Journal of
Risk and Financial Management

MDPI

Article

Season Ticketing as a Risk Management Tool in Professional Team Sports: A Pricing Analysis of German Soccer and Basketball

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Abstract: Ticket sales remain a significant source of revenue in professional team sports. However, season ticket revenue, as an effective risk-reducing instrument, is rarely analyzed in the literature. This study aims to determine, from a price and product perspective, the extent to which different factors affect season ticket prices. Using three different professional German sports leagues, a ticket-pricing model was developed as the empirical model. Consistent with other pricing studies, an ordinary least-squares (OLS) model and a Tobit model were fit. The results indicate that different season ticket rights, type of season ticket, club league membership, fan club membership, club stadium utilization rate, club sporting performance, and club market size have significant negative or positive impacts on season ticket price. Whereas, for example, a reserved seat in the stadium has a positive impact, the population of the club's city has a negative impact. Based on the results, club managers should consider all traditional season ticket rights and season ticket discounts when calculating season ticket pricing. These and further implications are discussed with respect to the risk management issues of season ticket pricing in light of the COVID-19 pandemic and differences in local market constellations of professional team sports clubs.

Keywords: season tickets; pricing; product design; professional team sports; football; basketball; sports finance; Tobit model; OLS model; COVID-19; Europe

Citation: Huth, Christopher, and Markus Kurscheidt. 2022. Season Ticketing as a Risk Management Tool in Professional Team Sports: A Pricing Analysis of German Soccer and Basketball. *Journal of Risk and Financial Management* 15: 392. https://doi.org/10.3390/jrfm15090392

Academic Editors: Hannes Winner, Michael Barth, Martin Schnitzer and Thanasis Stengos

Received: 30 April 2022
Accepted: 24 August 2022
Published: 3 September 2022

1. Introduction

In European professional sports, sports clubs' primary source of revenue has traditionally been gate receipts (Andreff 2009; Fried et al. 2008). In the leading European football leagues, media and commercial revenues are currently higher than ticket revenues. However, especially for clubs in minor football leagues or other sports leagues, tickets remain a significant source of revenue (Huth 2014). While a match day ticket allows the holder to attend a certain game, a season ticket is valid for several games—e.g., all home matches of the regular season—played by a sports club (Huth 2012). Previous research on sports tickets has focused, inter alia, on the pricing of match day tickets (e.g., Alexander 2001; Boyd and Boyd 1998; Coates and Humphreys 2007), the impact of assets on ticket sales (e.g., Brown et al. 2006; Lawson et al. 2008), customer satisfaction with (season) tickets (e.g., Beccarini and Ferrand 2006; McDonald 2010; McDonald et al. 2013; O'Reilly et al. 2008), and ticket sales strategies (e.g., Bruggink and Eaton 1996; Drayer and Martin 2010; Drayer et al. 2012; Iho and Heikkilä 2010).

The topic of season tickets, however, is rarely analyzed in the sports economics and sports finance literature. This lack of research is surprising, considering the major role that season tickets play (Wakefield 2006) in generating substantial direct and relatively low-risk revenues for sports clubs (McDonald 2010). The example of Germany's 1st Football Bundesliga shows that, on average, clubs sell more season tickets (60 percent) than match day tickets (40 percent) (Deutsche Fußball Liga 2013). Indeed, in North American sports

leagues, sellouts and waiting lists for season tickets are the rule rather than the exception (Boyd and Boyd 1998; DeSerpa 1994). Surprisingly, season tickets are normally sold at a discount. This discount amounts to, on average, 27.52 percent in Germany's 1st Football Bundesliga (Huth 2014), even though this league had an average stadium utilization rate of more than 90 percent (Statista 2015) in the pre-COVID-19 age. These two examples show that many sports clubs could increase their profits by raising their season ticket prices (Boyd and Boyd 1998).

This study aims to determine, from a price and product perspective, the extent to which different factors affect season ticket prices. In this context, the role of season ticket discounts and different monetary and nonmonetary season ticket rights for season ticket holders were particularly considered. For the present study, three different leagues were selected to facilitate comparisons among different market situations. The considered leagues were chosen because they had different stadium utilization rates, from very high (1st Football Bundesliga, 93 percent) through intermediate (Basketball Bundesliga, 84 percent) to low (2nd Football Bundesliga, 59 percent), and, therefore, different supply and demand markets. This is particularly important in the context of the COVID-19 pandemic representing a fundamental business risk, as sports leagues are currently faced with larger free capacities in their stadiums due to lags in returning attendance demand after spectator lockdowns (Huth and Kraus 2021). For this reason, this question should be considered in any study conducted at this time.

This paper broadens the literature considerably. To the best of our knowledge, no previously published study has focused empirically on season ticket pricing and rights for season ticket holders. To date, studies on sports season tickets have primarily concentrated on predicting season ticket renewal, including churn rates (Katz et al. 2019; Lee et al. 2020; McDonald 2010; McDonald et al. 2014; McDonald and Stavros 2007) and satisfaction among season ticket holders (Beccarini and Ferrand 2006; McDonald et al. 2013; Won and Lee 2022). This first empirical exploratory study of season ticket pricing thus provides several useful insights into relevant factors for season ticket pricing. In addition, the findings may help sports clubs develop more customized season ticket arrangements and, therefore, achieve better supply and demand matching. The findings also illuminate what season ticket rights should be offered to create an attractive product for both sports clubs and season ticket holders. This could become particularly important in the post-COVID period, as initial data indicate that the demand for tickets has decreased since the pandemic compared with the period before it (Huth and Kraus 2021). Thus, it is even more important for clubs to design a product that is tailored to fit the current situation in the form of season tickets.

This paper is structured as follows: The following section provides a short description of the economics of season tickets. Subsequently, key aspects of sports ticket pricing are presented. Next, the method used in this study is presented in terms of the empirical model, data collection, and data description. Then, key findings are discussed and interpreted in the Results Section. A concluding section then discusses the key implications of the paper.

2. Characteristics of Season Tickets

A season ticket can be assigned to a subscription market in which customers allocate—mostly contractually—the majority of their business to one provider for a certain period of time (Dawes 2014). In this sense, a season ticket is quite similar to other subscription market products, such as newspaper subscriptions, phone services, and insurance (Sharp et al. 2002). In this context, Simmons (2006) explains that season ticket holders usually have particularly close emotional, temporal, and financial links to their preferred sports club. Lee et al. (2020) and McDonald (2010) add that season ticket holders are the most loyal and involved among sports club supporters. McDonald and Stavros (2007) illustrate that, in extreme cases, a season ticket is purchased for altruistic reasons to help ensure a club's financial survival. Season tickets are normally marketed at the beginning of the new season by sports clubs (McDonald 2010; Simmons 2009).

Regarding the economic aspects of season tickets, consumers buying them must bear a valuation risk. Neither weather conditions (Borland and MacDonald 2003; Iho and Heikkilä 2010; Parlasca 1993), nor the team's playing quality and performance (Simmons 2009) can be evaluated at the time of purchase. Simultaneously, season ticket holders' risk can be identified as a key advantage from sports clubs' point of view, as sports clubs generate a major portion of ticket revenues before a new season starts, allowing them to invest in and plan for the professional squad or other assets (McDonald 2010). This financial advantage also has a risk-minimizing benefit for sports clubs. Revenues from season tickets are guaranteed regardless of the sports club's future sporting success. By selling a large portion of available seats as season tickets, clubs do not experience lost revenues in the case of underperformance. Season ticket revenues are thus somewhat decoupled from a club's sporting performance, whereby financial risk decreases and planning security increases (Huth 2012). Customer loyalty is an additional advantage because, in addition to club membership, season tickets can be considered a long-term customer loyalty instrument (Simmons 2009), which reduces the risk of the season ticket holder changing team affiliation. Additionally, sports clubs receive extensive customer data that can be used for numerous other research areas, such as specialized offers in cooperation with a club's sponsors (McDonald 2010). In fact, from the perspective of clubs in Germany's 1st and 2nd Football Bundesliga, planning security, and, therefore, less financial risk, is the greatest benefit, ranking ahead of customer loyalty, stadium utilization, and club support (Huth 2014).

A key disadvantage of season tickets, however, is the accorded discount. Based on a complete utilization of the stadium, season ticket sales reduce ticket revenues. The discount is given because season ticket holders underwrite a certain part of the mentioned risk (Simmons 2006). Therefore, the season ticket discount can be considered a risk premium for season ticket holders' accepted risk. In addition, Salant (1992) argues that for the holder, a season ticket also constitutes an insurance contract in the form of a renewable option for preferable regular-season seating and access to highly valued playoff games. Therefore, season ticket holders are willing to pay a certain risk premium. In addition to emphasizing the risk argument, Beccarini and Ferrand (2006) illustrate that the season ticket discount positively influences season ticket holders' satisfaction.

Compared with match day tickets, season tickets often contain additional property rights (DeSerpa 1994; McDonald and Stavros 2007). Property rights theory distinguishes four kinds of rights: (1) the right to use the good (*usus*), (2) the right to formally and materially modify the good (*abusus*), (3) the right to retain the returns of the good's use (usus fructus), and (4) the right to sell the good completely or partially (Alchian and Demsetz 1972; Pejovich 1976). The right to use is relevant for season ticket holders because they have the right to attend all the home matches of a given club. Additionally, the right to sell is relevant if a season ticket holder is unable to attend a game and is inclined to sell the ticket for that match to another person. The two other rights are more or less irrelevant for season ticket holders because a season ticket does not generate financial returns, such as dividends, and is not modifiable because the club, not the customer, defines its conditions. These rights are reserved by sports clubs. The season ticket holder does have the opportunity to sell tickets for special games profitably on the secondary market, thus making the third right also potentially relevant. However, many clubs are now punishing such sales of tickets above the official price.

Concerning season ticket rights, the right to attend a certain number of matches, e.g., all home matches of a season, is the fundamental right of a season ticket holder. This bundling of matches provides three major advantages for season ticket holders. First, they have the convenience of buying one season ticket instead of several match day tickets. Second, they are charged lower transaction costs. Third, they have the guarantee of attending the top games against the league's best or most prestigious clubs. Clubs also grant a certain number of additional season ticket rights, such as the right to a reserved place in the stadium, the right of preemption for special matches (e.g., playoff games or (inter)national cup competitions), the option to repurchase for the next season and discounts in the fan

shop. Sports clubs commonly grant the right of entry to all home games, the right to a reserved place in the stadium, a purchase option for special matches, and the option to repurchase for the next season (Huth 2014). Season ticket rights can be classified into monetary and nonmonetary rights. Nonmonetary season ticket rights bear the advantage that clubs can offer them without incurring high additional costs. Some of these rights, such as the option to buy additional tickets for special matches or the renewal period for season tickets, can be offered completely cost free. In contrast, monetary season ticket rights cost a club a certain amount of its real return. These rights mostly concern discounts on the season ticket itself, on merchandise in the fan shop, or on stadium magazines. However, these discounts can also be considered to promote sales because they can stimulate demand for other club products and services.

In contrast to match day ticket pricing (e.g., Noll 1974; Scully 1989; Forrest et al. 2002), quantitative pricing has not been the subject of any study to date. DeSerpa (1994), however, theoretically discusses the rationality of ostensibly low season ticket prices. Although many games sell out in different sports, the seller prices below the myopic short-term demand price to give fans a reason to purchase season tickets. DeSerpa (1994) also notes that underpriced season tickets are optimal if fans prefer to attend only a portion of the ticketed games and to resell the tickets for the remaining matches. Season tickets must be priced sufficiently low so that holders are able to at least recoup their initial investment after assuming the transaction costs of resale.

The additional offered rights also represent a certain value that must be quantified. Season ticket rights such as the right of preemption for special matches can be interpreted as a kind of option right. The season ticket holder has the option—but not the obligation—to buy tickets for special matches. In financial mathematics, these options are evaluated by various option-pricing models, such as the Black–Scholes model (Black and Scholes 1973) and the binominal model of Cox et al. (1979). Therefore, every offered (season ticket) right has a certain value. However, additional season ticket rights can be evaluated differently by their holders, and in extreme cases, no supplemental right may be attractive to its holder.

Concerning both season ticket discounts and season ticket rights, previous research indicates that no correlation or a weak correlation exists between the number of rights and the season ticket discount offered by sports clubs (Huth 2014). Therefore, a low discount does not compensate for a large number of rights, or vice versa. However, the findings indicate that less competitive clubs offer more season ticket rights than more competitive clubs.

3. Empirical Model, Methods, and Data

3.1. Empirical Model

A ticket pricing model was developed for the empirical model. Different regression models were selected for the analysis. In line with other pricing studies (e.g., Alexander 2001; Paul and Weinbach 2013; Salaga and Winfree 2015), an ordinary least-squares (OLS) model, followed by a Tobit model (Greene 2003), was calculated. However, no zero values for the season ticket price exist in the present dataset. A subsample was created by separating the survey participants according to their responses regarding whether they had ever bought a season ticket. Thus, the subsample contains only participants who have (ever) purchased a season ticket. Additionally, when the dependent variable is season ticket prices, there is no upper limit truncation, as is habitually seen when attendance is used as the response variable; thus, the venue capacity constraint is avoided (Salaga and Winfree 2015). Hence, the Tobit model can be considered an alternative to the OLS model, especially with regard to OLS regression results.

OLS and Tobit regressions focusing on the season ticket price (PRICE) and the logarithm price (LNPRICE) as dependent variables were run. The log-linear form of the second dependent variable LNPRICE was used to avoid misspecification problems (Gerrard et al. 2007). In line with the early empirical work of Demmert (1973), Noll (1974), and Schofield (1983), demographic, sport- and team-specific, and economic variables were

considered. Additionally, the survey participants' preferences for different season ticket rights were considered.

The general form of the model with season ticket prices (the actual price or the log price) as the dependent variable is as follows:

$$DEP = \beta_0 + \beta_1 DISCOUNT + \beta_2 ALLGAMES + \beta_3 SEAT + \beta_4 REPURCH + \beta_5 PREEMP + \beta_6 GATE + \beta_7 PTRANS + \beta_8 PARK + \beta_9 PRESENT + \beta_{10} STORE + \beta_{11} MAG + \beta_{12} SPONS + \beta_{13} TRANSFER + \beta_{14} INVIT + \beta_{15} FRIEND + \beta_{16} YEARS + \beta_{17} MEMBERC + \beta_{18} MEMBERFC + \beta_{19} MEMBERU + \beta_{20} AGE + \beta_{21} AGE2 + \beta_{22} SEX + \beta_{23} EDU + \beta_{24} INC + \beta_{25} STAND + \beta_{26} DFL1 + \beta_{27} DFL2 + \beta_{28} UTIL + \beta_{29} SUCC + \beta_{30} POPUL + \beta_{31} GDP + e$$

3.2. Data Description and Measurement

As mentioned above, two dependent variables were considered. First, PRICE measures the season ticket price most recently paid by participants in the survey. Alternatively, LNPRICE is the log of PRICE.

The independent variables in the regression models were as follows: First, fifteen typically monetary and nonmonetary season ticket rights, including season ticket discounts, were considered. For their selection, season ticket flyers of all the considered sports clubs were analyzed, and fifteen possible season ticket rights were identified. To consider the role of the link between fans and clubs, which Simmons (2006) identified as important, four club-link-related variables were selected. Participants indicated whether they were club members (MEMBERC), fan club members (MEMBERFC), or Ultras group members (MEMBERU). YEARS indicates the number of years that season ticket holders have held season tickets. Additionally, five categories of sociodemographic data on participants were considered in the analysis: their age (AGE), age squared (AGE2), sex (SEX), highest educational level (EDU), and net income (INC). Participants' real per-capita income (INC) was used because previous research has found that income is an important economic determinant of demand and attendance decisions (Bruggink and Eaton 1996; Feehan 2009).

Additionally, the type of season ticket (STAND) was selected to control for the monetary difference between standing and seating season tickets. Second, DFL1 and DFL2 controlled for whether a season ticket was valid in the 1st Football Bundesliga (DFL1) or 2nd Football Bundesliga (DFL2); the Basketball Bundesliga was the omitted category. In addition, clubs' stadium utilization (UTIL) and success in the previous season (SUCC) were considered. Teams with high stadium utilization and success were expected to have higher season ticket prices because these clubs have more power to charge higher prices. Previous studies indeed indicate that good sporting performance boosts subsequent attendance (Feehan 2009; Simmons 1996). Finally, two macroeconomic variables were considered to control for a club's market size and potential. Wilson and Sim (1995) and Schmidt and Berri (2001) underline the relevance of market size. Market size is usually described using the population of a club's hometown (POPUL) (Simmons 2009), whereas market potential is described using the local GDP of a club's city or region (GDP). The data were collected from the German Federal Statistical Office (Statistisches Bundesamt 2015).

In addition to a general regression that included all three selected leagues and both types of season tickets (seating and standing), regressions that split the survey data into the three leagues and two types of season tickets were conducted. Table 1 gives an overview of the two considered dependent variables and the 31 selected independent variables.

Table 1. Overview of variables.

Variable	Description	Scale
	Dependent variable	
PRICE	Price of season ticket (in EUR)	Metric
LNPRICE	Logarithmic price of season ticket	Metric
	Preference(s) for season ticket rights	
DISCOUNT	Season ticket discount (5-point scale)	Ordinal
ALLGAMES	Guarantee to see all matches live (5-point scale)	Ordinal
SEAT	Reserved seat in the stadium (5-point scale)	Ordinal
REPURCH	Option to repurchase for next season (5-point scale)	Ordinal
PREEMP	Right of preemption for special matches (5-point scale)	Ordinal
GATE	Special entrance for STH (5-point scale)	Ordinal
PTRANS	Ticket for public transport (5-point scale)	Ordinal
PARK	Parking area for STH (5-point scale)	Ordinal
PRESENT	Special present for STH (5-point scale)	Ordinal
STORE	Special discounts in fan shop (5-point scale)	Ordinal
MAG	Special price for stadium magazine (5-point scale)	Ordinal
SPONS	Special discounts with club's partners (5-point scale)	Ordinal
TRANSFER	Transferability of season ticket (5-point scale)	Ordinal
INVIT	Invitations to specific events (5-point scale)	Ordinal
FRIEND	Free entrance to friendly matches (5-point scale)	Ordinal
	Season ticket holder club-related variables	
MEMBERC	Club member (1 = yes; 0 = no)	Nominal
MEMBERFC	Fan club member (1 = yes; 0 = no)	Nominal
MEMBERU	Ultras group member (1 = yes; 0 = no)	Nominal
YEARS	Period of holding season ticket (in years)	Metric
	Sociodemographic data	
AGE	Age of participant (six categories)	Ordinal
AGE2	Age^2	Metric
SEX	Sex of participant (0 = male; 1 = female)	Nominal
EDU	Highest educational level of participant (seven categories)	Ordinal
INC	Net income of participant (six categories)	Ordinal
	Fixed-effects variables	
STAND	Standing season ticket (1 = standing; 0 = seating)	Nominal
DFL1	1st Football Bundesliga (1 = 1st DFL; 0 = other)	Nominal
DFL2	2nd Football Bundesliga (1 = 2nd DFL; 0 = other)	Nominal
UTIL	Stadium utilization (in %)	Metric
SUCC	Club's sporting success (league position)	Metric
POPUL	Population of club's city	Metric
GDP	Local 2012 GDP of club's city (or region)	Metric

3.3. Data Collection and Descriptive Results

As mentioned above, a comparative approach was chosen to track season ticket pricing under different league market conditions. Three leagues were selected according to the criterion of stadium utilization. This approach was used to find three leagues with different stadium utilization rates and, therefore, different market situations to consider different ticket markets with potentially different pricing models. The selected leagues were the 1st and 2nd Bundesliga in football, Germany's preferred sports, and the 1st Bundesliga in basketball, a sport with growing popularity.

In the present study, data from a standardized online questionnaire were combined with different secondary data sources. Accordingly, some variables were collected from club-related data sources, such as stadium utilization rates and clubs' individual rankings during the previous season. Macroeconomic data were collected from the official homepages of clubs' home cities and from official data obtained from the German Federal Statistical Office. As noted above, neither the study, nor the data collected were affected by the COVID-19 pandemic. Thus, a market environment that was as "normal" as possible and that was not influenced by an extreme situation can be assumed. The data were collected in the 2014/15 season.

Other variables were collected via a standardized online questionnaire to reduce cost and time factors (Li et al. 2008; Wright 2005). Another advantage of this approach was that season ticket holders from all the considered sports leagues across Germany were able to participate (Bartlett 2005). The questionnaire tool *Qualtrics* was used for online sampling. The questionnaire had four major parts. First, the participants were filtered by the criterion of being a season ticket holder or nonholder to prevent nonholders from answering the central questions, which focused on season ticket rights. Afterwards, season ticket holders were questioned about the league and the club for which they purchased their season tickets. Season ticket holders' relationship with the chosen clubs was also analyzed. They declared whether they were club members, fan club members, or Ultras group members. Additionally, the participants were asked how long they had held season tickets. These questions aimed to elucidate the relationship between season ticket holders and clubs. The next part—the focus of the study—asked the participants to evaluate season ticket rights according to their subjective judgements via 5-point Likert scales (from 1 = do not agree to 5 = fully agree) to assess their attitudes or, rather, preferences (Jones 2015; Revilla et al. 2014). Sociodemographic data on the respondents were collected in the survey's final section.

In total, N = 1076 football and basketball fans participated in the online survey, and 762 of these participants had held a season ticket in the past. The link to the survey was distributed in various club forums and via social media (e.g., Facebook). The distribution of respondents over the three analyzed leagues was approximately uniform (1st Football Bundesliga with a share of 28 percent, 2nd Football Bundesliga with 35 percent, and Basketball Bundesliga with 36 percent). Thus, the comparative study approach is also reflected in the sampling. In all, 45 percent of season ticket holders bought a standing season ticket; thus, the present sampling more or less represents the real allocation of standing and seating season tickets.

Table 2 shows the summary statistics for the variables used in the regression analysis.

The mean price paid for a season ticket by the survey participants was EUR 236.84. Notably, the highest mean season ticket price was identified for the 1st Football Bundesliga (EUR 286.02), followed by the Basketball Bundesliga (EUR 250.53), and the 2nd Football Bundesliga (EUR 180.36). Independent of the league, the mean paid standing season ticket cost was EUR 149.65, and the mean seating season ticket cost was EUR 309.21.

The highest-rated season ticket rights were the guarantee to see all matches live in the stadium (ALLGAMES) and the right of preemption for special matches (PREEMP). The results also indicate season ticket holders' preference for the season ticket discount, which was rated the third-most-important season ticket component. Analyzing differences in preferences among the three leagues, a Kruskal–Wallis test (Kruskal and Wallis 1952) indicated that evaluations of season ticket rights significantly differ in most cases. REPURCH, for example, is especially relevant for the 1st Football Bundesliga's season ticket holders. Considering the high average stadium utilization rate, this result is logical because the season ticket limit is exhausted for most clubs in the 1st Football Bundesliga.

Table 2. Summary statistics.

Variable	Mean	SD	Min	Max	Mean DFL1	Mean DFL2	Mean BBL
PRICE	236.84	125.68	50	782	289.54	181.86	253.71
LNPRICE	5.337	0.510	3.912	6.662	5.541	5.09	5.43
DISCOUNT	4.356	0.939	1	5	4.30	4.23	4.45
ALLGAMES	4.713	0.694	1	5	4.84	4.60	4.73
SEAT	4.142	1.130	1	5	4.10	4.04	4.34
REPURCH	4.283	0.968	1	5	4.56	4.21	4.26
PREEMP	4.491	0.822	1	5	4.56	4.62	4.38
GATE	3.140	1.290	1	5	2.77	3.27	3.21
PTRANS	3.540	1.342	1	5	3.72	3.69	3.21
PARK	2.733	1.341	1	5	2.41	2.59	3.12
PRESENT	2.734	1.341	1	5	2.36	2.67	2.99
STORE	3.059	1.279	1	5	2.68	2.99	3.31
MAG	2.471	1.168	1	5	2.43	2.53	2.43
SPONS	2.661	1.203	1	5	2.31	2.59	3.01
TRANSFER	4.083	1.058	1	5	3.98	3.92	4.35
INVIT	3.001	1.214	1	5	2.62	2.85	3.38
FRIEND	3.227	1.200	1	5	2.95	3.23	3.37
MEMBERC	0.472	0.499	0	1	0.75	0.62	0.17
MEMBERFC	0.364	0.481	0	1	0.38	0.39	0.31
MEMBERU	0.077	0.267	0	1	0.12	0.11	0.39
YEARS	5.915	3.684	1	15	6.36	6.25	5.14
AGE	2.827	1.278	1	6	2.87	2.94	2.98
AGE2	9.626	8.224	1	36	9.11	10.11	10.79
SEX	0.190	0.393	0	1	0.14	0.11	0.31
EDU	4.434	1.327	1	7	4.61	4.22	4.36
INC	2.988	1.426	1	6	3.13	3.04	3.10
STAND	0.447	0.498	0	1	0.48	0.59	0.29
DFL1	0.281	0.450	0	1	-	-	-
DFL2	0.337	0.473	0	1	-	-	-
UTIL	80.617	20.141	32.4	100	95.1	57.3	90.8
SUCC	10.748	4.138	1	18	10.87	10.72	10.65
POPUL	560,889.2	784,113.4	12,785	3,375,000	494,309	911,908	298,675
GDP	44,212.67	15,915.77	19,108	105,059	44,387	39,240	48,501

4. Results and Discussion

4.1. General Results

A variance inflation factor (VIF) test was performed on each regression to test for multicollinearity. The results indicate that none of the VIF values for the regression models exceeds 4.63, except for the variables AGE and AGE2. This value is under the threshold of 10 (Baum 2006; Beckham et al. 2012; Wooldridge 2013), indicating no issues with multicollinearity. Therefore, no variables were excluded from the regression analyses. Additionally, robust standard errors were specified in the OLS models with PRICE as the dependent variable based on significant Breusch–Pagan/Cook–Weisberg and White (1980) test results.

The analysis below focuses on the results of the semilog OLS regressions. The results of the semilog Tobit regressions are presented in Appendix A for comparison. Table 3 presents the estimation results for the different regression models. The * notations denote statistical significance at the 10 (*), 5 (**), and 1 (***) percent levels.

Table 3. OLS regression model with LNPRICE.

	Dependent Variable LNPRICE					
Variable	**ALL**	**BBL**	**BULI2**	**BULI1**	**STANDING**	**SEATING**
DISCOUNT	−0.0211	0.0056	−0.0257	−0.0559	−0.0589	−0.0416
	(0.013)	(0.024)	(0.018)	(0.027)	(0.015)	(0.020)
ALLGAMES	−0.0021	−0.0076	0.0005	−0.0225	**0.0963** *	−0.0653
	(0.018)	(0.033)	(0.024)	(0.049)	(0.023)	(0.027)
SEAT	**0.0705** ***	**0.0857** *	**0.0825** *	**0.1001** **	**0.0922** *	**0.1097** ***
	(0.012)	(0.023)	(0.017)	(0.021)	(0.013)	(0.021)
REPURCH	0.0375	0.0719	0.0196	−0.0033	−0.0663	**0.0828** **
	(0.014)	(0.023)	(0.021)	(0.034)	(0.016)	(0.023)
PREEMP	−0.0335	−0.0147	−0.0446	−0.0223	−0.0417	−0.0189
	(0.015)	(0.025)	(0.026)	(0.032)	(0.019)	(0.022)
GATE	**−0.0574** **	0.0487	**−0.0910** **	**−0.1264** **	−0.0647	−0.0700
	(0.010)	(0.018)	(0.015)	(0.022)	(0.013)	(0.015)
PTRANS	−0.0319	−0.0563	−0.0182	−0.0184	−0.0477	−0.0117
	(0.009)	(0.015)	(0.014)	(0.018)	(0.012)	(0.013)
PARK	0.0368	0.0404	0.01193	**0.1099** *	0.0520	0.0404
	(0.010)	(0.018)	(0.017)	(0.022)	(0.014)	(0.014)
PRESENT	−0.0013	0.0024	0.0785	−0.0378	0.0630	−0.0177
	(0.013)	(0.021)	(0.020)	(0.031)	(0.017)	(0.18)
STORE	0.0226	−0.0354	0.0865	−0.0330	−0.0278	0.0416
	(0.013)	(0.022)	(0.019)	(0.028)	(0.016)	(0.018)
MAG	−0.0180	−0.0259	**−0.1107** **	0.0620	−0.0700	0.0065
	(0.013)	(0.022)	(0.019)	(0.027)	(0.017)	(0.018)
SPONS	**0.0594** **	**0.0887** *	−0.0819	**0.1289** *	−0.0417	**0.1128** **
	(0.013)	(0.021)	(0.020)	(0.029)	(0.017)	(0.017)
TRANSFER	−0.0066	0.0218	−0.0128	0.0213	0.0220	−0.0172
	(0.011)	(0.024)	(0.016)	(0.022)	(0.014)	(0.017)
INVIT	0.0102	−0.0284	0.0566	0.0082	0.0153	0.0110
	(0.012)	(0.021)	(0.019)	(0.027)	(0.015)	(0.018)
FRIEND	−0.0344	−0.0627	0.0194	−0.0956	0.0105	−0.0810
	(0.011)	(0.020)	(0.015)	(0.024)	(0.014)	(0.016)
YEARS	0.0225	**0.1129** **	0.0465	−0.0866	−0.0674	**0.0814** **
	(0.003)	(0.006)	(0.005)	(0.007)	(0.005)	(0.004)
MEMBERC	0.0379	0.0609	0.0229	0.0192	**0.1004** *	0.0126
	(0.026)	(0.055)	(0.035)	(0.052)	(0.031)	(0.039)
MEMBERFC	**−0.0974** ***	−0.0438	**−0.1610** ***	**−0.1262** ***	−0.0359	**−0.1634** ***
	(0.024)	(0.043)	(0.038)	(0.047)	(0.031)	(0.035)
MEMBERU	0.0017	−0.0174	−0.0205	0.0075	−0.0060	0.0118
	(0.041)	(0.102)	(0.059)	(0.071)	(0.042)	(0.084)
SEX	−0.0031	0.0162	0.0087	−0.0163	−0.0456	0.0382
	(0.029)	(0.043)	(0.054)	(0.063)	(0.040)	(0.041)
AGE	0.1671	**0.4974** **	0.2927	−0.3466	0.0815	**0.3900** *
	(0.045)	(0.074)	(0.075)	(0.094)	(0.063)	(0.065)
AGE2	−0.0981	**−0.3871** *	−0.2385	**0.3466** *	0.0135	−0.3076
	(0.007)	(0.011)	(0.011)	(0.014)	(0.010)	(0.009)
EDU	−0.0130	−0.0465	−0.0247	0.0299	−0.0084	−0.0298
	(0.009)	(0.016)	(0.014)	(0.019)	(0.012)	(0.012)
INC	**0.1471** ***	**0.1788** ***	**0.1385** ***	**0.1341** **	**0.2501** ***	**0.1523** ***
	(0.010)	(0.019)	(0.016)	(0.020)	(0.013)	(0.015)
STAND	**−0.569** ***	**−0.4635** ***	**−0.6518** ***	**−0.7096** ***		
	(0.027)	(0.052)	(0.043)	(0.050)		
DFL1	**0.2069** ***				**0.2382** ***	**0.3019** ***
	(0.034)				(0.045)	(0.049)
DFL2	0.0546				**−0.2591** ***	**0.2177** ***
	(0.048)				(0.059)	(0.073)

Table 3. *Cont.*

	Dependent Variable LNPRICE					
Variable	**ALL**	**BBL**	**BULI2**	**BULI1**	**STANDING**	**SEATING**
UTIL	**0.1374** ***	**0.2411** ***	0.0597	0.0652	−0.0848	**0.3235** ***
	(0.001)	(0.003)	(0.001)	(0.005)	(0.001)	(0.002)
SUCC	**0.0833** ***	0.0262	0.0463	0.0672	**0.1432** ***	**0.0802** *
	(0.003)	(0.007)	(0.007)	(0.006)	(0.004)	(0.005)
POPUL	**−0.2205** ***	**−0.1268** ***	**−0.2972** ***	−0.0670	**−0.1712** ***	**−0.3423** ***
	(1.78×10^{-8})	(4.26×10^{-8})	(2.61×10^{-8})	(8.28×10^{-8})	(2.36×10^{-8})	(2.57×10^{-8})
GDP	−0.0284	−0.0495	−0.0593	−0.0033	−0.0613	−0.0416
	(7.23×10^{-7})	(1.91×10^{-6})	(9.66×10^{-7})	(2.35×10^{-6})	(8.69×10^{-7})	(1.10×10^{-6})
Constant	**4.970** ***	**3.738** ***	**5.257** ***	**5.566** ***	**4.915** ***	**4.463** ***
	(0.161)	(0.342)	(0.022)	(0.636)	(0.200)	(0.247)
N	762	277	269	216	345	417
R^2	0.6808	0.6389	0.6998	0.6937	0.3658	0.4965
Adjusted R^2	0.6673	0.5965	0.6634	0.6460	0.3052	0.4574

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The results presented and discussed below should be viewed with the caveat that the perspectives of economic actors, represented by the dependent and independent variables, may differ or overlap. One reason for this is that survey data are combined with secondary data sources, for instance, on stadium utilization, sporting success, and local GDP. These variables tend to somewhat reflect the management perspective of the clubs' representatives. In contrast, most variables are censored data provided by the responses of the survey participants, thus clearly reflecting the demand-side perspective. However, while it is set by the clubs, the price is evaluated both from the supply and demand sides of the market.

The results show that three season ticket rights are significant in the general model ALL over all the leagues and ticket types. Specifically, SEAT, which is the most significant season ticket right, and SPONS have a significant and positive influence on season ticket prices. In contrast, GATE significantly decreases LNPRICE. None of these variables causes additional costs, and all can be classified as nonmonetary rights from a sports club's perspective. In contrast, sports clubs could benefit from an economic point of view, especially given the significance of SPONS. The significant and positive impact of SPONS on LNPRICE may be surprising, given that SPONS received only a substandard rating of 2.66 in the survey. The results suggest that sports clubs and their sponsors—especially for seating season tickets in the 1st Football Bundesliga and Basketball Bundesliga—have the opportunity to provide special offers to season ticket holders. Therefore, clubs can give their sponsors additional value for their sponsorship by having direct access to season ticket holders. Sports clubs may receive additional monetary benefits from this direct and exclusive access to clubs' most involved supporters.

Considering the high ratings for DISCOUNT, ALLGAMES, SEAT, REPURCH, PRE-EMP, and TRANSFER, it is interesting that only SEAT is significant in all the calculated regressions. While ALLGAMES and DISCOUNTS are classified and quantified as the most important rights granted by season tickets, both variables—with one exception, i.e., ALLGAMES in the STANDING regression model—are nonsignificant in the regression models. Therefore, they are important for season ticket holders, but they have no direct impact on season ticket prices. This result is extremely surprising, considering that sports clubs especially promote season ticket discounts in their season ticket flyers. A possible explanation may be that both rights are deeply anchored in season ticket holders' perceptions. These rights are expected and are not unusual for season ticket holders. However, ALLGAMES is slightly significant and increases LNPRICE in the STANDING model to a slightly greater degree than SEAT. ALLGAMES is also the seventh-strongest variable in this model. Thus, it is concluded that the initial right of a season ticket holder to see all matches live is important, at least in the standing area. Given that the supply of standing places is

fewer than that of seats, this result is understandable. Considering the high demand for standing season tickets in the 1st Football Bundesliga, it is surprising that ALLGAMES is not significant in the BULI1 model. However, both ticket types are considered, and, therefore, both influenced ALLGAMES in the BULI1 model. Focusing on pairwise correlation, none can be identified between ALLGAMES and LNPRICE in the 1st Football Bundesliga, whereas a slightly positive and significant correlation of 0.1019 exists between the two variables in the STANDING model. This finding statistically supports the results.

In contrast to ALLGAMES, REPURCH is only significant in the SEATING model. Similar to ALLGEAMES, it is surprising that REPURCH is not significant in the BULI1 and STANDING models, given that the high demand for season tickets in the 1st Football Bundesliga reflects regular sellouts. Furthermore, pairwise correlation indicates a weak but significant correlation of 0.1840 between the two variables in the SEATING model.

4.2. Findings Regarding the Season Ticket Rights Variables and Sociodemographic Data

SEAT is significant, increasing ticket prices in all the calculated regressions and revealing that season ticket rights have the highest impact on LNPRICE in the SEATING model. This result is supported by the fact that SEAT is measured using the mean value and is the third-highest-valued right for season ticket seating holders. That said, this right plays only a minor role for standing season ticket holders. A Kruskal–Wallis test statistically confirms this difference, a result that is expected, given that a reserved seat or place in the stadium can be considered a highly specific right conveyed by seating season tickets. This right is particularly valuable, for example, for those who always want to sit next to family members or friends. It is not equally relevant in a stadium's standing area, where a certain spot within the area is more important. Accordingly, some clubs separate their standing areas into several sections. Thus, for some season ticket holders, a certain section—but not a special place—in the standing area is relevant.

PARK is significant only in the 1st Football Bundesliga. This result is understandable because the 1st Football Bundesliga attracts many visitors who travel by car to the games. However, the parking area is also limited around new stadiums. For example, Munich's Allianz Arena offers 9800 parking places for a maximum stadium capacity of 75,000 (Allianz Arena 2015). Parking rights for season ticket holders of the 1st Football Bundesliga may be an interesting additional benefit. However, parking can be an additional revenue source (Coates and Humphreys 2007). By offering parking rights to season ticket holders, clubs will lose a portion of their potential parking revenues, provided that they do not integrate parking prices into season ticket pricing. Alternatively, clubs can offer season ticket holders an option to park in a dedicated area for a certain fee. In this way, clubs will not have to forego any of their parking revenues.

4.3. Findings Regarding the Season Ticket Holder Club-Related Variables

Of the four considered season ticket holder club-related variables, only MEMBERFC is highly significant in most of the regression models, being associated with decreases in season ticket prices. This result is explained by the fact that MEMBERFC receives an additional discount on season tickets. Interestingly, only MEMBERFC—and not the other two memberships, which also offer an additional discount—is significant. This effect is the sixth highest in the general model ALL and, therefore, has an impact on LNPRICE. Regarding YEARS, this variable has a significant and positive impact on LNPRICE for basketball and on seating season tickets in general. In the medium to long term, these season ticket holders are willing to pay more for their season tickets.

Considering also the high and positive impact of AGE, which is the strongest variable in both models, this finding is understandable. Older season ticket holders who have purchased season tickets for many years have a greater willingness to pay than do younger season ticket holders. However, correlation analysis illustrates that only a weak or medium correlation (0.3256) exists between YEARS and AGE. It is remarkable that AGE is, on the one hand, only significant in two regression models, while on the other hand, it is the strongest variable in both models. More specifically, older season ticket holders have an extreme positive impact on season ticket prices. With basketball often perceived as a young person's sport, this result is most notable for basketball clubs. Less surprising, however, is the important role of AGE in the SEATING model. Typically, older supporters prefer seating over the standing area, while younger supporters prefer to stand.

In accordance with conventional theory (Simmons 2009), participant net income has a highly significant and positive impact on ticket prices in all seven regression models. In fact, INC is the only participant-related variable that is significant in all the models, exerting the fourth-highest impact on LNPRICE in the general model ALL, as well as a high impact in all the other models. In general, a high income increases participants' willingness to pay more for a season ticket. Therefore, a positive income effect can be identified. Hence, clubs seem to have a certain opportunity to raise ticket prices gradually in higher pricing categories to skim additional payment reserves. In contrast, neither SEX nor EDU is significant in the general model ALL. As a result, in season ticket sales, the approach can be the same for both female and male supporters. Additionally, EDU has no impact on LNPRICE, which is somewhat surprising because a certain correlation may be expected between participants' income and their educational level (De Gregorio and Lee 2002; De Wollf and van Slijpe 1973). However, only a weak pairwise correlation of 0.256 can be identified in this study. A notable limitation, however, is that INC was measured only ordinally and not metrically, which could lead to a certain bias in this variable.

4.4. Findings Regarding the Fixed-Effects Variables

Whereas DFL1, UTIL, and SUCC have a significant positive impact on season ticket prices, STAND and POPUL decrease them. DFL2 and BIP are nonsignificant in the general model ALL, whereas DFL2 is highly significant in both the STANDING and SEATING regression models. STAND has the highest impact on LNPRICE of all the considered independent variables in all the models in which STAND was considered. As expected from the different pricing in the standing and seating areas, a standing season ticket has a negative impact on LNPRICE. Independent of the league, season ticket holders paid twice the price of a standing season ticket (EUR 149.65) for a seating season ticket (EUR 309.21) on average. This price difference affects the dependent variable LNPRICE considerably and expectably.

In addition to STAND, DFL1 has a highly significant and positive impact, i.e., the third-highest impact of all the variables in the general model ALL, on season ticket prices. This result is also expected, given that the average season ticket price—valid for both standing and seating areas—is higher in the 1st Football Bundesliga (EUR 286.02) than in the Basketball Bundesliga (EUR 250.53). Interestingly, both DFL1 and DFL2 have a positive impact on seating ticket prices. Considering the average seating season ticket prices, this result is surprising because the Basketball Bundesliga's season ticket holders pay EUR 292.82, whereas season ticket holders for the 2nd Football Bundesliga pay only EUR 255.70. However, DFL2 increases LNPRICE only in the SEATING model. In contrast, LNPRICE is negatively influenced by DFL2 in the STANDING model. Therefore, DFL2 has a negative impact on the STANDING model and a positive impact on the SEATING model.

The club-related variables UTIL and SUCC, with the second in accordance with Feehan (2009) and Simmons (1996), have highly significant positive effects on ticket prices in the general model ALL, whereas UTIL has a stronger impact on LNPRICE than does SUCC. UTIL is also significant in the BBL model, in which it is the fourth-strongest variable, and the SEATING model, in which it is the third-strongest variable, while SUCC is significant

in both ticket type models. According to the results of the general model, successful clubs and/or clubs that have a high stadium utilization rate can set season ticket prices slightly higher than clubs with less sporting success or lower utilization rates. Interestingly, this comparative advantage is not statistically verifiable in the league models, as UTIL is highly significant only in the Basketball Bundesliga. A possible explanation could be that football clubs, compared with basketball clubs, price season tickets more in the inelastic range of the demand curve because revenues from tickets are not as relevant for them. As demonstrated by Coates and Humphreys (2007), sports clubs accept inelastic ticket prices to raise revenues from other sources. The Basketball Bundesliga has nearly no television revenues, so a club's revenues depend on commercial and ticket revenues. Therefore, ticket revenues are more relevant for sports clubs in the Basketball Bundesliga than they are for clubs in the other examined leagues. Additionally, pairwise correlations between LNPRICE and both club-related variables indicate a weak correlation in the different league models. Thus, a link is identified between these variables in the bivariate analysis, although this link is not verified in the multivariate analysis. As expected, the correlation between LNPRICE and UTIL is the highest in the Basketball Bundesliga.

Finally, the considered macroeconomic variable POPUL indicates that with an increasing population, season ticket prices notably decrease. POPUL is the second-strongest variable in the general model and plays a significant role in all seven regression models, with the exception of the 1st Football Bundesliga. Considering the market size hypothesis and previous findings (e.g., Schmidt and Berri 2001; Wilson and Sim 1995), this result is surprising. According to the market size hypothesis, a large population should increase the potential demand for sports goods and services (Feehan 2009; Késenne 2008). This effect is especially strong for successful sports clubs, which can invest more in talent than smaller clubs (El-Hodiri and Quirk 1971; Quirk and Fort 1992; Buraimo et al. 2007). Subsequently, clubs can skim higher prices more effectively in larger markets. The results of the present study do not identify market size as a relevant factor. A possible reason for this finding could be that the competition with other forms of entertainment—in other words, substitute leisure activities (Alexander 2001; Simmons 2009)—is higher in cities with larger populations than in small cities, where a first-league sports club is a major source of pride. Késenne (2008) adds that preferences and social stratification can also affect (ticket) demand. Consequently, local monopolies are more developed in smaller cities. Based on these findings, the second explanation seems more plausible to account for this result than the market size hypothesis. In contrast to POPUL, GDP is not significant in all the models. Therefore, a high local GDP does not, in contrast to season ticket holders' net income, affect season ticket prices. This finding is supported by pairwise correlation, which does not identify a link between the two variables.

5. Conclusions

This study aimed to identify factors that influence season ticket prices. The findings indicate that three season ticket rights generally have a significant impact on season ticket prices and that GATE has a negative impact and should not be considered a season ticket right. Special gates for season ticket holders are, in reality, more the exception than the rule. The two significant and positive season ticket rights (SEAT and SPONS) are—from a club's perspective—nonmonetary rights. Sports clubs may therefore benefit economically from integrating sponsors into their season tickets to obtain higher sponsoring revenues. Hence, if they do not already do so, sports clubs should integrate these rights into their season tickets and prioritize them in their season ticket sales campaigns. In addition, surprisingly, of the four season ticket rights (SEAT, PREEMP, ALLGAMES, and REPURCH) that were offered by more or less all the sports clubs in the analyzed leagues, only SEAT is significant in all the models. In contrast, PREEMP is nonsignificant in all the regressions, whereas ALLGAMES is only significant for standing season ticket holders, and REPURCH is only significant in the SEATING model. Therefore, reassessing whether sports clubs should still offer these rights would be worthwhile. However, a descriptive analysis showed that

all traditionally offered season ticket rights are important for season ticket holders, even though this result was, for the most part, not confirmed by the regression analysis. The season ticket discount is also valuable to season ticket holders. Therefore, all traditional season ticket rights and season ticket discounts should be considered and advertised in a club's season ticket sales campaign.

However, the current discount of more than 27 percent in the 1st Football Bundesliga may not be appropriate, considering that season ticket sellouts are standard for several sports clubs. In sports clubs with high stadium utilization rates, seating season tickets in medium to high price classes should be priced higher in the future to skim a greater portion of potential ticket revenues. This strategy is also supported by the significant role of season ticket holders' income in season ticket purchasing. As previous findings illustrate, INC is one of the most important factors in increasing season ticket holders' willingness to pay. Therefore, season ticket holders with a high income may be willing to pay higher season ticket prices. However, in accordance with practices regarding inelastic match day ticket pricing and the previously mentioned arguments for season ticket discounts of Beccarini and Ferrand (2006) or Simmons (2006), it is advisable to offer a discount. In this way, season ticket holders will still have an incentive to buy season tickets. In addition, the sports clubs must wait to see how the number of spectators may change in the post-COVID period. Due to changed habits (e.g., more family time, more personal active sport activities), a significant and not risk-free change in people's leisure time behaviors can be expected for the clubs. In this light, discounts should only be revised when and if the situation in the sports leagues has returned to normal.

Generally, successful sports clubs with a high utilization rate have greater potential than others to raise their season ticket prices. Such an increase should be approached prudently, however, given that a high stadium utilization rate is important for sports clubs (Huth 2014) to sell supplementary goods and services in their stadiums (Coates and Humphreys 2007). Sports clubs located in larger cities should also consider substitutes in such competitive local markets that may place market shares at risk; thus, the common market size hypothesis may not entirely hold true. Sports clubs in larger cities should therefore first identify competition in their local markets and then determine their price structures. They should also bear in mind that by selling season tickets, they can increase their planning security, bringing considerable added value and increasing their overall financial protection.

Author Contributions: Conceptualization, methodology, resources, data curation, writing—original draft preparation, C.H.; writing—review and editing, supervision, funding acquisition, M.K. All authors have read and agreed to the published version of the manuscript.

Funding: Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—491183248. Funded by the Open Access Publishing Fund of the University of Bayreuth.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data were collected by an online survey of season ticket holders of professional team sports clubs complemented by secondary data from a variety of online accessible sources. Thus, the unique dataset results from online field work by the authors and may be shared upon request.

Acknowledgments: The authors are indebted to students attending project seminars at the University of Bayreuth for their assistance in the data collection.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Results of Tobit regression with LNPRICE.

	Dependent Variable LNPRICE					
Variable	**ALL**	**BBL**	**BULI2**	**BULI1**	**STANDING**	**SEATING**
DISCOUNT	−0.0211	0.0056	−0.0257	−0.0559	−0.0589	−0.0416
	(0.012)	(0.023)	(0.017)	(0.025)	(0.014)	(0.019)
ALLGAMES	−0.0021	−0.0076	0.0005	−0.0225	**0.0963** *	−0.0653
	(0.018)	(0.031)	(0.023)	(0.045)	(0.022)	(0.026)
SEAT	**0.0705** ***	**0.0857** *	**0.0825** *	**0.1001** **	**0.0922** *	**0.1097** ***
	(0.011)	(0.022)	(0.016)	(0.020)	(0.012)	(0.020)
REPURCH	0.0375	0.0719	0.0196	−0.0033	−0.0663	**0.0828** **
	(0.014)	(0.022)	(0.020)	(0.032)	(0.016)	(0.022)
PREEMP	−0.0335	−0.0147	−0.0446	−0.0223	−0.0417	−0.0189
	(0.015)	(0.023)	(0.024)	(0.030)	(0.018)	(0.021)
GATE	**−0.0574** **	0.0487	**−0.0910** **	**−0.1264** **	−0.0647	−0.0700
	(0.010)	(0.017)	(0.014)	(0.021)	(0.012)	(0.014)
PTRANS	−0.0319	−0.0563	−0.0182	−0.0184	−0.0477	−0.0117
	(0.009)	(0.015)	(0.013)	(0.017)	(0.011)	(0.012)
PARK	0.0368	0.0404	0.01193	**0.1099** **	0.0520	0.0404
	(0.101)	(0.017)	(0.016)	(0.020)	(0.013)	(0.014)
PRESENT	−0.0013	0.0024	0.0785	−0.0378	0.0630	−0.0177
	(0.013)	(0.020)	(0.019)	(0.029)	(0.017)	(0.017)
STORE	0.0226	−0.0354	0.0865	−0.0330	−0.0278	0.0416
	(0.012)	(0.021)	(0.018)	(0.026)	(0.016)	(0.018)
MAG	−0.0180	−0.0259	**−0.1107** **	0.0620	−0.0700	0.0065
	(0.012)	(0.021)	(0.018)	(0.025)	(0.016)	(0.017)
SPONS	**0.0594** **	**0.0887** **	−0.0819	**0.1289** **	−0.0417	**0.1128** **
	(0.012)	(0.019)	(0.018)	(0.027)	(0.016)	(0.017)
TRANSFER	−0.0066	0.0218	−0.0128	0.0213	0.0220	−0.0172
	(0.011)	(0.022)	(0.015)	(0.021)	(0.013)	(0.016)
INVIT	0.0102	−0.0284	0.0566	0.0082	0.0153	0.0110
	(0.012)	(0.020)	(0.017)	(0.025)	(0.014)	(0.017)
FRIEND	−0.0344	−0.0627	0.0194	−0.0956	0.0105	−0.0810
	(0.011)	(0.019)	(0.015)	(0.022)	(0.013)	(0.015)
YEARS	0.0225	**0.1129** ***	0.0465	−0.0866	−0.0674	**0.0814** **
	(0.003)	(0.056)	(0.005)	(0.006)	(0.004)	(0.0043)
MEMBERC	0.0379	0.0609	0.0229	0.0192	**0.1004** **	0.0126
	(0.025)	(0.051)	(0.033)	(0.048)	(0.030)	(0.038)
MEMBERFC	**−0.0974** ***	−0.0438	**−0.1610** ***	**−0.1262** ***	−0.0359	**−0.1634** ***
	(0.023)	(0.041)	(0.036)	(0.043)	(0.029)	(0.034)
MEMBERU	0.0017	−0.0174	−0.0205	0.0075	−0.0060	0.0118
	(0.041)	(0.096)	(0.056)	(0.066)	(0.040)	(0.080)
SEX	−0.0031	0.0162	0.0087	−0.0163	−0.0456	0.0382
	(0.028)	(0.041)	(0.051)	(0.059)	(0.038)	(0.039)
AGE	0.1671	**0.4974** **	0.2927	**−0.3466** *	0.0815	**0.3900** **
	(0.044)	(0.070)	(0.071)	(0.087)	(0.060)	(0.063)
AGE2	−0.0981	**−0.3871** **	−0.2385	**0.3466** **	0.0135	−0.3076 *
	(0.006)	(0.010)	(0.010)	(0.013)	(0.010)	(0.009)
EDU	−0.0130	−0.0465	−0.0247	0.0299	−0.0084	−0.0298
	(0.009)	(0.015)	(0.013)	(0.018)	(0.012)	(0.012)
INC	**0.1471** ***	**0.1788** ***	**0.1385** ***	**0.1341** **	**0.2501** ***	**0.1523** ***
	(0.010)	(0.018)	(0.015)	(0.019)	(0.013)	(0.015)
STAND	**−0.569** ***	**−0.4635** ***	**−0.6518** ***	**−0.7096** ***		
	(0.026)	(0.049)	(0.040)	(0.046)		
DFL1	**0.2069** ***				**0.2382** ***	**0.3019** ***
	(0.033)				(0.043)	(0.047)
DFL2	0.0546				**−0.2591** ***	**0.2177** ***
	(0.047)				(0.056)	(0.070)

Table A1. *Cont.*

	Dependent Variable LNPRICE					
Variable	**ALL**	**BBL**	**BULI2**	**BULI1**	**STANDING**	**SEATING**
UTIL	**0.1374** ***	**0.2411** ***	0.0597	0.0652	−0.0848	**0.3235** ***
	(0.001)	(0.003)	(0.001)	(0.005)	(0.001)	(0.002)
SUCC	**0.0833** ***	0.0262	0.0463	0.0672	**0.1432** ***	**0.0802** *
	(0.003)	(0.006)	(0.007)	(0.006)	(0.004)	(0.005)
POPUL	**−0.2205** ***	**−0.1268** ***	**−0.2972** ***	−0.0670	**−0.1712** ***	**−0.3423** ***
	(1.74×10^{-8})	(4.03×10^{-8})	(2.46×10^{-8})	(7.66×10^{-8})	(2.25×10^{-8})	(2.47×10^{-8})
GDP	−0.0284	−0.0495	−0.0593	−0.0033	−0.0613	−0.0416
	(7.08×10^{-7})	(1.81×10^{-6})	(9.11×10^{-7})	(2.18×10^{-6})	(8.28×10^{-7})	(1.05×10^{-6})
Constant	**4.970** ***	**3.738** ***	**5.257** ***	**5.566** ***	**4.915** ***	**4.463** ***
	(0.153)	(0.301)	(0.021)	(0.585)	(0.191)	(0.24)
N	762	277	269	216	345	417
McFadden's R^2	0.773	0.767	0.984	0.814	1.102	0.633
McKelvey and Zavoina's R^2	0.681	0.640	0.701	0.695	0.366	0.497

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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