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EXTENSION

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Economic Dimensions of the Florida Golf Course Industry¹

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Executive Summary

Economic impacts of the Florida golf industry were estimated for year 2000 based upon a survey of golf courses, together with other published data and regional economic models. A survey questionnaire was mailed to all 1,334 golf courses in Florida. Responses were received from 223 firms, representing a 17 percent response rate. The respondent golf courses were classified as private (50 percent), semi-private (27 percent), public (14 percent), municipal (nine percent), resort (five percent), and military (one percent). Results for survey respondents were extrapolated to estimate values for the entire industry.

Total annual revenues amounted to \$4.44 billion, including membership and initiation fees (38 percent), playing fees (27 percent), food and beverage services (18 percent), retail sales (six percent), lodging (four percent), and miscellaneous other activities (nine percent). The revenues for year 2000 were 49 percent higher than a previous estimate of \$3.0 billion in 1991-92, representing an average annual growth rate of five percent in nominal dollar terms. Florida counties with golf course revenues in

excess of \$100 million include Palm Beach (\$664 million), Collier (\$476 million), Dade (\$288 million), Broward (\$261 million), Indian River (\$211 million), Lee (\$196 million), Hillsborough (\$193 million), Pinellas (\$145 million), Orange (\$131 million), Martin (\$115 million), and Duval (\$110 million). Results were also summarized for eight economic regions of Florida.

Golf industry employment totalled 73,000 persons, including clubhouse personnel (68 percent) and golf course maintenance personnel (32 percent). Of the total workforce, 71 percent were employed as full-time employees and 29 percent as part-time, temporary, or seasonal employees.

Annual expenses amounted to \$3.70 billion, including golf course maintenance (29 percent), food and beverage service (20 percent), golf operations (13 percent), administrative overhead (12 percent), clubhouse (10 percent), capital (nine percent), tennis, fitness and other recreation services (four percent), and miscellaneous other expenses (four percent).

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Charitable contributions made by golf courses amounted to \$12 million in cash and \$25 million in-kind. The book value of assets owned by golf courses was \$10.8 billion, including land (58 percent), buildings and installations (26 percent), vehicles and equipment (10 percent) and golf course irrigation systems (six percent).

Area owned by Florida golf courses was 205,000 acres, with 147,000 acres in maintained turf and 140,000 acres irrigated. Bermudagrass was the predominant type of turfgrass used on golf courses, representing 93 percent of maintained turf area. Water used for irrigation amounted to 173 billion gallons, of which recycled water was the dominant source (49 percent), with lesser amounts from surface waters (29 percent) and wells (21 percent). Compared to five years ago, water use per acre was increased by nine percent of firms, decreased by 42 percent, and remained the same for 42 percent. Fertilizer use per acre was increased by 29 percent of firms, decreased by 18 percent, and remained the same for 47 percent.

Rounds of golf played in Florida totaled 58.6 million in 2000, with 33 percent by out-of-state visitors, 14 percent by non-local Florida residents, and 54 percent by local residents. There were 26,298 tournament events hosted by Florida golf courses, with an attendance of 2.11 million spectators. Travel expenses in Florida by golf playing visitors were estimated at \$22.9 billion, of which \$5.4 billion may be attributed directly to the golf experience, based upon national average golf travel data. These expenditures had an impact on the Florida economy of 226,000 jobs and \$9.2 billion in personal and business net income (value added).

Residential developments with golf courses totaled 756,000 residential units, with an average value of \$366,000 and a total value of \$158 billion. Overall, the influence of golf courses on property values was very positive. In 13 of the 18 counties, property values across all land use types were significantly greater if located within the same square mile section as golf courses. For example, differentials were as high as \$46,537 for residential properties near golf courses in Martin County. Total county property taxes attributed to golf courses in the

selected counties, based upon average county millage rates in 1999, were estimated at \$214 million.

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Introduction

Golf is a highly popular recreational activity in the United States. In 2000, there were over 15,000 golf facilities in the country (National Golf Foundation, 2001). Florida has over 1,300 public and private golf courses, more than any other state. Numerous acclaimed golf courses in Florida host prestigious tournaments, including the PGA tour, which is headquartered in the state. Golf courses in the Fort Myers, Naples, and Fort Pierce/Saint Lucie areas of Florida are among the top five specific golf destinations in the United States. Florida's warm climate allows golf play throughout the year, and golf is a primary activity for many of the millions of tourists who visit the state each year.

According to a 1991 economic study, there were about 1,100 golf facilities in Florida (Hodges et al., 1994). Sixty percent were privately owned, 17 percent semi-private, 12 percent public, and the remainder either resort, municipal, or military. Nearly 80

percent of the facilities were 18-hole courses on which nearly 40 million rounds of golf were played. This translates into 45,000 rounds of golf played per course in 1991. In terms of economic activity, Florida's golf industry generated \$3.01 billion in sales and \$2.92 billion in economic value added; employed 13,400 full-time equivalent persons in golf course maintenance; spent \$469 million for labor, equipment, materials, and services; had total assets of \$1.07 billion; and managed 131,000 acres of land.

The present study updates this information for year 2000 to reflect the growth in the industry and to assess the impact of golf tourism to Florida. Because out-of-state visitors bring new money into the Florida economy, their impact on the golf industry and tourism sector is associated with an economic multiplier effect. This involves three levels of economic activity: *direct* expenditures by tourists, *indirect* expenditures by various companies doing business with golf facilities, and *induced* impacts resulting from personal consumption expenditures by industry employees and allied suppliers.

Water use for landscape irrigation is a critical and growing issue in Florida. Many golf course superintendents are aware of the increasing political pressures to reduce consumption or switch to alternative water sources such as reclaimed water. At the same time, heightened environmental awareness by the public is focusing attention on heavy users of water, fertilizers, and pesticides. Golf courses, which are generally located close to or within urban centers, are particularly prone to public scrutiny of resource use practices. With more golf courses than any other state, and with a rapidly expanding urban population, the Florida golf course industry is often in the spotlight with regard to water consumption practices. This is particularly true during periods of drought, which Florida has experienced in recent years (Haydu et al., 1997).

Increasingly, golf courses are being constructed as part of larger residential community development projects. Golf course communities are typically viewed as highly desirable places to live (e.g., enhanced aesthetic qualities, recreational sport activities, and amenities derived from clubhouse and dining facilities). Because of the premiums people

typically pay to enjoy these amenities, it is anticipated that golf facilities may significantly influence overall real estate values in the community. An objective of this research was to document these impacts.

Methods

Information to be collected from Florida golf courses and issues of concern to the golf industry were determined based upon comments received in two focus group sessions with golf course owners and managers at Apopka and Naples, Florida in July, 2001. These sessions included a total of 12 industry professionals representing industry associations, individual golf course owners, managers, and superintendents. Based upon their recommendations it was decided to use a mail survey approach rather than a telephone or internet survey, since typically several people in each organization would be required to provide different types of information.

Information collected in this survey for year 2000 included revenues, expenditures, employment, and value of assets managed, type of golf course, number of golf rounds played, geographic origin of golfers, number and value of associated residential developments, golf course area managed, types of turfgrass maintained, and volume and source of irrigation water consumed.

Survey questionnaires were mailed to a list of golf courses that was compiled from three different sources: members of the *Florida Golf Course Superintendents Association*, subscribers to *Florida Golf News* magazine, and Florida firms listed in the *Reference USA* database under Standard Industrial Code 7992 (public golf courses) and 7997 (private membership sports clubs). These lists were combined, sorted, and checked to eliminate duplicates, resulting in a list of 1,334 firms. Surveys were mailed to the listed firms two times (October and November 2001), with a follow-up reminder postcard mailed one week later. Completed survey questionnaires were received from 223 firms, representing a 17 percent response rate. Results for survey respondents were extrapolated to estimate values for the entire population. The overall expansion factor was 5.8.

Data on property values in proximity to golf courses were obtained from a database of county property tax records for 1999 from the Florida Department of Revenue. The data were analyzed for the 18 top Florida counties that collectively accounted for 71 percent of all golf courses in the state (67 counties total). These data were then segmented into two groups: areas that contained golf course facilities and similar areas that did not contain golf course facilities. The spatial resolution of analysis was a one-square mile area of the Public Land Survey System (divided into sections, townships, and ranges). Properties in each group were then compared to assess the likelihood of significant differences in property values. Statistical t-tests were conducted on the difference in values based on the presence or absence of a golf course to determine the statistical significance.

The total economic impacts of golf-playing visitors were evaluated using the *IMPLAN* input-output analysis and social accounting software package and data for Florida counties (MIG Inc., 2001). A regional economic model was developed for the state of Florida, and economic multipliers from the model were used to estimate the secondary economic effects of inter-industry purchases, investment, and consumer expenditures by industry employees. Economic impact measures included employment, value added, personal income, and indirect business taxes. Impact measures were expressed on the basis of per-acre golf course area and per-million gallons water consumed to enable comparisons of economic efficiency with other economic sectors and to other major golf states.

Results were also reported for eight areas of the state that represent functional economic regions that were defined on the basis of worker commuting patterns by the U.S. Department of Commerce, Bureau of Economic Analysis (Table 1).

Results

Golf Course Characteristics

Florida golf courses fall into eight main categories, but are dominated by three major types: private, semi-private, and public. From the survey sample, 50 percent of the golf courses were privately

owned, 27 percent were semi-private, and 14 percent were public facilities. The remainder were comprised of municipal, residential development, resort, and miscellaneous other types. These percentages differ moderately from previous estimates for 1991 (60 percent of the golf courses were private, 17 percent were semi-private, and 12 percent were public facilities). The decline in private golf courses is consistent with the findings of the National Golf Foundation (2000), which showed that 87 percent of all new golf courses are public access facilities (a trend that is expected to continue in the coming years).

For the surveyed golf courses, eight percent had nine holes, 70 percent had 18 holes, eight percent had 27 holes, 11 percent had 36 holes, and three percent had more than 36 holes. The overall average number of golf holes per course in 2000 was 21, which represented an estimated 27,683 holes for all courses statewide.

Eighty-three percent of the golf courses in Florida have been built since 1960 (25 percent in the last 10 years). The increase in new golf facilities parallels the state's rapidly growing population and the popularity of golf as a recreational sport. This growth has been driven by demand. Since 1986, the number of golfers has increased 34 percent, from 19.9 million to 26.7 million (NGF, 2001).

Golf Course Area, Turf Varieties, and Water Use

Total acreage devoted to Florida golf facilities in year 2000 was 207,582 acres, with 147,927 acres maintained in turfgrass playing areas and 140,274 acres irrigated. In 1991, maintained turfgrass area was 131,300 acres. The average area per course in year 2000 was 114 acres maintained turfgrass and 108 acres irrigated.

Over half a dozen varieties of turfgrass are used on Florida golf courses. Bermudagrass (92 percent) is the most prevalent turfgrass used because it is drought resistance and tolerant to heavy traffic. Far down the list in second place was bahiagrass (3.5 percent), which is typically limited to the golf course rough. Saint Augustinegrass (2.7 percent) and others (1.0 percent) such as Zaysia and Centipede varieties

are generally limited to the special tee and greens areas.

Total water use by Florida golf courses in 2000 was estimated at 172 billion gallons. Average water use per golf course was estimated at 133 million gallons per year. Nearly 85 billion gallons of water came from recycled water, 49 billion from surface water, 35 billion from wells, and 1.5 billion from municipal sources. Average water consumption was 1.23 million gallons per acre, or 3.75 acre feet applied. Recycled water (49 percent) was the primary source, followed by surface water from canals and lakes (29 percent), and groundwater from wells (21 percent) from wells.

From a water policy and efficiency standpoint, perhaps even more important than total consumption per acre are changes in water use patterns over time. To address this issue, golf course superintendents were asked whether irrigation water use per acre over the past five years had increased, decreased, or remained the same. If it increased or decreased, respondents were asked to specify how much it had changed. About 42 percent of respondents indicated that their water consumption had decreased, and the same share (42 percent) said that per acre use remained the same. For those who indicated a reduction in water use, the amount of decrease averaged 37 percent. Nine percent of respondents indicated per acre water use actually increased over the past five years and that it increased by roughly eight percent.

Golf Play

Golf play on Florida golf courses in 2000 was estimated at nearly 59 million rounds. As a percentage of total rounds played, nearly half (49 percent) occurred during the January through April period. Fall was the second most popular period with 28 percent, or 16 million rounds being played, followed by the May through September period with just under 25 percent, or 14 million rounds.

Florida has a large influx of winter visitors from other states and international locations, particularly Europe and South America. Local county residents (54 percent) represented the group most frequently playing golf, followed by U.S. residents from outside

Florida (27 percent), non-local Florida residents (14 percent), and international visitors (five percent).

Florida Golf Visitors and Expenditure Impacts

One of the objectives of this research was to estimate the total economic impact of golf visitors to the state of Florida. The typical U.S. golf traveler makes 6.6 golf-related trips per year, spending approximately \$1,114 per trip on lodging, local transportation, food, entertainment, golf lessons, gifts, and miscellaneous other expenses (NGF, 1999). In 2000, Florida was the largest golf travel market in the United States, with 3.12 million golf-playing visitors, at approximately \$23 billion (Table 2).

Visitors to Florida impact the economy at three levels: *directly* on expenditures such as food, recreation, lodging, and entertainment; *indirectly* by the receiving industries of those dollars as they in turn spend money to purchase goods and services to operate their businesses; and *induced* impacts from personal consumption expenditures by the employees of these companies and their allied suppliers. Direct impacts represented 41 percent of the total output impacts, indirect effects constituted 11 percent, and induced effects made up 47 percent. Estimated impacts of Florida golf tourism are summarized in Table 3.

The output impact from golf tourism spending totaled \$12.86 billion. Output represents total revenues generated from the three sectors of economic activity: services, which accounted for \$5.06 billion, or 39 percent of the total; trade with \$3.05 billion, or 24 percent; and finance, insurance, and real estate, which comprised \$1.36 billion, or 10 percent.

Value-added is a measure of net industry income after cost of goods sold have been subtracted from total sales. Of the \$8.46 billion in total value added impact, the services sector accounted for \$3.27 billion (39 percent); trade for \$2.14 billion (25 percent); and finance, insurance, and real estate comprised \$984 million (12 percent). Value added included impacts on labor income (\$5.58 billion) and on indirect business taxes paid to local, state, and federal governments (\$792 million).

Finally, the total employment impact represents the jobs that are generated from all economic activities due to golf visitor spending, which totaled 215,873 jobs, including 96,000 in the service sector; 72,000 in the trades sector; and 17,000 in the government sector.

Golf Course Revenues

Total revenues for Florida golf courses in 2000 were estimated at \$4.44 billion. Golf courses ranged from less than \$500,000 to greater than \$25 million in annual revenues. Golf courses in the \$1 million to \$3 million size range represented the largest share of respondents (44 percent). Golf courses with revenues in the \$2 million to \$3 million range represented the largest share of total industry revenues (16 percent). About 86 percent of all respondent firms had annual revenues under \$5 million.

The primary source of revenue was membership and initiation fees (38 percent) at \$1.7 billion, followed by golf course playing fees (27 percent) at \$1.2 billion; restaurant, food, and beverage services (18 percent) at \$794 billion; miscellaneous other revenues (eight percent) at \$366 million; retail sales from pro shops and gift shops (six percent) at \$267 million; and lodging (four percent) at \$164 million (Table 4).

Golf Course Expenses

Expenses to operate Florida golf course facilities averaged \$2.86 million for the sample of responding golf courses (Table 5). Expanding this to represent the entire population of Florida golf courses, industry-wide expenses totaled \$3.7 billion in 2000. The most significant expense was golf course maintenance, representing 29 percent of the total. Average maintenance expenses were \$677,000 per firm, or \$7,139 per acre of turf area. The second largest category was expenses associated with food and beverage services, which averaged \$464,000 per golf course (20 percent of total expenses). Golf operation expenses averaged \$301,000 per facility (13 percent), followed by administrative overhead at \$283,000 (12 percent); clubhouse operations at \$244,000 (10 percent); capital expenditures such as purchases, interest, and depreciation at \$222,000 (nine percent); and recreational services such as

tennis and fitness training at \$82,000 (four percent). Florida golf courses purchased a total of \$511 million (14 percent of total expenses) in goods and services from vendors outside the state.

Golf courses are frequently asked for charitable contributions for local schools, civic organizations, and other non-profit organizations. In 2000, total contributions averaged \$28,000 per golf facility and \$9,000 in cash contributions.

Golf Course Employment

Employment is an important indicator of an industry's contribution to a local, regional, or national economy. Wages paid to employees stimulate local economies. In 2000, Florida's golf course industry employed an estimated 72,038 people, including 51,375 full-time workers and 20,663 part-time workers (Table 6). One-third (33 percent) of these employees worked on golf course maintenance activities and two-thirds (67 percent) worked for the golf course clubhouse and/or related food service or recreational concerns. The average Florida golf course employed 16 full-time and three part-time people for maintenance work, or roughly one person for every five acres of maintained grass. Clubhouses accounted for a large share of employees because its services may include hotel operations, restaurants, and recreational services (e.g., golf instruction). The average Florida golf clubhouse employed 27 full-time people and 19 part-time or seasonal labor, or roughly one employee for every \$150,000 of financial assets in land, vehicles and equipment, irrigation systems, and golf-owned buildings and installations.

Golf Course Assets

In 2000, Florida's golf courses owned assets with an estimated value of \$10.8 billion (Table 7). Land comprised the largest share of total industry assets at \$6.2 billion (58 percent). Golf-related buildings and equipment accounted for the second largest share at \$2.8 billion (26 percent), followed by vehicles and equipment at \$1.1 billion (10 percent) and irrigation systems at \$684 million (six percent). For instance, the average golf facility owned \$8.3 million of total assets (\$29,995 on a per-acre basis), comprised of land (\$5.2 million), buildings and

installations (\$2.3 million), vehicles and equipment (\$848,000), and irrigation systems (\$570,000).

Regional and County Economic Characteristics

Economic characteristics and impact estimates for the Florida golf course industry were developed for each county and eight regions of the state to support local policy analysis (Table 8). The most prominent region was Miami-Fort Lauderdale with 363 golf courses (27 percent of the total golf courses), which generated \$1.6 billion (41 percent of total industry revenues), employed 28,759 workers (39 percent of the industry's workforce), and accounted for \$3 billion (nearly 44 percent of capital assets).

The regions of Orlando and Fort Myers-Cape Coral (Naples) vied closely for second and third place, depending on the indicator being examined. Orlando had nearly twice as many golf courses as Fort Meyers (341 versus 173) but generated 20 percent less revenue (\$610 million versus \$738 million). Orlando also employed more people (14,561 versus 10,144) but owned fewer assets (\$1.0 billion versus \$1.5 billion). Golfers in Orlando played three times as many rounds of golf (15.1 million versus 5.8 million) and had about twice the acreage (32,526 acres versus 18,755) of maintained turf as Fort Myers-Cape Coral (Naples). Although Orlando had more golf courses, southwest Florida has a higher income level.

Tampa-Saint Petersburg-Clearwater was the fourth most prominent region with 151 courses; \$400 million in revenues; 8,400 employees; \$558 million in assets; 8.2 million rounds of golf played; and nearly 20,000 acres of maintained turf. Sarasota-Bradenton followed closely behind with 116 courses; \$201 million in revenues; 4,652 employees; and over 13,000 acres of maintained turf. Jacksonville was ranked next with seven percent of the courses and a comparable share of the other economic indices. Tallahassee comprised three percent of courses, two percent of industry revenues, three percent of industry employment (1,838 jobs), and \$41 million in assets. While Pensacola had more golf courses, golf rounds, and maintained turf area

than Tallahassee, it had less revenues, jobs, and capital assets.

Palm Beach was the top-ranked county in Florida with \$633 million in revenues; 12,332 employees; 18,120 acres of turf area; and golf play of 6.5 million rounds (Table 8). Collier county had \$483 million in revenues; 5,235 employees; 9,550 acres of turf; and golf play of 2.7 million rounds. Miami-Dade County had \$288 million in revenues; 2,364 employees; 8,400 acres of turf; and golf play of 2.8 million rounds. Broward County accounted for \$261 million in revenues; 5,075 employees; 11,847 acres of turf; and 4.2 million rounds of golf played. Lee County had \$196 million in revenues; 4,814 employees; 9,118 acres of turf; and golf play of 3.2 million rounds. A second tier of the top 10 counties were Orange, Hillsborough, Pinellas, Martin, and Duval, with revenues ranging from \$193 million for Hillsborough County to \$110 million for Duval County.

Impact of Golf Courses on Real Estate Values

The influence of golf courses on local real estate values were examined in the 18 Florida counties with the largest number of golf courses and representing 71 percent of the golf courses in Florida. The analysis compared assessed property values from county property appraisers compiled by the Florida Department of Revenue for 1999. For each county, property values were compared for properties near golf courses with similar properties not near golf courses. Properties "near" golf courses were defined as located within the same one-square-mile section of the Public Land Survey System and properties "not near" were located outside these sections.

Differences in total property value for properties near or not near golf courses are summarized in Table 9. Values denoted by an asterisk (*) indicate that the difference was statistically significant at the 95 percent level of confidence according to a t-test. That is, a difference this large would occur by chance fewer than five times in 100 ($p < 0.05$). In general, the number of positive values greatly exceeded negative values. In 12 of the 18 counties, there was a positive difference in total values that was statistically significant across all land use types. In contrast, three counties had a negative difference and three counties

had no significant difference. To this extent, the influence of golf courses on property values appears to be favorable.

Perhaps a better measure of property values is the difference in value of the land alone, exclusive of the value of improvements. For residential properties, the positive difference in land values was greatest for Martin County, averaging \$46,537 per parcel. There were also large positive differences for Duval, Okaloosa, Orange, and Palm Beach Counties. Counties with a significant negative residential land value associated with golf courses included Broward, Miami-Dade, Manatee, Volusia, and Pinellas Counties. Commercial property land values were generally positively related to golf courses, with 13 of the 18 counties having statistically significant positive values. Collier County had the highest differential value for commercial land uses associated with golf courses, at \$184,244.

Table 10 illustrates property value by land use type. Commercial, agricultural, industrial, institutional, and government land use types all showed an increase in total value associated with golf courses, averaging \$10,942 per parcel, with \$20,000 for residential properties, \$70,000 for commercial properties, \$114,000 for industrial, and \$121,000 for agricultural land. Differences in values for land alone were positive but smaller, averaging \$464 across all property types and \$2,871 for residential properties, but again were negative for utility properties. Assessed values showed a positive difference, averaging \$12,461 per parcel associated with golf courses, and tax values (net of exemptions) averaged \$17,981 greater. Sale prices had an average difference of about \$9,000 per parcel.

A more geographically focused analysis was conducted to compare property values near golf courses with similar properties in adjacent land sections for eight counties (Collier, Lee, Sarasota, Pinellas, Hillsborough, Lake, Orange, and Duval). This was done to account for possible bias by eliminating from the analysis properties in rural areas that may have inherently lower values. There were mixed results across all counties, land use types, and value measures. Counties with overall positive differences in value associated with golf courses

included Lee, Duval, Sarasota, Pinellas, and Lake. Counties with overall negative differences in value associated with golf courses included Collier, Hillsborough, and Orange Counties. The largest positive difference in total value was in Lee County (\$31,426), while the largest negative difference was in Orange County (-\$49,176). These results confirm that the effect of golf courses on land values is rather localized, extending perhaps only a few miles.

The differences in property values associated with golf courses were used to estimate the share of local property tax revenues that may be attributable to golf courses, as summarized in Table 11. First, the average difference in assessed value per parcel associated with golf courses was multiplied by the number of parcels near golf courses (within the same one-square-mile section) to determine the difference in total assessed value. This calculation was applied only for those counties in which the differences were determined to be statistically significant. The average *ad valorem* millage rate for each county was multiplied by the difference in assessed value to estimate the difference in total property taxes, which was then expressed as a share of the total county property tax collections for 1999. *Ad valorem* millage rates ranged from 11.9 to 20.7 (dollars per \$1000 assessed value). This analysis was conducted separately for all 18 of the counties evaluated and for the eight selected counties in which the analysis of properties "not-near" golf courses was restricted to adjacent land sections.

For all counties and properties, the greatest difference in assessed value (\$5.4 billion) occurred in Palm Beach County, followed by Collier (\$3.7 billion), Lee (\$2.6 billion), and Martin Counties (\$2.2 billion). Sarasota and Okaloosa Counties also had a difference in total assessed value exceeding \$1 billion, while Broward County had a decrease in assessed value of \$3.8 billion associated with golf courses. Among all 18 counties, there was a net increase in property taxes of \$214 million. As a share of total county tax collections, this represented eight percent in Palm Beach County, 15 percent in Collier, 10 percent in Lee, 22 percent in Martin, and 15 percent in Okaloosa.

For the restricted analysis of properties in adjacent land sections, differences in total property tax collections were dramatically smaller, due to lower differences in average value per parcel. The difference in total property taxes was \$26 million in Lee County, followed by \$17 million in Pinellas and \$11 million in Sarasota, which represented three to seven percent of total county property tax collections. In Collier and Orange Counties there was a decrease in property taxes of \$18 million and \$22 million, respectively.

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Table 1. Economic regions of the state of Florida.

Region #	Region Name	Counties Included
31	Miami-Fort Lauderdale	Indian River, Saint Lucie, Okeechobee, Glades, Hendry, Palm Beach, Broward, Dade, Monroe, Martin
32	Fort Myers-Cape Coral (Naples)	Lee, Collier
34	Tampa-Saint Petersburg-Clearwater	Hernando, Pasco, Pinellas, Hillsborough
33	Sarasota-Bradenton	Sarasota, Manatee, Charlotte, Desoto
30	Orlando	Flagler, Marion, Citrus, Sumter, Lake, Polk, Hardee, Highlands, Osceola, Orange, Seminole, Brevard, Volusia
29	Jacksonville	Hamilton, Suwannee, Lafayette, Dixie, Levy, Gilchrist, Columbia, Alachua, Baker, Union, Bradford, Nassau, Duval, Clay, Putnam, Saint Johns
35	Tallahassee	Bay, Jackson, Calhoun, Gulf, Liberty, Franklin, Gadsden, Leon, Wakulla, Jefferson, Madison, Taylor
81	Pensacola	Escambia, Santa Rosa, Okaloosa, Walton, Holmes,* Washington*

* Counties from adjacent Dothan, Alabama economic region.
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table 2. Travel expenditures by Florida golf visitors, 2000.

Type of Expenditure	Average Per Trip ¹	Average Per Day ²	Estimated Total Expenses ³	Expenses Attributable to Golf ⁴
	<i>(dollars)</i>	<i>(dollars)</i>	<i>(\$ millions)</i>	<i>(\$ millions)</i>
Lodging	403	102	8,303	1,941
Transportation	87	22	1,793	419
Food	203	51	4,183	978
Entertainment	113	29	2,328	544
Golf Lessons	106	27	2,184	510
Gifts	87	22	1,793	419
Other	115	29	2,369	554
Total Expenses ⁵	1,114	282	22,953	5,364

Source:
¹ National Golf Foundation (1999).
² Average per trip divided by average number of travel days per trip.
³ Average expenditure per day multiplied by estimated number of traveler-days.
⁴ Share of trip expenses attributable to golf (23%).
⁵ Excludes transportation expenses to destination (\$227 per trip).

Table 3. Total economic impacts of golf visitor expenditures in Florida, by major industry sector, 2000.

Industry Sector	Output Impact	Value Added Impact	Employment Impact
	<i>(\$ millions)</i>	<i>(\$ millions)</i>	<i>(Jobs)</i>
Services	5,060	3,268	95,641
Trade	3,049	2,144	71,574
Finance, Insurance, Real Estate	1,355	984	7,092
Transportation, Communication, Public Utilities	1,031	649	11,229
Government	971	886	17,109
Construction	779	282	7,509
Manufacturing	534	192	3,321
Agriculture	63	36	1,385
Other	11	3	55
Mining	6	3	55
Total	12,860	8,455	215,873

Table 4. Revenues to Florida golf courses, by business activity, 2000.

Business Activity	Respondents		Mean Per Course +/- Standard Error	Expanded Total
	<i>(#)</i>	<i>(%)</i>	<i>(\$1,000)</i>	<i>(\$ millions)</i>
Golf course membership and initiation fees	173	78	1,135 +/- 137	1,665
Golf course playing fees (greens, carts, dues)	198	89	808 +/- 61	1,186
Restaurant, food, and beverage services	176	79	542 +/- 66	794
Other	79	35	249 +/- 149	366
Retail sales (pro shops, gift shops)	161	72	182 +/- 21	267
Lodging	12	5	112 +/- 304	164
Total			3,429 +/- 272	4,437

Table 5. Expenses for Florida golf course operations and related business activities, 2000.

Expense Category	Respondents		Mean Per Course +/- Standard Error	Expanded Total
	(#)	(%)		
Golf course maintenance	183	82	667 +/- 47	1,056
Food and beverage services	155	70	464 +/- 63	725
Golf operations	169	76	301 +/- 28	470
Administrative overhead	146	66	283 +/- 36	441
Clubhouse	152	68	244 +/- 37	381
Capital (purchases, interest, depreciation)	118	53	222 +/- 64	347
Other	47	21	94 +/- 57	147
Tennis/fitness, other recreation services	82	37	82 +/- 27	129
Total costs	187	84	2,856 +/- 230	3,696

Table 6. Employment by Florida golf courses, 2000.

Employee Type	Respondents		Mean Per Course +/- Standard Error	Expanded Total
	(#)	(%)		
Course maintenance, full-time	221	99	16 +/- 1	21,205
Course maintenance, part-time/seasonal	156	70	3 +/- 0	2,396
Clubhouse/other, full-time	190	85	27 +/- 3	30,170
Clubhouse/other, part-time/seasonal	167	75	19 +/- 2	18,268
Total Employment	222	100	56 +/- 4	72,038

Table 7. Value of total assets owned by Florida golf course facilities as of December 2000.

Asset	Respondents		Mean Per Course +/- Standard Error	Expanded Total
	(#)	(%)		
Land	134	60	5,180 +/- 872	6,226
Golf-owned buildings and installations	135	61	2,323 +/- 231	2,813
Vehicles and equipment	142	64	848 +/- 72	1,080
Irrigation systems	134	60	570 +/- 59	685
Total	147	66	8,350 +/- 926	10,805

Table 8. Economic characteristics of Florida golf courses, by region and county, 2000.

Region or County*	Respon- dents	Golf Courses	Revenues	Employment	Assets	Rounds Played	Turf Area Maintained
	(#)	(#)	(\$ millions)	(Jobs)	(\$ millions)	(1000)	(Acres)
Miami-Ft Lauderdale	53	363	1,650	28,759	2,992	16,547	48,450
Ft Myers-Cape Coral (Naples)	52	173	737	10,144	1,471	5,851	18,775
Orlando	47	341	611	14,561	1,011	15,121	32,526
Tampa-Clearwater- St. Petersburg	21	151	405	8,420	559	8,262	19,982
Sarasota, Bradenton	20	116	202	4,652	395	5,635	13,050
Jacksonville	13	94	272	4,302	361	3,422	9,675
Tallahassee	6	37	59	1,838	41	937	3,176
Pensacola	4	59	55	870	19	1,659	4,019
Palm Beach	23	142	664	12,342	1,019	6,514	18,120
Collier	31	86	476	5,235	985	2,759	9,550
Dade	4	48	288	2,364	1,412	2,784	8,400
Broward	10	66	261	5,075	212	4,244	11,847
Indian River	6	27	211	3,335	387	749	3,672
Lee	21	87	196	4,814	360	3,165	9,118
Hillsborough	6	52	193	3,822	342	2,357	7,800
Pinellas	7	47	145	1,826	195	2,659	4,794
Orange	5	57	131	4,651	226	2,565	7,627
Martin	6	46	115	2,354	220	1,560	3,703
Duval	7	32	110	1,536	193	1,391	3,634
Sarasota	10	55	99	2,624	208	3,138	7,524
Volusia	12	37	93	1,989	148	1,957	4,320
Pasco	5	34	74	2,183	29	1,863	4,420
Brevard	5	31	53	1,011	122	782	1,513
Lake	4	38	58	599	127	1,321	3,563
Charlotte	4	27	54	1,040	72	1,181	2,903
Manatee	5	31	53	1,011	122	1,401	2,492
Seminole	3	17	50	1,417	135	782	1,513
Polk	5	64	45	858	108	2,035	2,445
St. Johns	3	13	40	706	20	442	1,335
St. Lucie	3	19	34	855	17	589	1,552
Citrus	6	18	24	447	16	700	1,305
Alachua	2	9	16	374	14	135	788
Leon	3	8	13	547	2	125	720
Hernando	3	18	10	822	29	1,242	3,090
Marion	4	29	9	631	N/A	645	2,755

* Regions defined by U.S. Department of Commerce, Bureau of Economic Analysis. [Table 1: included counties]

Table 9. Average difference in total values for properties with respect to Florida golf courses, by land use and county, 1999.

County	All Uses	Resident	Commercial	Industrial	Agriculture	Institution	Govt.	Utility
	<i>(dollars per parcel)</i>							
Broward	-34,887*	-22,859*	347,000*	535,956*	213,582	208,406	-116,657	-91,289*
Collier	47,933*	14,179*	323,081*	781,000	1,067,982*	0	0	5,104
Dade	-3,505	6,884*	-82,972	-173,922*	-102,558*	-394,392*	-202,385	423,635
Duval	49,957*	71,280*	406,477	-166,525*	922,976	46,533	-727,335*	-125,124*
Escambia	-10,677	-2,721*	60,884*	144,433	31,896*	-59,576*	67,056	9739*
Hillsborough	9,002*	32,113*	220,082*	-87,367	18,447	-64,422	-264,544*	-228,099*
Lake	4,703*	9,281*	180,852*	211,204	-18,234*	194,324	-102,124*	-10,196
Lee	48,406*	52,021*	199,500*	11,618	296,024*	687,000*	92,300	3,237
Manatee	-6,624*	541	88,582*	144,120	418,055*	379,669*	50,060	-177,772
Martin	71,906*	72,006*	-144,126*	173,740	-103,515*	130,996	37,471	-98,842
Okaloosa	60,171*	60,961*	139,581*	283,630	8,010	377,384*	455,000	129,775
Orange	702*	46,803*	13,604	2,260,000*	236,798	672,000	-335,379	-29,352*
Palm Beach	37,143*	39,807*	609,979*	593,623*	36,236	739,000*	202,000	-7,089
Pasco	1,051	7,856*	-31,662*	-98,401*	39,275	-41,495	-10,529	-126,100
Pinellas	13,886*	12,774*	173,383*	557,106*	-38,504	303,853	274,000	-4,532*
Polk	5,387*	-223	96,933*	170,697	65,358	76,714	57,143	-151,222*
Sarasota	32,509*	38,896*	-126,957*	-41,567	79,062	42,566	-819,087*	7,551
Volusia	-4,823*	1,363*	14,276	-10,553	70,690*	373,634	-104,182*	18,695

* Denotes statistically significant differences ($p < .05$). Analysis of one-square-mile sections (public land survey system: section, township, range).
Source: Florida Department of Revenue (1999); University of Florida (2000).

Table 10. Weighted average property values with respect to Florida golf courses, 1999.

Measure	Land Use	Near Golf Course	Not-Near Golf Course	Difference, Near Minus Not-Near
		<i>(dollars)</i>		
Total Value	All land uses	124,101	113,159	10,942
	Residential	104,559	84,965	19,594
	Commercial	526,518	456,838	69,681
	Industrial	686,775	572,396	114,379
	Agricultural	330,423	209,440	120,984
	Institutional	587,227	504,902	82,325
	Government	522,668	550,617	-27,949
	Utility	36,816	71,075	-34,259
Land Value	All land uses	38,398	37,935	464
	Residential	28,709	25,837	2,871
	Commercial	250,992	200,333	50,660
	Industrial	251,119	208,984	42,135
	Agricultural	56,992	34,626	22,366
	Institutional	177,916	137,378	40,538
	Government	278,535	234,695	43,839
	Utility	20,249	30,757	-10,507
Assessed Value	All land uses	120,133	107,672	12,461
Tax Value		101,180	83,200	17,981
Sale Price (most recent)		144,986	135,590	9,396
Source: Florida Department of Revenue (1999); University of Florida (2000).				

Table 11. Difference in assessed value associated with golf courses and total property tax implications in selected Florida counties, 1999.

County	Difference, Average Assessed Value	Parcels Near Golf Courses	Difference, Assessed Value	Ad Valorem Tax Millage Rate*	Difference, Property Tax	Total County Tax Collections	Total County Tax Collections
	(dollars)	(number)	(\$ millions)	(\$/1000)	(\$ millions)	(\$ millions)	(%)
Analysis includes all parcels outside sections with golf courses							
Palm Beach	38,442*	140,000	5,382	16.1742	87.0	1,091	8.0%
Collier	52,042*	70,753	3,682	11.8633	43.7	290	15.1%
Lee	48,778*	52,595	2,566	15.5825	40.0	383	10.4%
Martin	73,621*	28,672	2,111	15.7687	33.3	154	21.6%
Duval	46,276*	17,134	793	20.6781	16.4	560	2.9%
Sarasota	33,187*	34,935	1,159	14.1164	16.4	309	5.3%
Pinellas	14,302*	67,517	966	16.8242	16.2	612	2.7%
Okaloosa	61,588*	17,095	1,053	12.4824	13.1	87	15.1%
Hillsborough	12,730*	33,063	421	18.0022	7.6	629	1.2%
Polk	7,649*	36,168	277	17.4710	4.8	247	2.0%
Pasco	4,786*	26,159	125	18.7010	2.3	170	1.4%
Lake	5,897*	21,346	126	14.4595	1.8	97	1.9%
Volusia	-3,111*	56,478	-176	16.8160	-3.0	253	-1.2%
Broward	-32,699*	116,000	-3,791	17.3663	-65.9	1,229	-5.4%
Orange	2,718	32,426	N/A	14.3204	0.0	649	0.0%
Escambia	-8,556	67,508	N/A	17.8170	0.0	130	0.0%
Dade	-1,004	36,895	N/A	17.0100	0.0	1,561	0.0%
Manatee	-1,098	31,447	N/A	17.1601	0.0	201	0.0%
Total		886,191	14,691		214	8,652	
Analysis includes only parcels in sections adjacent to sections with golf courses							
Lee	31,913*	52,595	1,679	15.583	26.2	383	6.8%
Pinellas	14,643*	67,517	989	16.824	16.6	612	2.7%
Sarasota	21,585*	34,935	754	14.116	10.6	309	3.4%
Collier	-21,813*	70,753	-1,543	11.863	-18.3	290	-6.3%
Orange	-47,392*	32,426	-1,537	14.320	-22.0	649	-3.4%
Duval	16,648	17,134	N/A	20.678	0.0	560	0.0%
Hillsborough	-6,165	33,063	N/A	18.002	0.0	629	0.0%
Lake	3,784	21,346	N/A	14.460	0.0	97	0.0%
Total		329,769	341		13.1	3,528	

* Denotes statistically significant differences (p<.05). Analysis compares values within same one-square-mile section (public land survey system: section, township, range).

Source: Florida Department of Revenue (1999).