11,679)	181,322 (11,333)	164,999 (10,312)	209,700 (13,106)	742,877 (11,607)
Washington, DC	244,199 (15,262)	267,171 (16,698)	256,127 (16,008)	278,711 (17,419)	1,046,208 (16,347)
TOTAL	2,785,001 (17,406)	2,339,019 (14,619)	2,747,897 (14,312)	2,742,102 (14,282)	10,614,019 (15,077)

* Expansion teams in 1998

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