



IOWA GOLF'S ECONOMIC IMPACT





Acknowledgements

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Overview

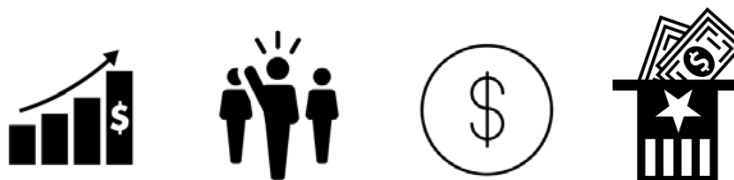
The game of golf drives significant economic activity across the State of Iowa. This impact includes not only direct operational expenditures and capital investments made by Iowa's 395 golf facilities, but also golf-related manufacturing and retail spending, golf tourism, and new golf-related residential construction.

For example, Cedar Falls-based Standard Golf is one of the country's leading golf course accessories manufacturers alongside Minnesota-based Par Aide. The PGA TOUR Champions event, the Principal Charity Classic, attracted 83,389 spectators to the Wakonda Club in Des Moines in 2016. New residential golf community developments are occurring across the state at sites such as Copper Creek, Wakonda Living, and the Greens at Woodland Hills, all in and around Des Moines; Otter Creek, just north of Des Moines in Ankeny; and the Willow Creek, Whispering Creek, and The Ridge developments, all near Sioux City.

In 2015, Iowa's \$606.1 million golf economy expenditures supported total statewide economic impact of \$817.5 million of direct, indirect, and induced economic output; 11,435 direct, indirect, and induced jobs; \$280.2 million in compensation; and \$72.3 million in state and local tax revenue. Figure 1 shows that this is an increase from 2006, the last time an economic impact study was performed.¹

Figure 1 Iowa Golf's Economic Impact 2006 and 2015

	Output (\$M)	Employment	Compensation (\$M)	Taxes (\$M)
2006	\$791.6	10,653	\$237.6	--
2015	\$817.5	11,435	\$280.2	\$72.3



Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Table 1 presents Iowa's total golf economy expenditures, which grew from \$508.6 million² in 2006 to \$606.1 million in 2015, representing a compound annual growth rate of 2% over this nine-year period. The state's

¹ SRI International (2007). *The Iowa Golf Economy 2006*.

² Revised tourism estimate of \$141.5 million changed from \$100.4 million previously, resulting in a revised total direct golf economy of \$463.6 million changed from \$422.5 million in 2006 study.

Iowa Golf's Economic Impact

largest sectors were Golf Facility Operations (\$225.9 million), Golf Tourism (\$169.2 million), and Golf-Related Supplies (\$107.8 million). During this period, Iowa experienced net closures in golf facilities, with the state's total number of golf facilities decreasing from 415 to 395. This nine-year period is notable for the major economic recession of 2008-2010, which negatively impact new golf course and new golf home construction.

Table 1. Iowa's Golf Economy Expenditures in 2006 and 2015 by Industry Segment (\$ millions)

	2006	2015	CAGR (%)
CORE INDUSTRIES			
 Golf Facility Operations	\$183.8	\$225.9	2.3%
 Golf Course Capital Investments (investment and new construction)	\$27.1	\$27.9	0.3%
 Golf-Related Supplies (retail and manufacturing)	\$85.4	\$107.8	2.6%
 Major Golf Tournaments and Associations	\$4.8	\$8.4	6.5%
 Golf Charitable Events	\$22.3	\$28.7	2.9%
Total Core Industries	\$323.3	\$398.8	2.4%
ENABLED INDUSTRIES			
 Golf Real Estate (new construction and realized premium)	\$60.9*	\$38.1	-5.1%
 Golf Tourism	\$124.4*	\$169.2	3.5%
Total Enabled Industries	\$185.3*	\$207.3	1.3%
TOTAL GOLF ECONOMY	\$508.6*	\$606.1	2.0%
TOTAL DIRECT IMPACT FOR IMPACT ANALYSIS	\$405.6*	\$480.1	1.9%

Note: * TEconomy recalculated 2006 Golf Tourism expenditures and the 2006 Golf Real Estate realized golf premium. Full explanations are provided in the report. The economic impact analysis calculates total impact on the margin of retail sales for both the Golf-Related Supplies and Tourism estimates, only the new golf course construction and new golf residential construction portions of Golf Course Capital Investment and Golf Real Estate, and excludes which is the same approach as the 2006 study.

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Golf Tournaments and Associations, Golf Tourism, and Golf-Related Supplies generated the strongest growth rates during from 2006-2015. As noted, declining sectors included new golf course construction and new golf home construction. Construction-related industries have larger economic multipliers and generate larger economic impacts than sectors, such as retail trade. Therefore, the difference between Iowa golf's total economic impact from 2006 to 2015 is less pronounced than the difference between Iowa golf's total direct impact from 2006 to 2015.

Table 1 presents estimates for each of Iowa's six golf industry segments in 2015, along with their values in 2006 and compound annual growth rates (CAGR) over this nine-year period. The estimates for each segment sum to Iowa's total golf economy. Most, but not all, of Iowa's total golf economy expenditures are included in economic impact accounting. The values subtracted from Iowa's total golf economy include:

- The wholesale, transportation, and production costs of goods for retail sales of golf-related supplies (\$49.7 million) and golf tourism shopping expenditures (\$15.9 million), as only the retail margin values generate state impacts from retail sales.
- The capital investment in existing golf facilities (\$21.7 million) portion of Golf Course capital investment is not included to avoid double counting, because it is assumed to be financed through golf facility operation revenue.
- The realized golf premium on the sale of existing golf homes (\$10.1 million) is not included, because the sale of existing homes is considered a transfer of assets.
- Money raised through golf charitable golf events (\$28.7 million) is not included, because it is considered a transfer of income.

The direct impact estimates were used to calculate indirect and induced effects to estimate the industry's total economic impact on the state.

Methodology

Framework

For the past 15 years, the World Golf Foundation’s GOLF 20/20 and key golf industry stakeholders in many states have successfully measured and communicated golf’s economic impact—i.e., how much the game contributes to state and national economies through direct, indirect, and induced economic activity and employment. As a result, the framework has been replicated internationally—e.g., see Ernst & Young’s *The Australian Golf Industry Economic Report 2010* and Sports Marketing Survey Inc.’s *The Economic Impact of Golf on the Economy of England 2012*.³ Adoption of the WGF’s golf industry impact framework⁴ has enabled the golf industry to assess its overall growth and the growth of individual industry segments over time and across geographic regions. Figure 1 presents the WGF’s golf industry and economic impact framework.

Figure 2 Golf Industry Impact Framework



Source: TEconomy Partners, LLC

³ Ernst & Young (2011). *The Australian Golf Industry Economic Report 2010*, https://www.clearinghouseforsport.gov.au/data/assets/pdf_file/0003/437610/AGIC_2010_Golf_Industry_Economic_Report.pdf Sports Marketing Survey Inc. (2014). *The Economic Impact of Golf on the Economy of England 2012*, <http://www.Englandgolf.org/library-media%5Cdocuments%5CThe%20Economic%20Impact%20of%20Golf%20on%20the%20Economy%20of%20England.pdf>.

⁴ The World Golf Foundation’s golf industry cluster framework debuted in its commissioned study performed by SRI International (2002). *The Golf Economy Report*. <http://www.golf2020.com/media/30717/2002golf2020economicreport.pdf>

The framework divides the golf industry into core and enabled industries. The four core industry segments include Golf Facility Operations, Golf Facility Capital Investments (course construction and renovations), Golf-Related Supplies (production and retail sales), and Golf Tournaments, Associations, and Charitable Events. The two enabled industry segments are Golf Real Estate (new home construction and premiums related to the sale of existing homes in golf communities) and Golf Tourism.

Methodology and Data

To estimate Iowa golf's economic impact, TEconomy first collected and analyzed secondary data from a wide range of long-standing data sources with time-series data for each of the six industry segments. These data were used to develop direct expenditure impact estimates for each of the four core and two enabled industry segments. These data sources include: the National Golf Foundation's *US Golf Facilities* report and *Golf's Charitable Impact* report, the Professional Golfers' Association of America's *PGA Operations Survey*, the U.S. Economic Census, the Golf Course Superintendents Association of America's *Capital Expenditures Survey*, the Golf Course Builders Association of America, Dun & Bradstreet/Hoovers, National Sporting Goods Association's *The Sporting Goods Market Survey*, golf association tax filings, TNS America and D.K. Shiflett for golf visitor trip data, and other surveys and studies commissioned by state tourism agencies.

TEconomy also performed primary research, such as online searches for major golf communities and interviews with developers and real estate agents to collect data on the number of homes constructed and the average construction cost of homes in these developments. In cases where response rates to other surveys are low, TEconomy works with state golf task forces to implement golf facility surveys to collect additional economic data.

Using these data, TEconomy estimated the direct expenditure impacts for each of the four core and two enabled industry segments. Based on the golf task force's review and approval of these estimates, TEconomy then used IMPLAN, an economic impact modeling software, to perform the economic impact analysis to estimate the golf industry's total economic impact on the state economy. In economics, the idea of the multiplier is that changes in the level of economic activity in one industry impacts other industries in the economy through changes in expenditures and incomes. The channels by which growth or decline in a particular industry sector impacts the level of overall economic activity in a state are:

- Direct effects: The direct employment and other economic activity generated by the core and enabled golf industry segments' operations and expenditures.
- Indirect effects: The demand generated for supplier firms by the six golf industry segments.
- Induced effects: The additional economic activity generated by the spending of these supplier firms and employees in the overall economy.

The sum of these three effects is referred to as the total impact.

IMPLAN calculates the indirect and induced effects stemming from the direct economic activity. IMPLAN is one of the most widely used and respected providers of economic impact modeling software. The software provides a platform for estimating total impact using highly detailed data tables representing 536 economic sectors. An advantage of IMPLAN is that it also estimates total Federal and state/local taxes generated by the golf industry in the form of income, sales, property, and other taxes.

The subsequent chapters present TEconomy's direct impact estimate for each of the six golf industry segments, as well as an explanation of what was measured and the estimation approach. The final chapter presents the economic impact analysis results.



Golf Facility Operations

Direct Impact

Iowa's 395 golf facilities generated \$225.9 million in 2015, up from \$183.8 million in 2006. While Iowa's total number of golf facilities declined (from 415 facilities in 2006), growth in average operating revenue drove growth in this industry segment over this nearly nine-year period.

Table 2. Iowa Golf Facility Revenue (\$M): 2006 and 2015

	2006	2015
Regulation and alternative facilities	\$183.8	\$225.9

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

The compound annual growth rate for golf facility revenue (2.3% per year) is slightly lower than growth in Iowa's recreation, entertainment, and related activities industry segment, which grew by 3.1% over this same period.⁵

Approach

What is measured:

Golf facilities generate operating revenue through greens fees, membership fees, range fees, golf cart rental, and associated spending on food and beverage. The golf facilities use this revenue to support facility operations through direct employment and purchases of a range of goods and services from other vendors—e.g., turfgrass equipment and maintenance providers, golf equipment and apparel manufacturers, food and beverage providers, etc. These expenditures by golf facilities is what drives the economic impact.

How it's measured:

This industry segment's direct economic impact is calculated by multiplying the number of regulation golf facilities in each of four categories—private, daily fee/semi-private, municipal/university/military, and resort—by the average revenue for that type of facility. The direct economic impact of alternative facilities, which include golf centers, practice ranges, and miniature golf, are measured in the same way.

Numbers of golf facilities by type are available from the U.S. Census Bureau's Economic Census, the National Golf Foundation, and the PGA of America (See Table 2). The Iowa golf task force also compiled a list of golf facilities, categorized by type. TEconomy compared and validated this list with the other sources. TEconomy also

⁵ U.S. Bureau of Economic Analysis (2016). GDP by State: Arts, Entertainment, and Recreation Industry (NAICS 71), 1997-2015.



performed online research and contacted golf facilities by telephone to accurately classify them as private or semi-private. Analyzing the various data sets, TEconomy found:

- The number of private facilities reported by the Economic Census is much higher than the number reported by NGF or Iowa's allied golf associations: 113 private facilities versus 57-65 private facilities. The Economic Census might be misclassifying semi-private or daily fee facilities as private facilities.⁶
- The number of private facilities has been declining over time.
- The total number of golf facilities has declined over time.

TEconomy used the following number of regulation facilities in its calculations: 65 private facilities, 271 daily fee/semi-private facilities, 53 municipal/university facilities, and six golf resorts. Alternative facilities data, which include 10 miniature golf facilities, 10 golf ranges, and 6 indoor golf centers, come from the Economic Census and the PGA of America Operations Survey.

Table 3. Number of Iowa Golf Facilities by Type of Facility: 2006 and 2015

	Private	Daily fee/ semi-private	Municipal/ university	Resort	Total
SRI 2006	85	265	60	5	415
TEconomy 2015	65	271	53	6	395
NGF 2006	71	336	-	3	411
NGF 2015	57	330	-	3	387
Economic Census 2007	125	196	-	-	321
Economic Census 2012	113	196	-	-	309

Source: U.S. Economic Census 2007 and 2012. National Golf Foundation. *U.S. Golf Facilities, 2006 and 2015*. SRI International. *The Iowa Golf Economy 2006*. Arlington, VA.

For average facility revenue, TEconomy reviewed data collected by the PGA Operations Survey and the U.S. Census Bureau's Economic Census. Due to the low response rate to the PGA Operations Survey, TEconomy collected average revenue data for Iowa golf facilities through a survey plus publicly available tax filings for nonprofit private and semi-private golf clubs. TEconomy worked with the Iowa golf task force to implement an online survey, which was sent to 272 out of the 395 Iowa golf facilities for whom email contacts were available. 79

⁶ A private facility is one in which the golf club operates for the benefit of its members and its members' guests. If a golf facility makes tee times open to the public, then it is no longer meets the definition of a private facility and is classified as either a semi-private or daily fee facility. Making tee times available (on select days or entirely) to the public has been one strategy used by private facilities to boost revenue during the Great Recession and even before.



facilities responded for a 29% response rate. Table 3 shows average facility revenue by type of facility. TEconomy used the survey responses adjusted by tax filings for the direct economic impact calculation.

Note that private facility average revenue reported by the Economic Census is very low compared to the TEconomy survey responses. This could be due to misclassification of semi-private or daily fee facilities as private facilities by the Census, which would bring the average revenue down. Many private facilities opened up to the public as a strategy to increase rounds during the recession. The 2006 study used Economic Census data for private and daily fee/semi-private facility average revenue. Municipal and resort average revenue data came from the PGA Operations Survey, which was not used in this study due to a very low response rate in 2015. For alternative facilities, TEconomy used Economic Census data and adjusted for inflation.

Table 4. Iowa Average Golf Facility Revenue by Type: 2002-2015

	Private	Daily fee/ semi-private	Municipal/ university	Resort
TEconomy 2015	\$1,507,585	\$405,030	\$737,816	\$1,250,000
Economic Census 2012	\$822,584	\$459,306	-	-
Economic Census 2007	\$476,095	\$415,730	-	-
Economic Census 2002	\$584,638	\$388,683		
SRI 2006	\$584,638	\$388,683	\$439,941	\$1,010,000

Source: U.S. Economic Census 2002, 2007, and 2012. SRI International. *The Iowa Golf Economy 2006*. Arlington, VA.

TEconomy subtracted average merchandise sales from average facility revenue (to avoid double counting with the Golf-Related Supplies industry segment).



Golf Facility Capital Investment

Direct Impact

In 2015, Iowa golf facilities invested \$21.7 million in capital improvements to existing greens and tees, clubhouses, etc., up from \$18.5 million in 2006, representing a compound annual rate of growth of 1.8%. New golf course construction is estimated to have supported \$6.2 million of economic activity, down from \$8.6 million in 2006 and representing a decline of -3.5% per year. Only one new golf course was constructed, which opened in 2015: The Falls at the Grand Falls Casino & Golf Resort, a links-style, Rees Jones-designed course.

Table 5. Iowa Golf Facility Capital Investment (\$M): 2006 and 2015

	2006	2015
Existing Facilities	\$18.5	\$21.7
New Course Construction	\$8.6	\$6.2

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Approach

What is measured:

Capital investments are major improvements outside of normal maintenance and operating expenditures by golf facilities for turf maintenance and grounds upkeep. Golf facilities periodically make major investments to improve greens and tees, renovate clubhouses and other buildings, and purchase turf maintenance equipment and irrigation systems. In addition to capital investments by existing facilities, construction of new golf courses constitutes is the other major type of capital investment.

How it's measured:

Golf facility capital investment data comes from surveys. The Golf Course Superintendents Association of America includes a golf facility capital budget question on its annual Compensation Survey. Over time the data have gone from more detailed reporting at the state level (by type of facility and by number of holes) to less specific reporting by Census geographic region with no breakdown by type of facility or number of holes. Therefore, TEconomy included a capital investment question on its Iowa golf facility survey. TEconomy used the following average capital investment figures that were reported by golf facilities and were adjusted downwards slightly to account for Iowa's large number of 9-hole facilities: \$139,658 for private facilities and resorts, \$36,060 for daily fee/semi-private facilities, and \$37,338 for municipal facilities.



For new course construction, the National Golf Foundation reports the number of new golf courses under construction and openings each year as part of its annual *U.S. Golf Facilities* publication. In 2014, NGF estimated that there were no new golf course openings in Iowa and that 1.5 new 18-hole equivalent courses were under construction. Based on input from the golf task force, TEconomy revised this to 1.0 new golf course for the 2015 calculation. The Golf Course Builders Association of America provides data on golf course construction and renovation costs based on its survey of golf course builders around the country. The GCBA estimates the average investment required to build a new golf course is \$11.7 million. Assuming the average course takes approximately two years to complete, we estimate the average investment in construction per 18-hole equivalent course per year was \$5.8 million, or \$6.2 million adjusted for inflation.



Golf-Related Supplies

Direct Impact

Consumer purchases of golf equipment, apparel, and accessories drove significant economic activity in 2015. Iowa retailers earned \$35.9 million on \$85.2 million of on-course and off-course sales in 2015, up from \$26.5 million on \$66.1 million of golf-related consumer goods purchases in 2006 representing a 2.8% compound annual growth rate in golf-related retail sales over this nine-year period. Iowa has a small number of companies that manufacture golf course accessories, custom golf clubs, and golf cars: Standard Golf, Momentus, Allstar Pro Golf, and Streetrod Golf Cars. These Iowa companies generated an estimated \$22.7 million from out-of-state shipments in 2015. This is up from \$18.8 million in 2006, representing a compound annual growth rate of 2.1%.⁷

Table 6. Iowa Golf-Related Supplies Revenue (\$M): 2006 and 2015

	2006	2015
Retail Sales	\$66.1	\$85.2
Manufacturing	\$18.8	\$22.7

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Approach

What is measured:

This segment captures both: (1) the total retail spending and net revenue (known as retail margin) that accrues to Iowa retailers from spending by golfers on golf equipment, golf shoes, and golf apparel and (2) the manufacture of these goods by Iowa companies. In addition to the manufacture of golf-related consumer goods, this segment captures the manufacture of golf cars, golf course accessories, and golf turf maintenance equipment. Like golfers, golf facilities also make purchases of goods to facilitate the game and facility operations. Streetrod Golf Cars is an Iowa company that manufactures custom golf cars in the fashion of some of America's favorite vehicles, and Standard Golf is an Iowa company that dates back to 1910 and is a global leader in the manufacture of golf course accessories.

How it's measured:

Data to calculate on-course and off-course retail spending on golf equipment, golf shoes, and golf apparel comes from the National Sporting Goods Association. The NSGA conducts an annual survey of 100,000 households. NSGA

⁷ The 2006 manufacturing figure included a portion of Vermeer's turf maintenance equipment and Becker Underwood's fertilizer and seed treatment revenue. However, Vermeer is focused exclusively on agricultural equipment now, and Becker Underwood is also heavily focused on crop technology. Therefore, they are not included in the 2015 manufacturing estimate.



has collected this data since 2002. Sales for different categories of purchases are broken down by geographic region, and TEconomy estimated state-level sales based on Iowa's share of 18-hole equivalent facilities for the West North Central Region.

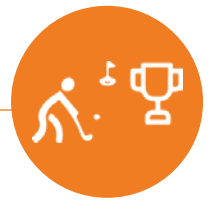
The estimation of economic impact is based upon the retail margin that accrues to Iowa companies that sell golf equipment and apparel.⁸ The retail margin is the net revenue accruing to the business after paying for the cost of goods from the wholesaler or manufacturer. The IMPLAN data and modeling software calculates economic impact based on the retail margin, which is built into the software platform.

The second type of activity captured by this industry segment is manufacturing activity—companies that produce golf equipment and golf apparel for golfers, as well as companies that manufacture golf cars, golf course accessories, and golf course turf maintenance equipment for golf facilities. Since consumer retail purchases and golf facilities operating expenditures are already captured in the retail portion of this industry segment and in the Golf Facility Operations estimate, respectively, TEconomy treats manufacturing separately.

To identify golf-related manufacturers, TEconomy conducted online research and Hoovers Dunn & Bradstreet database searches. We also solicited input from the state golf task force. Annual revenue and employment figures for manufacturers come from the Hoovers Dunn & Bradstreet database, as well as TEconomy estimates. Hoovers often underestimates actual revenues for private companies, since private company revenue is not publicly available. Standard Golf is a leading golf course accessories manufacturer. TEconomy believes Hoovers significantly underreports Standard Golf's actual revenue. Consequently, for this single Iowa golf-related manufacturer, TEconomy estimated revenue using data for the golf course accessories market. Golf courses spend approximately \$4,000 per year on golf course accessories, and there are approximately 15,000 facilities in the U.S. The two manufacturers that account for a conservative 80% market share are Standard Golf and Par Aide. TEconomy apportioned a share of this market to Standard Golf.

TEconomy subtracted the share of sales going to in-state customers from total sales to avoid double-counting with the golf facility operations and retail consumer golf sales segments. This leaves an estimated total of out-of-state shipments of \$22.7 million.

⁸ The U.S. Census Bureau's Annual Retail Trade Survey reports the retail margin for different industry sectors, which was 42.1% in 2014 (latest available), up from 40.1% in 2006.



Tournaments, Associations & Charitable Events

Direct Impact

Tournaments and Associations: Iowa and the Quad Cities Region host two professional golf tournaments each year: The Principal Charity Classic, a PGA TOUR Champions event, and the John Deere Classic, a PGA TOUR event. The Principal Charity Classic was named the PGA TOUR Champions Tournament of the Year in 2016, recognizing overall excellence, as well as the intangibles that make a tournament stand out among many successful events. “The Principal Charity Classic has left a significant charitable footprint as well as an estimated \$23 million annual economic impact on the greater Des Moines region,” said Iowa Governor Terry Branstad. “That matters to this state.”⁹

In addition to the professional tournaments, Iowa’s golf associations organize junior, senior, and amateur championships and serve as professional organizations on behalf of their members. Major associations include the Iowa Golf Association and Foundation, the Iowa Section of The PGA, the Iowa Golf Course Owners Association, the Iowa Golf Course Superintendents Association, the Iowa Turfgrass Institute, and the First Tee chapters of Central Iowa and the Quad Cities. Total expenditures supporting the Principal Charity Classic and association-supported tournament activities and related member activities generated \$8.3 million in 2015, up from \$4.8 million in 2006, reflecting a compound annual growth rate of 6.5%.

Charitable Events: Charitable golf events serve as important fundraisers for many state and local charitable organizations. In 2015, Iowa golf facilities hosted charitable events that generated \$28.7 million in net proceeds and in-kind contributions for beneficiary organizations, up from \$22.2 million in 2006, reflecting a 2.9% compound annual growth rate. The TEconomy survey found that Iowa facilities host 6 to 11 charitable events each year. On the high end, the Annual City of Hope Golf Outing played at Geneva Golf and Country Club in Muscatine, Iowa, raised \$465,000 in net proceeds in 2015 for the City of Hope cancer research hospital, and the Principal Charity Classic raised \$1.4 million for local children’s charities ranging from children’s hospitals to the United Way and Variety—the Children’s Charity of Iowa. However, many Iowa golf clubs raise smaller, but highly impactful sums (\$2,000 to \$10,000 in net proceeds per event) for local fire departments, hospitals, college scholarships, food banks, children’s museums, youth programs, etc.

⁹ “Principal Charity Classic Named PGA TOUR Champions Tournament of the Year,” December 8, 2016. Accessed January 2, 2017. <http://www.principalcharityclassic.com/principal-charity-classic-named-pga-tour-champions-tournament-year/>

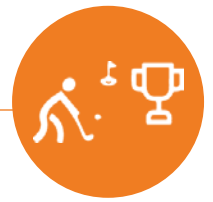


Table 7. Iowa Tournaments, Associations & Charitable Giving (\$M): 2006 and 2015

	2006	2015
Tournaments and Associations	\$2.6	\$8.3
Charitable Events	\$22.2	\$28.7

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Approach

What is measured: Tournaments and associations estimates the direct expenditures related to the hosting of both professional and amateur tournaments. Professional golf tournaments are events organized by the PGA TOUR, the PGA of America, the USGA, and the LPGA. State golf associations also organize junior, senior, and amateur tournaments, as well as support other activities on behalf of their members. Charitable giving captures both the in-kind contributions and the net proceeds resulting from charitable golf events that are hosted by Iowa's golf facilities. Golf tournaments are

How it's measured: The Tournaments estimate is derived from direct tournament-related expenditures. Lodging, food and beverage, and other tourism-related expenditures associated with these high-impact events are captured in the Hospitality/Tourism segment of the report. The Associations estimate is the sum of major state golf association expenditures. These are reported on profit and loss (P&L) statements provided by the state golf associations to TEconomy and/or via tax filings.

The charitable giving estimate draws on the National Golf Foundation's most recent charitable giving survey and is validated by TEconomy's 2015 facilities survey, which included questions about charitable golf events. The national study is based on the number of golf facilities that hold charitable golf events, the average number of events held by each facility, and both the net proceeds and in-kind fees, services, and discounts donated. It also includes the charitable giving associated with professional golf tournaments. Charitable giving is not included in economic impact estimation because it is considered a direct transfer of income in economic impact accounting.



Golf Real Estate

Direct Impact

Golf courses provide walkable open spaces and recreational facilities, making them a key amenity in many residential communities. New golf-related real estate construction generated \$28.1 million in 2015, down from \$48.7 million in 2006 representing a compound annual growth rate of -5.9 percent over this nine-year period. New golf home construction peaked in 2006 prior to the bursting of the real estate bubble, the financial crisis, and ensuing economic recession. Iowa's economy has since rebounded, and examples of active development across the state include the Hubbell Homes developments at Copper Creek, Wakonda Living, and the Greens at Woodland Hills, all in and around Des Moines; Otter Creek, just north of Des Moines in Ankeny; and the Willow Creek, Whispering Creek, and The Ridge developments, all near Sioux City.

There are an estimated 29 golf communities in Iowa, down from 33 golf communities in 2006. TEconomy estimated the "golf" premium associated with these developments to be \$10.1 million, down from \$12.2 million in 2006 representing a compound annual growth rate of -2.1 percent.¹⁰ The premium is the additional amount a buyer is willing to pay for a home or property located on a golf course or within a golf community.

Table 8. Iowa Golf Real Estate (\$M): 2006 and 2015

	2006	2015
Golf Home Construction	\$48.7	\$28.1
Existing Home Sales Golf Premium	\$12.2*	\$10.1

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations. * Recalculated.

Approach

What is measured: New golf home construction generates significant regional economic activity and impact. For this segment, TEconomy measures expenditures related to new golf home construction, as well as economic activity associated with the resale of existing golf homes and the premium associated with these homes. The "golf premium" is the extra value a homeowner can expect to receive on the sale of a home located in a golf community that goes beyond the home's other features.

How it's measured: TEconomy conducted online research to identify new golf community developments and new phases of development at existing golf communities. We validated this list with the Iowa golf task force and

¹⁰ The calculation of the \$12.2 million existing home sale golf premium corrects an error in the 2006 study that used 50 golf communities instead of the 33 golf communities reported by the National Golf Foundation, *Golf Facilities in the U.S.*, annual publication.



included additions to the list made by task force members. TEconomy then contacted real estate developers, builders, and real estate agents to identify the number of new homes under construction in the base year and the average construction cost of these homes.

To calculate the golf premium, TEconomy multiplied Iowa's 29 existing golf communities by the average number of housing units per golf course by the home turnover rate. TEconomy estimates that in 2015, the home turnover rate (percentage of homes sold relative to the total housing stock) was 4.6 percent in Iowa.



Golf Tourism

Direct Impact

Golf is a popular outdoor recreational activity and spectator sport that spurs travel—both day trips and extended vacations. In 2015, TEconomy estimates that Iowa's golf tourism expenditures totaled \$169.2 million, up from \$124.4 million¹¹ in 2006. This represents a 3.5% compound annual growth rate, which is slightly lower than the 3.8% CAGR in Iowa's total domestic tourism expenditures over this same nine-year period. Growth in average person trip spending drove growth in total golf tourism expenditures. In addition to business and leisure travel, golf drives significant tourism activity as a spectator sport. The Principal Charity Classic attracted 83,389 spectators in 2016. Junior, senior, and other amateur and member-guest tournaments also bring visitors via day trips and overnight trips to different parts of the state.

Table 9. Iowa Golf Tourism (\$M): 2006 and 2015

	2006	2015
Golf Trips	799,443	834,949
Average Spending per Trip (\$)	\$155.65*	\$202.67
Total Travel Expenditures (\$)	\$124,432,703*	\$ 169,215,379

Note: *Recalculated using the 2006 Iowa Welcome Center average trip spending data.

Source: TEconomy Partners, LLC, 2015 calculations. SRI International, 2006 calculations.

Approach

What is measured: The golf tourism industry segment estimates the golf-related travel expenditures in which a person travels 50-plus miles and plays or watches golf as a key recreational activity while on business or leisure travel.

How it's measured: Data for this calculation comes from surveys of visitor trips and average trip spending collected or commissioned by state departments of tourism. For the previous 2006 study, total Iowa visitor trip data and the percentage of visitors who played golf while visiting Iowa came from the Travel Industry Association of America's TravelScope statistics commissioned by Travel Iowa. Travel Iowa has not commissioned a similar study to estimate total number of visitor trips since 2011¹², but does

¹¹ To make direct comparisons over time, TEconomy recalculated the 2006 Golf Tourism expenditures using 2006 Iowa Welcome Survey average trip spending data. This enabled us to compare changes in reported average trip spending from 2006 to 2015, since the Iowa Welcome Center Survey has been conducted annually every year. The 2006 study extrapolated from a 2003 national golf tourism survey conducted by the National Golf Foundation, which was never updated.

¹² TNS America (2012). "Travels America: Iowa Travelers, 2010 and 2011."

<http://www.traveliowa.com/UserDocs/documents/Travel/TNSSummary.pdf>



invest in an annual economic impact assessment, as well as annual Welcome Center surveys. The 2015 Welcome Center Surveys asks visitors about “main areas of interest,” but golf is not included as an option. TEconomy estimated total golf trips in 2015 by assuming conservatively that Iowa growth was half of the U.S. national growth rate in domestic visitor trips from 2006 to 2015. U.S. domestic visitor trips rose by 8.9%, and TEconomy assumed that Iowa golf trips grew by 4.45% over the same period.

For average trip spending, TEconomy drew on Iowa’s 2015 Welcome Center Survey. The average length of a trip was 3.6 days, and the average number of people in a travel party was 2.5, the same as in 2006. TEconomy calculated a blended average trip spending of \$202.67 that includes both day trips and overnight trips. To enable more direct comparisons over time, TEconomy recalculated the 2006 average golf trip spending for Iowa using the 2006 Iowa Welcome Survey average trip spending data. This enabled us to compare changes in reported average trip spending from 2006 to 2015, since the Iowa Welcome Center Survey has been conducted annually every year. The original estimate in the 2006 study extrapolated from a 2003 national golf tourism survey conducted by the National Golf Foundation, which was never updated.¹³ The blended average trip spending using the 2006 Welcome Survey data and the same ratio of day trips to overnight trips as in 2006 was \$155.65.

¹³ National Golf Foundation (2003). *The U.S. Golf Travel Market*.

Economic Impact

Economic impact analysis is an effective way of modeling how growth or decline of a target industry sector contributes to changes in the overall level of economic activity in a state economy. In the case of the golf industry, the analysis focuses on the impact of each of the six core and enabled golf industry segments defined by the WGF's golf industry framework and estimated by TEconomy. Economic impact analysis typically measures three major channels by which growth or decline of an industry sector impacts the level of overall economic activity in a state:

- **Direct effects:** The direct employment and other economic activity generated by the core and enabled golf industry segments' operations and expenditures.
- **Indirect effects:** The demand generated for supplier firms by the six golf industry segments.
- **Induced effects:** The additional economic activity generated by the spending of these supplier firms and employees in the overall economy.

The sum of these three effects is referred to as the **total impact**.

This concept of how a dollar of investment is re-spent multiple times throughout the economy as it passes from business to business or business to employee is known as the "multiplier effect." The result of the multiplier effect is that one dollar of investment ends up having a total economic impact that is a few multiples higher.

Multiplier effects are larger when the initial investment spurs follow-on investment, when the consumption component, including purchases from suppliers, is higher, and when the spending occurs locally. To calculate economic impact, TEconomy used a State of Iowa specific model and data from IMPLAN. IMPLAN is one of the most widely used and respected providers of economic impact modeling software. The software provides a platform for estimating total impact using highly detailed data tables representing 536 economic sectors. An advantage of IMPLAN is that it also estimates total Federal and state/local taxes generated by the golf industry in the form of income, sales, property, and other taxes.

Most, but not all, of Iowa's total golf economy expenditures are considered in the total economic impact calculation. Only the margin on total retail sales of golf-related supplies and golf tourism shopping expenditures are included. The capital investment in existing golf facilities portion of Golf Course capital investment is not included to avoid double counting, because it is assumed to be financed through golf facility operation revenue. The realized golf premium on the sale of existing golf homes is not included, because the sale of existing homes is considered a transfer of assets. Finally, money raised through golf charitable golf events is not included, because it is considered a transfer of income.

Table 10 presents the total economic impacts stemming from the direct effect of each of the six golf industry segments. Note that capital investments in existing golf courses, charitable giving, and the realized golf premium on the sale of existing golf homes are not included in the economic impact calculation. Capital investments, outside of major renovations, are assumed to be financed through operating revenue and, therefore, not included to avoid double counting. Charitable giving is considered a transfer of income rather than the generation of new income. Similarly, the sale of existing homes is also considered a transfer of assets rather than new economic activity.

Table 10. Iowa Golf's Total Economic Impact in 2015
by Industry Segment (\$ millions)

		Output	Employment	Compensation	State and Local Taxes
CORE INDUSTRIES					
	Golf Facility Operations	\$377.88	5,344	\$106.284	\$35.39
	Golf Course Construction	\$10.12	83	\$3.66	\$0.34
	Golf-Related Supplies	\$112.57	2,286	\$62.88	\$10.91
	Major Golf Tournaments and Associations	\$12.81	153	\$3.56	\$2.31
	Total Core Industries	\$513.37	7,867	\$176.39	\$48.96
ENABLED INDUSTRIES					
	Golf Residential Construction	\$47.54	348	\$15.84	\$1.70
	Golf Tourism	\$256.55	3,220	\$88.02	\$21.61
	Total Enabled Industries	\$304.09	3,568	\$103.85	\$23.31
	TOTAL	\$817.47	11,435	\$280.25	\$72.27

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model.

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Appendix 1: Economic Impact Tables

Table A1-1. Golf Facility Operations

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	4,281	\$62,181,786	\$102,078,046	\$225,945,277	\$27,618,178	\$15,496,475
Indirect Effect	584	\$25,446,648	\$52,626,955	\$91,479,281	\$4,471,935	\$6,479,131
Induced Effect	480	\$18,656,562	\$33,991,081	\$60,455,723	\$3,300,943	\$4,489,103
Total Effect	5,344	\$106,284,996	\$188,696,082	\$377,880,281	\$35,391,056	\$26,464,709
Multiplier	1.25	1.71	1.85	1.67		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-2. Golf Course Construction

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	54	\$2,422,675	\$2,956,852	\$6,238,299	\$132,959	\$440,340
Indirect Effect	13	\$598,359	\$943,502	\$1,804,414	\$96,550	\$131,160
Induced Effect	17	\$639,777	\$1,165,214	\$2,072,605	\$113,216	\$153,909
Total Effect	83	\$3,660,812	\$5,065,568	\$10,115,318	\$342,725	\$725,409
Multiplier	1.55	1.51	1.71	1.62		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-3. Golf-Related Supplies

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	1,883	\$45,957,187	\$60,637,440	\$58,167,468	\$8,122,862	\$9,055,686
Indirect Effect	120	\$5,927,940	\$10,390,852	\$18,769,686	\$841,845	\$1,381,575
Induced Effect	283	\$10,998,828	\$20,033,307	\$35,633,316	\$1,946,308	\$2,646,066
Total Effect	2,286	\$62,883,956	\$91,061,601	\$112,570,470	\$10,911,015	\$13,083,327
Multiplier	1.21	1.37	1.50	1.94		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-4. Major Golf Tournaments and Associations

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	113	\$2,269,551	\$5,522,254	\$8,412,452	\$1,928,717	\$692,628
Indirect Effect	24	\$670,475	\$1,290,305	\$2,371,877	\$271,323	\$168,213
Induced Effect	16	\$623,859	\$1,136,376	\$2,021,242	\$110,391	\$150,092
Total Effect	153	\$3,563,884	\$7,948,935	\$12,805,572	\$2,310,431	\$1,010,933
Multiplier	1.35	1.57	1.44	1.52		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-5. Golf Residential Construction

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	182	\$9,471,765	\$13,220,437	\$28,061,999	\$590,907	\$1,860,577
Indirect Effect	94	\$3,597,513	\$5,590,685	\$10,511,984	\$623,554	\$780,144
Induced Effect	71	\$2,768,837	\$5,042,971	\$8,970,037	\$489,972	\$666,103
Total Effect	348	\$15,838,114	\$23,854,093	\$47,544,021	\$1,704,433	\$3,306,824
Multiplier	1.91	1.67	1.80	1.69		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-6. Golf Tourism

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	2,470	\$56,344,839	\$94,008,914	\$153,270,536	\$16,544,471	\$13,314,704
Indirect Effect	353	\$16,246,050	\$28,530,096	\$53,299,940	\$2,333,049	\$3,776,026
Induced Effect	397	\$15,424,997	\$28,099,706	\$49,979,062	\$2,729,340	\$3,711,249
Total Effect	3,220	\$88,015,885	\$150,638,716	\$256,549,538	\$21,606,860	\$20,801,979
Multiplier	1.30	1.56	1.60	1.67		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Table A1-7. Total, Iowa Golf Industry







Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	8,983	\$178,647,803	\$278,423,944	\$480,096,031	\$54,938,092	\$40,860,406
Indirect Effect	1,188	\$52,486,985	\$99,372,394	\$178,237,182	\$8,638,253	\$12,716,247
Induced Effect	1,265	\$49,112,859	\$89,468,656	\$159,131,986	\$8,690,168	\$11,816,524
Total Effect	11,435	\$280,247,647	\$467,264,995	\$817,465,198	\$72,266,513	\$65,393,177
Multiplier	1.27	1.57	1.68	1.70		

Source: TEconomy Partners, LLC analysis using IMPLAN Iowa state model

Appendix 2: Comparison of Original and Revised 2006

Table A2-1 shows the TEconomy revisions to the 2006 realized golf premium (declined) and golf tourism (increased) figures.

Table A2-1. Iowa's Golf Economy Expenditures in 2006 and 2015
by Industry Segment (\$ millions)

	SRI 2006	Revised 2006	
CORE INDUSTRIES			
 Golf Facility Operations	\$183.8	\$183.8	
 Golf Course Capital Investments	Investment in existing facilities	\$18.5	\$18.5
	New course construction	\$8.6	\$8.6
 Golf-Related Supplies	Retail sales (margin)	\$66.6 (\$26.7)	\$66.6 (\$26.7)
	Manufacturing	\$18.8	\$18.8
 Major Golf Tournaments and Associations	\$4.8	\$8.4	
 Golf Charitable Events	\$22.3	\$22.3	
Total Core Industries	\$261.2	\$323.3	
ENABLED INDUSTRIES			
 Golf Real Estate	New residential construction	\$48.7	\$48.7
	Realized premium on sale of existing homes	\$18.5	\$12.2*
 Golf Tourism	\$100.4	\$124.4*	
Total Enabled Industries	\$167.6	\$185.3	
TOTAL	\$428.8	\$508.6	
TOTAL DIRECT IMPACT FOR IMPACT ANALYSIS CALCULATION	\$391.8	\$405.6	