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The Effect of Appurtenant Golf Memberships on Residential Real Estate Prices

Steve P. Fraser*

Florida Gulf Coast University, Lutgert College of Business, 10501 FGCU Boulevard South, Fort Myers FL 33965-6565. Phone: 239-590-7336. Fax: 239-590-7367. Email: sfraser@fgcu.edu.

Marcus T. Allen

Florida Gulf Coast University, Lutgert College of Business, 10501 FGCU Boulevard South, Fort Myers FL 33965-6565. Phone: 239-590-7321. Fax: 239-590-7367. Email: timallen@fgcu.edu.

Considerable prior research confirms the existence of real estate price premiums associated with golf course amenities in residential development projects. This study examines a unique residential development project in which membership in a golf club is appurtenant to the real estate: ownership of certain (but not all) dwellings in the project includes deeded membership in the project's golf club. In this development project, golf memberships can only be obtained or disposed of by acquiring or selling the associated dwelling, respectively. The results of this analysis indicates that price premiums associated with appurtenant golf memberships, after controlling for golf course view and other relevant property characteristics, are significantly positive. Furthermore, the results indicate that the magnitude of the price premium for appurtenant golf memberships varies across dwelling types (detached vs. attached) in this project. These findings may be important for housing developers, consumers, lenders, appraisers, and property and income tax authorities.

Keywords

Housing Prices, Hedonic Pricing, Club Goods, Golf Club Membership, Common Interest Real Estate Developments

* Corresponding author

1. Introduction

Since the early 20th century, developers have recognized that proximity to golfing opportunities can be a valuable amenity in residential development projects.¹ By directly integrating golf courses into residential development projects, developers attempt to capture real estate price premiums from property purchasers who see value in having a golf course in the project. Such price premiums may be even larger for lots/dwellings that directly abut the course or have a view of some portion of the course. When deciding whether or not to include a golf course in a new development project, the task of a developer is to determine whether or not the impact on the timing and magnitude of development sales revenue justifies the dedication of land in the project to the course (opportunity costs) as well as course construction costs. The prevalence of residential golf communities suggests that potential real estate price premiums associated with golf courses have proven to be persuasive for many developers.

A variety of factors may affect potential real estate price premiums associated with a golf course integrated into a development project, including course design and construction, other related amenities (swimming pool, tennis courts, clubhouse, restaurant, etc.), and, most importantly for the purposes of this study, the membership/ownership structure of the golf course. Modern golf communities typically use one of the following three types of membership/ownership structures for golf courses included in the projects: public, private-nonequity, and private-equity.

Public courses, which include courses owned by for-profit entities or municipalities, are also known as daily fee courses and open to anyone who pays the use fee. Private-nonequity courses are limited to use by members of the course club and their guests. Members of private-nonequity courses typically join a club that is operated by the owner of the golf course club by paying a membership fee and periodic membership dues and assessments. Private-equity courses are likewise limited to use by members of the course club and members pay membership fees, dues, and assessments, but with an important distinction: members of private-equity clubs own the course club and, in most cases, the real estate on which it operates.

In the typical private-equity club, a member who no longer desires to belong to the club may transfer the membership under conditions established by the club by surrendering it back to the club or by selling it to a new owner/member. In the private-equity club that is the subject of this study, however, membership is an appurtenance to real property in the real estate development project. Therefore, a member who no longer desires to belong to

¹ See Cory et al. (2001) for a brief history of early 20th century golf community development projects.

the club (or a potential new member who does desire to belong to the club) must sell (or purchase) the real property to which membership is legally and permanently attached. The appurtenant golf membership cannot be separately transferred from the real property, nor can the real property be separately transferred from the appurtenant golf membership. The golf membership is a deeded appurtenance to the real property that “runs with the land”. This structure assures that the number of golf memberships is constant over time, which may provide greater stability for the golf club operations.

The purpose of this study is to identify and measure the potential price effect of appurtenant golf memberships on residential real estate prices after controlling for golf course view and other relevant property characteristics. This unique method of bundling golf membership with the traditional real property rights held by a purchaser raises potentially important questions for developers, appraisers, property and income taxing authorities, lenders, and, of course, housing consumers.

Previous researchers have examined real estate price premiums associated with golf course abutment and golf course view in public and private courses, but no prior study has directly considered the impact on value associated with appurtenant golf memberships. A previous study (Hansz and Hayunga (2012)) that is closely related to the current study considers the price effects of the options of house buyers to join a private-equity club by paying either a membership transfer (if the house seller was a current member) or a member initiation fee (if the house seller was not a current member) to the club, but the actual club memberships in that study are not appurtenant to the real estate, or mandatory, as they are in the current study. Valuing the appurtenant golf membership may be important to myriad stakeholders. The most important impact of the valuation itself is the increase in the transparency of the real estate transaction. Lenders and appraisers alike may prefer to know the value of the appurtenant golf membership separately from the value of the underlying real property. The results below show that the value of appurtenant golf membership is positive, but varies over time.

The analysis presented here examines potential price premiums associated with appurtenant golf memberships within a 1,291 dwelling development project over the period 2003-2012. Of these 1,291 dwellings, 830 dwellings have appurtenant golf memberships.² The project consists of both single-family detached dwellings (410 of which have appurtenant golf memberships)

² The development project analyzed in this study began construction and residence sales in 1998 and was fully developed and sold by 2005. All residences in the development include an appurtenant social membership in the club, but only 830 dwellings include golf memberships. The developer specified which dwellings included appurtenant golf memberships during the marketing and sale process. The maximum number of golf membership is specified in the project’s master association declaration.

and single-family attached dwellings (of which 420 have appurtenant golf memberships) in one- to four-story, multi-unit buildings.³

The results of the analysis presented in this study indicate that appurtenant golf memberships are significantly and positively related to single-family attached dwelling prices with an estimated average magnitude of 8% compared to single-family attached dwellings that do not have appurtenant golf memberships.

The remainder of the paper is organized as follows: Section II summarizes previous studies of the price effects of golf as a property amenity, Section III describes the data and the analysis method, Section IV presents the analysis results, and Section V summarizes the study and suggests issues for further research.

2. Previous Research

Several previous studies have addressed the issue of residential real estate price premiums associated with golf course proximity, abutment, and view. Do and Grudnitski (1995) examine the effect on the selling price of a property when a property abuts a golf course and report that abutment adds 6% to 7% to the selling price of a single-family detached dwelling in a sample of 717 transactions near San Diego, CA, from 1990-1993. Similarly, Asabere and Huffman (1996) report a price premium of 7% to 8% for golf course frontage dwellings in a sample of 105 sales in Burlington County, NJ, from 1992 to 1994. Grudnitski and Do (1997) use a matched-pair sample of 314 single-family detached dwellings from the San Diego, CA area from 1990 to 1993 to examine the issue of course abutment and report a price premium of 4.8% for houses with golf course frontage. Lutzenhiser and Netusil (2001), as part of a broader study on the effects of open space on dwelling prices, consider a sample of 16,636 single-family detached dwelling transactions in Portland, OR, from 1990 to 1992 and report a price premium of 21% for dwellings located within 200 feet of a golf course.

Owusu-Edusei and Espey (2003) report a premium of 27% for dwellings that abut golf courses in a sample of 3,731 single-family detached dwellings in Greenville, SC, from 1994 to 2000. Grudnitski (2003) examines a sample of 2,311 single-family detached dwelling transactions near Las Vegas, NV, from 1998 to 2001 to consider whether location within a golf community (without consideration of abutment or view of the course) is associated with a price premium in comparison to dwellings not located within a golf community,

³ As suggested by an anonymous reviewer, this study focuses on attached dwellings due to the lack of variation in appurtenant golf membership in detached dwellings. In the transaction sample analyzed below, 87% of the detached transactions include appurtenant golf memberships.

taking into consideration ownership/membership structure. He reports price premiums of 12.5% for dwellings in private course communities, 6% in semi-private course communities, and 5.7% in public course communities. Nicholls and Crompton (2007) consider a sample of 305 single-family detached dwelling sales in a single golf course development project near College Station, TX, from 1997 to 2001, and report a price premium of 25.8% for dwellings with golf course abutment relative to dwellings in the same development without course abutment. Shultz and Schmitz (2009) consider the issues of course abutment and ownership/membership structure by using a sample of 5,782 single-family detached dwellings from 2000 to 2006, of which 1,324 abut one of 20 different golf courses in Omaha, NE. They report price premiums of 28% for private non-equity courses, 15% for public courses, 9% for municipal courses, and 5% for private equity courses.⁴ Wyman and Sperry (2010) refine the concept of course abutment by distinguishing between residential building lots with “fairway” views from lots of less than 350 feet (the typical width of a golf course fairway) of the golf course versus lots with “prime” views of more than 350 feet of the golf course. By using a sample of 563 lot sales in a golf development project near Greenville, SC, from 2000 to 2008, they report lot price premiums of 42% for “fairway” views and 85% for “prime” views.

Although the research studies summarized above consistently indicate price premiums associated with golf course abutment and views as residential property amenities, no prior study specifically addresses appurtenant golf memberships as a determinant of residential real estate prices. In a closely related study, Hansz and Hayunga (2012) examine real property ownership in Pinehurst, NC, and consider country club membership as a club good.⁵ In that study, some of the sample properties include the right to transfer country club

⁴ Shultz and Schmitz (2009) do not distinguish between appurtenant and non-appurtenant golf memberships for the five private equity courses in their sample.

⁵ The seminal paper of Buchanan (1965) on the economic theory of club goods, distinguishes club goods from the public and private goods of Samuelson (1954) as goods available for consumption only by members of a group. Such groups, or clubs, are formed when members perceive there is a net benefit to membership related to the good provided by the club: a Pareto optimal result that maximizes the welfare of the group. Buchanan’s model also shows that a Pareto optimum exists for the whole economy if the population is partitioned among a set of clubs in which each individual is a member of an optimally configured club in terms of membership size and level of provision of the good in question. As noted by Sandler and Tschirhart (1997), substantial research has expanded the club theory and it has been applied in numerous economic settings. Studies by Coy and Pohler (2002), Leisch (2002), Langbein and Spotswood-Bright (2004), Grant (2005), Manzi and Smith-Bowers (2005), Wu (2005), Raposo (2006), Pow (2007), Pow and Kong (2007), Pow (2009), and Hanz and Hayunga (2012) address the issue of club goods in housing settings in various global markets. This study contributes to the theory of club goods by estimating the implicit price of appurtenant golf membership as a club good in a private residential development in the United States that is internally governed by a property owners association.

membership at a price of \$12,000, while other properties afforded owners the opportunity to join the club by paying a \$40,000 initiation fee. Essentially, the authors examine how the real estate market prices the option to obtain golf club membership rights. The authors find that the shadow price for club membership afforded by the transfer opportunity is less than the \$28,000 difference implied among property types. The Hansz and Hayunga (2012) study differs from this effort in that their study essentially examines the right to become a member. In the present study, golf membership is permanently bundled with the other property rights of purchasers of dwellings in the development project under consideration. Purchasers of houses with appurtenant golf memberships incur all of the benefits and costs associated with golf membership. There is no right to opt out of membership and no transfer or initiation fee payable to the club by the house buyer. The analysis here controls for golf course abutment and view as considered in previous studies and adds the issue of appurtenant golf membership to the body of knowledge with regard to the price effects of golf amenities in residential real estate markets.

3. Data and Analysis Method

The residential development project considered here is located in southwest Florida (Fort Myers) and was developed by a nationally prominent homebuilder that has developed numerous projects in the area. The project consists of a total of 1,291 attached or detached single-family dwellings. All dwellings in the community include an appurtenant social membership in the community club and 830 (64%) of the dwellings include an appurtenant golf membership. Of the 461 dwellings without appurtenant golf memberships, 10% are detached and 90% are attached. Both golf and social members and their accompanying guests may use the other amenities in the community, including swimming, tennis, and dining facilities. Only golf members (two per dwelling) and their accompanying guests may use the golf facilities in the community. Owners of dwellings with appurtenant golf memberships pay periodic membership dues to the community club that are approximately three times more than the dues paid by owners of dwellings who have only social memberships.

Of the 830 dwellings with appurtenant golf memberships, 366 (44%) are single-family detached dwellings and 464 (56%) are single-family attached dwellings. Whether or not a particular dwelling has an appurtenant golf membership was determined at the time of the original sale by the developer to the first buyer of the dwelling. The deeds from the developer to the first buyers specify any appurtenant golf membership included with the property.⁶

⁶ Due to errors in some of the original deeds that conveyed ownership from the developer to the initial buyers, the developer filed public records notices that clarified the appurtenant golf memberships (or lack thereof) for approximately 340 dwellings in

The developer marketed and sold certain dwellings scattered somewhat randomly throughout the project with appurtenant golf memberships. The master association declaration documents specify the maximum number of appurtenant golf memberships at 830. Of particular note for this study, 87% of the transactions that involve single-family *detached* dwellings include golf membership. In contrast, only 54% of the single-family *attached* dwellings in the sample include golf membership. Due to the differing characteristics between single-family detached dwellings and single-family attached dwellings, the analysis that follows considers each sample independently. Only the results of the single family *attached* sample are reported directly due to lack of variation in the variable of interest for the detached dwelling sample.⁷

The data collected for this study consist of information with regard to 899 transactions of single-family attached dwellings in the real estate development project as recorded in the public records system for the county. The sample includes only those transactions identified by the office of the county tax appraiser as occurring at arm's length. The 899 transactions in the sample occurred between 2003 and 2012, a time period that includes 372 initial transfers from the developer to individual owners as well as subsequent transfers of 527 dwellings between individual owners.⁸ The last transfer from the developer to an individual owner occurred in 2005. In addition to transaction prices, the data sample includes appropriate property characteristics for each dwelling as described and summarized in Table 1.

Table 1 presents descriptions and summary statistics of the variables included in this analysis. The average transaction price for single-family attached dwellings is \$181,352 and the average transaction price for single-family detached dwellings is \$295,424. The percentage of dwellings with appurtenant golf memberships is 54% and the average age of the dwellings is less than three years.⁹

2010 and 2011. The authors thank the management of the community club for its assistance in confirming the accuracy of the list of dwellings that have appurtenant golf memberships.

⁷ We also eliminate attached dwellings that are duplexes. There are a small number of these properties in the project, and they share more common characteristics with single-family detached dwellings than with single-family attached dwellings.

⁸ There are 28% of the single-family attached dwellings and 23% of the single-family detached dwellings that sold more than once during the study period.

⁹ Previous research suggests that dwelling age is negatively associated with transaction price in most housing markets. In this analysis, the regression analysis for Equation 1 omits a variable for dwelling age for two reasons. First, all of the dwellings in the samples might be best considered "newer" homes with at least 70% of the homes less than four years old in each sample. Second, inclusion of the age variable in regressions that include year dummies proved problematic. Any effect due to the age of a dwelling appears to be subsumed by the time effect captured with the year dummies.

The following hedonic pricing model provides the framework for analysis in this study.

$$\ln PRICE_j = \alpha + \beta GOLFMBR_j + \gamma_i X_{ij} + \theta_t YEAR_{tj} + \varepsilon_j \quad (1)$$

The dependent variable in Equation 1 is the natural log of the transaction price (*PRICE*) of the *j*th dwelling. The independent variables are *GOLFMBR_j*, a binary variable that takes the value of one if the *j*th dwelling has an appurtenant golf membership and zero otherwise; *X_{ij}*, a vector of control variables (*i* = 1, . . . , I) that describes dwelling *j* as defined in Table 1 above; and *YEAR_{tj}*, a vector of binary variables (*t* = 1, . . . , T) that takes the value of one if the *j*th dwelling is sold in year *t* and zero otherwise. The variable ε_j is a white noise error term and α , β , γ_i , and θ_t are parameters to be estimated.

The primary variable of interest in this study is *GOLFMBR*, a binary variable that indicates whether or not the dwelling includes an appurtenant golf membership. The control variables in vector *X* include those variables consistent with previous research. The variables in vector *X* control for view of the golf course (*GOLFVIEW*), view of any water body (*WATER*), the living area of the dwelling (*SQFT*), whether the dwelling has a garage (*GARAGE*), the floor number of the dwelling (*FLOOR*), and the number of floors in the building (*BLDG*).

The binary variable *GOLFVIEW* addresses the potential amenity effects of golf course abutment and view. The golf course in this development project is a “single fairway, returning nines configuration” which typically, as discussed in Crompton (2000), maximizes the number of lots in a development with golf course frontage. This configuration lends itself to maximization of the number of dwellings in the project with course abutment, but not all of these dwellings have a direct golf course view if the dwelling is, for example, adjacent to a cart path with substantial landscaping that blocks any view of the golf course fairways, greens, or teeing grounds. Thus, a dwelling might technically abut the course, but does not necessarily have a desirable golf course view. The amenity value of golf course abutment is primarily derived from the associated golf course view, and not whether the property technically abuts the course. The variable *GOLFVIEW* is set equal to one if the dwelling has a reasonably unobstructed view of a teeing ground, fairway, or green based on a personal inspection by the authors (accompanied by a club member) of the view of each dwelling. The a priori expectation of the sign of the coefficient from the pricing model for this variable is positive.

Table 1 Variable Description and Summary Statistics, Attached Dwellings (N=899)

Variable	Mean	Standard Deviation	Minimum	Maximum	Description
PRICE	\$181,352	\$46,748	\$100,000	\$360,000	Am's length transaction price of dwelling
GOLFMBR	0.5406	0.4986	0	1	Binary variable equal to 1 if dwelling includes appurtenant golf membership, 0 otherwise
GOLFVIEW	0.6240	0.4846	0	1	Binary variable equal to 1 if dwelling has a view of the golf course, 0 otherwise
WATER	0.7241	0.4472	0	1	Binary variable equal to 1 if dwelling has a water view, 0 otherwise
AGE	2.9166	3.5029	0	13	Age of dwelling, in year
SQFT	1285	120	1095	1504	Air conditional living area of the dwelling in square feet
BEDS	2.0000	0.0000	2	2	Number of bedrooms in the dwelling
BATHS	2.0000	0.0000	2	2	Number of bathrooms in the dwelling
FLOOR	2.0630	1.0228	1	4	Number indicating the floor of unit
BLDG	3.2580	0.9287	2	4	Number indicating the number of floors in building
GARAGE	0.3315	0.4710	0	1	Binary variable equal to 1 if dwelling has a garage, 0 otherwise

The pricing equation also includes a binary variable *WATER* to control for the adjacency of a dwelling to a body of water. A water view may be valuable for its view alone, or for the privacy that the water body affords the dwelling. The a priori expectation for the sign of the estimated coefficient on the *WATER* variable is, therefore, positive. The a priori predicted relationships between transaction price and the *SQFT* and *GARAGE* variables are positive.

No a priori expectations are posited for the sign of the relationship between transaction price and the *FLOOR* and *BLDG* variables for the following reasons. Southwest Florida is a popular destination for retirees and seasonal residents. Many retirees in multi-unit buildings might want the view and privacy afforded properties on the highest floor of a building. In contrast, the more immobile retirees might prefer the easy access of a first floor unit.

Note that the hedonic pricing model for the single-family attached sample excludes the number of bedrooms (*BEDS*) and bathrooms (*BATHS*) because all such properties have the same number of bedrooms and bathrooms.

4. Results

Table 2 presents ordinary least squares (OLS) regression estimates of the parameters of Equation 1. Results are shown for the semi-log functional form (dependent variable = $\ln(\text{PRICE})$). An advantage of the semi-log functional form is the ease of interpreting the binary variable coefficients as percentage change effects on the dependent variable by using the transformation discussed by Kennedy (1981).¹⁰ As noted earlier, the primary variable of interest in this study is *GOLFMBR*. The coefficient estimate for this variable is positive and significant. The results indicate a 7.96% price effect for the single-family attached sample (\$14,432 when evaluated at the mean transaction price).¹¹ This result is similar, as a percentage of the average house price in the samples, to the premium found by Hansz and Hayunga (2012) for the right to transfer an established golf membership for an additional fee paid to the golf club.

The coefficients of most of the control variables within the single-family attached sample (*GOLFVIEW*, *SQFT*, and *GARAGE*) are significant and positive, but the coefficient on the *WATER* variable is insignificant.¹² The *FLOOR* coefficient is positive and significant while the coefficient on *BLDG*

¹⁰ Kennedy (1981) demonstrates that the percentage change in the dependent variable is equal to $e^{(\beta - 1/2\text{Var}(\beta))} - 1$, where β is the OLS coefficient on a binary variable in a semi-log regression.

¹¹ The result is a 1.63% price effect for the single-family detached sample (\$4,817 when evaluated at the mean transaction price).

¹² Water features are typically significantly and positively related to house prices. The lack of significance of the coefficient on the variable *WATER* in this study may be related to the type of water features present in the development (small ponds).

is not significant. These results suggest dwelling buyers prefer to live on higher floors, but do not suggest that buyers prefer buildings with more or fewer floors. The coefficients for all of the individual year dummy variables are highly significant. The coefficients are positive from 2004 through 2008 and negative from 2009 through 2012. The sign change of these coefficients is consistent with the trend in dwelling prices in the southwest Florida area during the recent nationwide housing crises.

Table 2 OLS Regression Results with Robust Standard Errors Attached Dwellings (N = 899)

Dependent Variable: ln(PRICE)			
Variable	Coefficient	p-value	
<i>GOLFMBR</i>	0.0766	0.000	***
<i>GOLFVIEW</i>	0.0138	0.093	*
<i>WATER</i>	0.0173	0.120	
<i>SQFT</i>	0.0007	0.000	***
<i>GARAGE</i>	0.0894	0.000	***
<i>FLOOR</i>	0.0261	0.000	***
<i>BLDG</i>	-0.0087	0.538	
<i>Y2004</i>	0.0889	0.000	***
<i>Y2005</i>	0.3601	0.000	***
<i>Y2006</i>	0.5606	0.000	***
<i>Y2007</i>	0.3111	0.000	***
<i>Y2008</i>	0.0856	0.000	***
<i>Y2009</i>	-0.8339	0.000	***
<i>Y2010</i>	-0.0654	0.000	***
<i>Y2011</i>	-0.1168	0.000	***
<i>Y2012</i>	-0.1420	0.000	***
<i>Constant</i>	10.9879	0.000	***
<i>F-statistic</i>		277.16	
<i>R²</i>		0.81	

Note: *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

These findings suggest that golf membership appurtenant to a property is positively and significantly related to transaction price. The magnitude of the price premiums substantially differs across the attached (7.96% and significant) and detached dwelling samples (1.63% and not significant). Taken together with an examination of the individual year dummy variables in each sample, the results suggest, or rather highlight, that the market for attached and detached dwellings prices appurtenant golf memberships differently, both in dollars and percentage of price. Interestingly, Hansz and Hayunga (2012) found the premium for condominium transactions (analogous to our *attached* sample) to be less than the premium for transactions that involve single-family (*detached*) dwellings.

Table 3 presents year-by-year OLS regression results for the attached dwellings sample in an effort to shed more light on the price premiums of

Table 3 Year-by-Year OLS Regression Results with Robust Standard Errors, Attached Dwellings (n = 899)

Dependent Variable: ln(PRICE)															
Variable	2003 (n = 143)			2004 (n = 289)			2005 (n = 174)			2006 (n = 35)		2007 (n = 38)			
	Coeff	p-value		Coeff	p-value		Coeff	p-value		Coeff	p-value	Coeff	p-value		
<i>GOLFMBR</i>	0.0469	0.000	***	0.0523	0.000	***	0.1058	0.020	**	0.1051	0.113	0.0919	0.130		
<i>GOLFVIEW</i>	0.2166	0.017	**	0.0356	0.001	***	-0.0379	0.275		0.0254	0.673	-0.0527	0.358		
<i>WATER</i>	0.0032	0.853		0.0209	0.242		0.1269	0.001	***	-0.0457	0.448	0.0680	0.496		
<i>SQFT</i>	0.0006	0.000	***	0.0006	0.000	***	0.0004	0.003	***	0.0005	0.027	**	0.0011	0.000	***
<i>GARAGE</i>	0.1112	0.002	***	0.0394	0.460		0.0598	0.524		0.1074	0.232	0.0564	0.647		
<i>FLOOR</i>	0.0187	0.000	***	0.0249	0.000	***	0.0377	0.018	**	0.0202	0.204	0.0523	0.099	*	
<i>BLDG</i>	0.0406	0.035	**	-0.0376	0.182		-0.1000	0.101		0.3890	0.525	-0.0943	0.190		
<i>Constant</i>	10.9041	0.000	***	1.2411	0.000		11.9015	0.000	***	11.6540	0.000	***	11.0220	0.000	***
<i>F-statistic</i>	90.74			117.98			13.34			6.45			13.25		
<i>R2</i>	0.82			0.73			0.24			0.55			0.76		
Dependent Variable: ln(PRICE)															
Variable	2008 (n = 46)			2009 (n = 46)			2010 (n = 31)			2011 (n = 34)		2012 (n = 63)			
	Coeff	p-value		Coeff	p-value		Coeff	p-value		Coeff	p-value	Coeff	p-value		
<i>GOLFMBR</i>	0.0998	0.005	***	0.0951	0.000	***	0.0808	0.017	**	0.0700	0.025	**	0.1616	0.000	***
<i>GOLFVIEW</i>	0.0431	0.240		0.0432	0.203		0.1500	0.608		0.0315	0.322		0.0273	0.275	
<i>WATER</i>	-0.0159	0.633		-0.0341	0.319		0.0534	0.118		0.0993	0.041	**	0.0850	0.007	***
<i>SQFT</i>	0.0013	0.000	***	0.0007	0.000	***	0.0005	0.001	***	0.0008	0.000	***	0.0009	0.000	***
<i>GARAGE</i>	0.0038	0.959		0.2334	0.008	***	0.0553	0.389		0.0700	0.461		0.0386	0.557	
<i>FLOOR</i>	0.0500	0.005	***	0.0040	0.766		0.0349	0.049	**	0.0188	0.236		0.0017	0.883	
<i>BLDG</i>	-0.0324	0.442		0.0731	0.142		-0.0383	0.356		-0.0149	0.765		-0.0338	0.372	
<i>Constant</i>	10.3358	0.000	***	10.6157	0.000	***	11.1985	0.000	***	10.6160	0.000	***	10.6291	0.000	***
<i>F-statistic</i>	32.52			23.03			18.77			13.64			31.07		
<i>R2</i>	0.80			0.75			0.76			0.79			0.79		

appurtenant golf membership over the study period.¹³ Coefficient estimates for the variable *GOLFMBR* are positive and significant in eight of the ten years. The significant coefficients on the *GOLFMBR* variable range from 0.0469 in 2003 to 0.1616 in 2012, thus suggesting a price effect of 4.8% to 17.52%. Only *SQFT* is positive and significant in all years. The coefficients on the remaining control variables are generally consistent with the findings from the pooled sample with varying degrees of significance. The *R*-squares of the year-by-year regressions are in the 70-80% range with the exceptions of the 2005 and 2006 subsamples. These years mark the beginning of a period of significant volatility in house prices in Fort Myers, Florida, and many other metropolitan areas in the United States.

5. Summary and Issues for Further Research

This study examines the price effects of appurtenant golf memberships on residential real estate prices. The results indicate that dwellings with appurtenant golf memberships are associated with significantly higher sale prices. In a sample of 899 single-family dwellings, the average price effect is 7.96%. The by-year analysis suggests the effect was as high as 17.52% in 2012. The results here provide a valuable insight into the market pricing of golf membership when added to the results of Hansz and Hayunga (2012). Buyers in the two studies appear to value the right to a golf membership at the same magnitude (in percentage terms) as the golf membership itself. In the Hansz and Hayunga (2012) study, it is important to note that the shadow price of the membership value is much less than the value implied by the fee structure of the club. While one might expect appurtenant golf membership to command a greater premium over the option to transfer a membership, appurtenant membership creates an unavoidable obligation for the house buyer (higher periodic membership dues) that may at least partially offset the premium. The results here are meaningful to a variety of real estate stakeholders, including developers, appraisers, lenders, and tax authorities.

Developers who are selling “bundled” golf are essentially selling two products in a single transaction—real property and the appurtenant golf membership. Buyers are making a joint decision to purchase a dwelling and a golf membership, and the results presented here suggest that the value of each product varies over time. When sold together, there is likely less transparency on the specific value of each product.

This lack of specifically recognizing a separate value for the appurtenant golf membership can be problematic for property appraisers when selecting properties for comparable sales. When an appraiser uses dwellings with and

¹³ Year-by-year regressions for the detached dwellings sample are impractical due to the small sample sizes in most years.

without golf membership in a comparable sales analysis, the resulting appraisal value can be significantly under- or over-estimated.

The value of the golf membership is also of particular note to lenders. When a buyer uses a mortgage to purchase a property with an appurtenant golf membership, the borrower presumably would not want to separately recognize the value of the golf membership. The likely outcome of this approach allows for the buyer to finance the value of the golf membership. In contrast, lenders might prefer to specifically recognize the value of golf membership in calculating the amount that they are willing to lend on the real property. Not doing so results in the lender assuming the risk related to the value of the appurtenant golf membership.

The contrasting incentives to recognize the value of golf membership in the sales transaction similarly affect property taxing authorities. After a purchase, a buyer may be incentivized to recognize the value of the golf membership and perhaps appeal for a lower property tax appraisal and, subsequently, a lower property tax bill. In the case where buyers do not appeal for a lower property value, they are paying more in property taxes than they would had golf membership not been included with property ownership.

The impact of not recognizing appurtenant golf membership is more complex for income taxing authorities. Many buyers are able to deduct mortgage interest for personal income tax purposes. To the extent that a golf membership was financed, buyers are afforded an additional benefit as they are essentially able to reduce their income tax obligation due to the manner by which the golf membership was bundled and financed.

The results of this study suggest appurtenant golf membership has a significant price effect on property transactions. The subsequent implications for property appraisers, lenders, and taxing authorities are left for further research.

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