

THE ECONOMIC
IMPACT OF
NORTH CAROLINA
GOLF





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Overview

The game of golf drives significant economic activity across the State of North Carolina. This impact includes not only direct operational expenditures and capital investments made by North Carolina's 534 golf facilities, but also golf-related manufacturing and retail spending, golf tourism, and new golf-related residential construction.

For example, North Carolina is home to some major golf-related manufacturers, such as John Deere Turf Care, which manufactures golf mowers for the global market from its North Carolina facility, and golf grip designer and manufacturer, Golf Pride, which has its headquarters and design facilities in North Carolina. Golf drives tourism as a key recreational activity on day trips, vacations, and business trips. The four professional tournaments hosted by North Carolina each year generates significant economic activity through both tournament-related expenditures and the large number of spectators drawn to these events. In 2017, North Carolina will host the PGA Championship, one of the four major golf championships, at Quail Hollow in Charlotte. The event is expected to generate \$100 million in economic impact.

Finally, compared to the last time this study was conducted in 2011, new golf home construction has bounced back. TEconomy identified a half dozen golf community developments with significant build-out activity (i.e., over 100 new homes under construction). These major build-outs were occurring at 12 Oaks in Holly Springs; Anderson Creek, near Fort Bragg; Brunswick Forest at Cape Fear National; Connestee Falls in Brevard, near the Nantahala National Forest; and St. James Plantation, near Bald Head Island. Several other golf communities had significant new home construction as well.

Summing across all six golf industry segments, the total size of North Carolina's direct golf economy in 2016 was \$2.366 billion. Moreover, this direct economic activity generates secondary and tertiary impacts throughout the state economy. When these other impacts are included, North Carolina's \$2.366 billion golf industry drove:

- \$3.738 billion of direct, indirect, and induced economic output;
- 36,688 direct, indirect, and induced jobs;
- \$1.156 billion in compensation; and
- \$434.6 million in federal, state, and local tax revenue.

Figure 1, below, presents North Carolina golf's total direct economic expenditures and the total economic impact generated by the direct expenditures across the state.

Figure 1 North Carolina Golf's Total Economic Impact 2016

Direct Impact	Total Impact		
Golf Economy Expenditures \$2.366 B 		Economic Output 	\$3.738 B
		Employment 	36,688
		Wages and Benefits 	\$1.156 B
		Federal, State, Local Taxes 	\$434.6 M

Source 1 TEconomy Partners, LLC

Table 1 presents data estimating the size of North Carolina’s direct golf economy by each of the six industry segments for 2007, 2011, and 2016. The 2016 update is the third time this study has been conducted. Table 1 shows that North Carolina’s golf economy has largely rebounded from the great recession of 2008-2010, with notable recovery in golf course capital investment and new golf home construction since 2011.

In 2016, the state’s largest golf industry segments were:

- Golf Facility Operations (\$1.126 billion),
- Golf-Related Supplies (\$356.8 million),
- Golf Real Estate (\$319.4 million), and
- Golf Tourism (\$250.3 million).

The estimates for each segment sum to the size of North Carolina’s total direct golf economy. Most, but not all, of North Carolina’s total golf economy expenditures are included in economic impact accounting.¹ The direct impact estimates are used to calculate the industry’s total economic impact on the state.

¹ The values subtracted from the total golf economy for economic impact accounting include: (1) the costs of goods for retail sales of golf-related supplies and golf tourism shopping expenditures, as only the retail margin values generate state impacts from retail sales, (2) the capital investment in existing golf facilities to avoid double counting, because it is assumed to be financed through golf facility operation revenue, (3) 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, and (4) charitable giving, because it is considered a transfer of income.

Table 1. North Carolina's Direct Golf Economy by Industry Segment:
2007, 2011 and 2016 (\$M)

	2007	2011	2016
CORE INDUSTRIES			
Golf Facility Operations	\$1030.8	\$1154.8	\$1125.8
Golf Course Capital Investments (investment and new construction)	\$153.2	\$86.4*	\$127.3
Golf-Related Supplies (retail and manufacturing)	\$281.9	\$353.6	\$356.8
Major Golf Tournaments and Associations	\$35.8	\$35.9	\$39.7
Golf Charitable Events	\$132.4	\$145.8	\$147.2
Total Core Industries	\$1,634.1	\$1,776.5	\$1,796.8
ENABLED INDUSTRIES			
Golf Real Estate (new construction and realized premium)	\$740.4	\$211.3*	\$319.4
Golf Tourism	\$232.5*	\$313.9*	\$250.3
Total Enabled Industries	\$972.9	\$525.2	\$569.7
TOTAL GOLF ECONOMY	\$2,607.0	\$2,301.6	\$2,366.5
TOTAL DIRECT IMPACT FOR IMPACT ANALYSIS**	\$2,243.9	\$2,032.4	\$2,012.2

Note: * TEconomy recalculated 2011 Golf Course Capital Investment, 2007 and 2011 Golf Tourism expenditures, and the 2011 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. This follows the same methodological approach as the 2007 and 2011 studies.

Source: TEconomy Partners, LLC, 2016 calculations. SRI International, 2007 and 2011 calculations.

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*.² Adoption of the WGF's golf industry impact framework³ 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

² 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>.

³ 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.

Data and Estimations

To estimate North Carolina 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, and other tourism surveys and studies commissioned by Visit North Carolina, a unit of the Economic Development Partnership of North Carolina.

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 were 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 North Carolina economy.

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

Finding

Golf facilities generate significant economic activity through their employment and operating expenditures. North Carolina’s 533 golf facilities generated \$1.126 billion in operating revenue in 2016. This is down slightly from \$1.155 billion in 2011, representing a compound annual growth rate of - 0.5%. The decline in this industry segment was driven largely by the decline in the total number of golf facilities: 556 facilities in 2011 down to 533 facilities in 2016. Changes in average revenue for different types of facilities were mixed over this period, with daily fee facilities and resorts experiencing some growth and recovery due to improving overall economic conditions, and privates and municipal facilities experiencing slight declines. In addition to the decline in regulation golf facilities, alternative facilities—particularly miniature golf facilities—also experienced net closures and declines in operating revenue over this period.

Table 1. North Carolina Golf Facility Revenue (\$B):
2007, 2011, and 2016

	2007	2011	2016
Regulation and alternative facilities	\$1.031	\$1.155	\$1.126

Source 2 TEconomy Partners and SRI International. *The North Carolina Golf Economy 2007 and 2011*.

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. TEconomy did the same for alternative facilities, which includes practice ranges, miniature golf, and others.

TEconomy compiled a master list of golf facilities, categorized by type of facility, drawing on facility lists maintained by North Carolina’s golf associations. We compared and validated this list with other sources, such as



the Economic Census, the National Golf Foundation, and the PGA of America (See Table 2). TEconomy used the following number of facilities in its calculations: 164 private facilities and 370 public facilities, which includes 296 daily fee/semi-private facilities, 48 municipal/university facilities, and 25 golf resorts. Note that this is very similar to the National Golf Foundation’s count of 143 private facilities and 369 public facilities. The higher number of privates used by TEconomy is likely due to smaller private clubs in more rural parts of the state that are captured on the Carolinas Golf Association or the Carolinas Chapter of the CMAA member lists, but not in NGF’s facility counts. For alternative facilities, TEconomy included 39 miniature golf facilities and 52 golf ranges based on Economic Census⁴ and PGA of America data.

Table 2. Number of North Carolina Golf Facilities by Type of Facility: 2002-2016

	Private	Public	Daily fee/ Semi-private	Municipal/ University/ Military	Resort	Total
TEconomy 2016	164	370	296	48	25	533
NGF 2016	143	369	344	-	25	512
NGF 2012	141	393	362	-	31	534
NGF 2007	157	385	359	-	26	542
NGF 2002	158	400	372	-	28	558
Economic Census 2012	110	336	336	-	-	446
Economic Census 2007	115	368	368	-	-	483
Economic Census 2002	120	362	362	-	-	482
SRI 2011	179	377	302	45	30	556
SRI 2007	180	378	291	57	30	558

Source 3 U.S. Economic Census 2002, 2007, and 2012. National Golf Foundation. *U.S. Golf Facilities, 2003-2016*. SRI International. *The North Carolina Golf Economy 2007 and 2011*.

For average facility revenue, TEconomy used a number of different data collection approaches. Working with North Carolina’s allied golf associations, TEconomy developed and implemented an online survey that was sent to 425 out of the 534 total North Carolina golf facilities for whom email contacts were available. 103 facilities responded for a 24% response rate. We then collected revenue data for 159 facilities via the D&B Hoovers company database and for 50 private and other facilities via 990 tax filings. In total, TEconomy collected revenue

⁴ The 2012 Economic Census is the latest available. The next Economic Census will be conducted in 2017, with data publicly released a couple years after that.



data for a total of 312 facilities out of a total of 533 facilities. Table 3 shows average facility revenue by type of facility for 2016 and previous years.

TEconomy used \$4.070 million for private facilities, down from \$4.303 million in 2011; \$1.354 million for daily fee facilities, up from \$1.046 million in 2011; \$966,445 for municipal/university/military facilities, down from \$988,244; and \$2.979 million for resorts, up from \$2.167 million in 2011.

Table 3. North Carolina Average Golf Facility Revenue by Type: 2002-2016

	Private	Daily fee/ Semi-private	Municipal/ University/ Military	Resort
TEconomy 2016	\$4,070,027	\$1,354,281	\$966,445	\$2,979,118
Economic Census 2012	\$3,160,345	\$1,303,315	-	-
Economic Census 2007	\$2,861,582	\$1,454,046	-	-
Economic Census 2002	\$2,187,092	\$1,091,876	-	-
SRI 2011 (PGA 2011)	\$4,302,757	\$1,046,474	\$988,244	\$2,166,877

Source 4 U.S. Economic Census 2002, 2007 and 2012. SRI International. *The North Carolina Golf Economy 2011*. Golf Facility Capital Investment

In 2016, North Carolina golf facilities invested \$105.8 million in capital improvements to existing greens and tees, equipment, and structures, up from \$71.3 million in 2011.⁵ This represents a compound annual rate of growth of 8.2% over this five-year period. Compared to 2011, when many North Carolina facilities placed major capital projects on hold, the 2016 facility survey shows recovery in capital investment. In addition, 2016 saw the construction and opening of a Robbins-designed 18-hole golf course at Compass Pointe, near Wilmington, and three major 9-hole renovations in other parts of the state. The new course and three major course renovations generated an additional \$21.5 million of economic activity, up from \$18.9 million in 2011, representing growth of 2.6% per year.

⁵ Revised calculation, previous \$67.4



Table 4. North Carolina Golf Facility Capital Investment (\$M): 2007, 2011, and 2016

	2007	2011	2016
Existing Facilities	\$62.2	\$71.3	\$105.8
New Course Construction	\$91.0	\$18.9	\$21.5

Source 5 TEconomy Partners and SRI International. *The North Carolina Golf Economy 2007 and 2011*.

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. Data is reported by GCSAA region and is no longer available at the state level. Therefore, TEconomy included a capital investment question on its North Carolina golf facility survey. TEconomy used the reported average capital investment figures from its survey for privates, resorts, and municipals/military university golf facilities. We used the GCSAA Southeast Region median reported capital investment for daily fees. TEconomy calculated a weighted average of \$198,468 in capital investment by North Carolina golf facilities in 2016 compared to a weighted average of \$128,154 in 2011. This is line with the GCSAA's estimate of \$154, 268 in capital investment for the Southeast Region (which includes Alabama, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee), up from \$81,822 in 2011.⁶

For new course construction, the National Golf Foundation reports the number of new golf courses under construction and the number of new golf facility openings each year as part of its annual *U.S. Golf Facilities* publication. In 2016, NGF estimated there was one new 18-hole equivalent golf course that was under construction in North Carolina. 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, but the most recent data is from 2011. In 2016, North Carolina has one new golf course under construction, the Robbins-designed 18-hole course at Compass Pointe. Additionally, there were three courses undergoing major renovations in 2016 at the Country Club of Asheville (Donald Ross Course), the Country Club of North Carolina (North Course),

⁶ Golf Course Superintendents Association. 2011 and 2015 data from the Capital Budget and Labor Survey.



and the Carmel Country Club of Charlotte (North Course). TEconomy conducted interviews and online research to collect data on the construction cost for each of the three renovations and the new 18-hole course at Compass Pointe.



Golf-Related Supplies

Consumer purchases of golf apparel, golf equipment, and accessories drive significant economic activity. North Carolina retailers earned \$76.9 million on \$182.6 million of on-course and off-course sales in 2015⁷, up from \$72.0 million on \$179.5 million of golf-related consumer goods purchases in 2011. This represents a 1.3% compound annual growth rate. Retail sales of golf club sets and golf apparel made gains, while sales of golf balls and individual clubs declined. In addition to retail sales, North Carolina is home to some major golf-related manufacturers. For example, John Deere Turf Care, located in Fuquay-Varina, manufactured its 500,000 ZTrak™ mower in 2015. The facility manufactures golf mowers for the global market. Similarly, golf grip designer and manufacturer Golf Pride (owned by Eaton Corporation) also has its headquarters and R&D facility in North Carolina. Home-grown startups, such as Peter Millar and Stitch Golf, design high-end apparel and golf bags. The state is also home to custom club and custom golf car manufacturers and others. These North Carolina-based companies generated an estimated \$174.2 million in out-of-state, value-added shipments in 2016. This is essentially the same as the \$174.1 million in 2011, reflecting recovery in manufacturing activity for some companies following the recession of 2008-2010, but the loss of the Jacobsen turf care facility (owned by Textron) in Charlotte due to consolidation and relocation to Textron's Georgia facility.

Table 5. North Carolina Golf-Related Supplies Revenue (\$M): 2007, 2011, and 2016

	2007	2011	2016
Retail Sales (Margin)	\$205.1 (\$81.6)	\$179.5 (\$72.0)	\$182.6 (\$76.9)
Manufacturing	\$78.8	\$174.1	\$174.2

Source 6 TEconomy Partners and SRI International. *The North Carolina Golf Economy 2007 and 2011*.

Approach

What is measured:

This segment captures both: (1) the net revenue (known as retail margin) that accrues to North Carolina retailers from spending by golfers on golf equipment, golf shoes, and golf apparel and (2) the manufacture of these goods by North Carolina companies. In addition to the manufacture of golf-related consumer goods, this segment captures the manufacture of golf cars, golf course accessories, and turf maintenance equipment. Like golfers, golf facilities also make purchases of goods to facilitate the game and facility operations.

⁷ 2015 data are the latest available from the National Sporting Goods Association at the time of this study.



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 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 North Carolina's share of 18-hole equivalent facilities for the South Atlantic Central Region.

The estimation of economic impact is based upon the retail margin that accrues to North Carolina companies that sell golf equipment and apparel. The U.S. Census Bureau's Annual Retail Trade Survey reports the retail margin for different industry sectors. TEconomy used the most recent retail margin available for sporting goods stores (42.1% in 2014, up from 40.1% in 2006) to estimate the retail margin accruing to North Carolina companies. The retail margin is the net revenue accruing to the business after paying for the cost of goods from the wholesaler or manufacturer.

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' Dun & Bradstreet database, as well as TEconomy estimates developed based on analysis of annual reports and interviews with company representatives.

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 \$174.2 million. The IMPLAN data and modeling software calculates economic impact based on the value added for manufacturing, i.e., the company's wholesale revenue minus the cost of production inputs.



Tournaments, Associations & Charitable Events

Finding

Tournaments and Associations: In 2016, North Carolina hosted four professional golf tournaments. These included: two PGA TOUR events, the Wells Fargo Championship (played at Quail Hollow in Charlotte) and the Wyndham Championship (played at Sedgefield Country Club in Greensboro); one Champions Tour event, the SAS Championship, played at Prestonwood Country Club in Cary; and one Web.com Tour event, the Rex Hospital Open, played at TPC Wakefield Plantation in Raleigh. North Carolina hosted one less major golf championship in 2016 compared to 2011. In addition to hosting championship events, North Carolina hosts junior, senior, and amateur tournaments organized by its state golf associations. These state golf associations also serve as professional organizations on behalf of their members. Major associations include the Carolinas Golf Association and Foundation, the Carolinas Section of The PGA, the Carolinas Golf Course Superintendents Association, the Carolinas Club Managers Association, and the North Carolina Chapter of the National Golf Course Owners Association. The First Tee, a national junior golf development program, has chapters in Brunswick County, the Greater Charlotte region, the Sandhills, and the Triangle. The Turf Council of North Carolina supports continuing education, university research and extension programs, environmental stewardship, and advocacy. Total expenditures stemming from the four major golf championships hosted by North Carolina, as well as golf association-supported tournament and member activities generated \$39.7 million in 2016, up from \$35.9 million in 2011, reflecting a compound annual growth rate of 2.1%.⁸

Charitable Events: Charitable golf events serve as important fundraisers for many state and local charitable organizations. In 2016, North Carolina golf facilities hosted charitable events that generated \$147.2 million in in-kind contributions by golf facilities and net proceeds raised for beneficiary organizations, up from \$145.8 million in 2011, reflecting a 0.2% compound annual growth rate. This is in line with a comparable CAGR at the national level of 0.3%. This includes charitable monies raised at both championship events and at the club level. On the high end, the Wells Fargo Championship played at the Quail Hollow Club in Charlotte raised approximately \$1.5 million in net proceeds in 2016 for Teach for America, and the Wyndham Championship raises \$1 million annually for a variety of charities that include the Crosby Scholars college access program for underprivileged youth and “Birdies fore Backpacks,” which provides backpacks of food to children in the Piedmont Triad region. At the club level, examples include the Hope for the Warriors Invitational played at River Landing in Wallace, NC, that raised \$212,000 for combat-wounded service members and their families, and the Save Injured Kids Golf Classic, held at the Sapona Ridge Country Club in Lexington, that raised over \$150,000 to benefit the Childress Institute for

⁸ This growth was largely driven by better data availability for association expenditures and marginal net growth in tournament revenue despite the loss of one championship tournament.



Pediatric Trauma. Many other North Carolina golf clubs generate smaller, but highly impactful sums for local hospitals, hospices, youth development organizations, colleges, churches, etc.

North Carolina Tournaments, Associations & Charitable Giving (\$M): 2007, 2011 and 2016

	2007	2011	2016
Tournaments and Associations	\$35.8	\$35.9	\$39.7
Charitable Events	\$132.4	\$145.8	\$147.2

Approach

What is measured: Direct expenditures related to hosting professional tournaments, total expenditures on tournaments and other activities by state golf associations, and charitable monies raised via golf events. The PGA TOUR, the PGA of America, the USGA, and the LPGA organize professional golf championship events across the country. State golf associations organize junior, senior, and amateur tournaments, and 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 North Carolina’s golf facilities.

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 2016 charitable giving survey.⁹ The national study of charitable giving 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 raised 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.

⁹ National Golf Foundation (2017). *Estimating the Charitable Impact of Golf*. January 2017.



Golf Real Estate

Golf courses provide walkable open spaces and recreation, making them a key amenity in many residential communities. New golf-related real estate construction generated \$218.1 million in 2016, up from \$155.3 million in 2011, representing a compound annual growth rate of 7.0 percent. North Carolina’s economy and the real estate market overall were much stronger in 2016 compared to 2011. Examples of golf communities with considerable build-out activity (i.e., more than 100 new homes under construction) include 12 Oaks in Holly Springs; Anderson Creek in Spring Lake, near Fort Bragg; Brunswick Forest at Cape Fear National, near Wilmington; Connetsee Falls in Brevard, near the Nantahala National Forest; and St. James Plantation in Southport, near Bald Head Island. Several other golf communities also had active new home construction.

There were an estimated 181 golf communities in North Carolina in 2016, up from 168 golf communities in 2011.¹⁰ TEconomy estimates the “golf” premium, the additional amount a buyer is willing to pay to purchase a home located on a golf course or within a golf community, was \$101.3 million in 2016. This is up from an estimated golf premium of \$56.0 million¹¹ in 2011, reflecting a strong recovery in existing golf home sales and growth in the number of golf communities. Growth in the calculated golf premium (12.6 percent per year) closely tracks recovery and growth in total existing home sales in North Carolina during the same time period.

Table 7. North Carolina Golf Real Estate (\$M): 2007, 2011, and 2016

	2007	2011	2016
Golf Home Construction	\$571.9	\$155.3	\$184.0
Existing Home Sales Golf Premium	\$168.5	\$56.0*	\$101.3

Source 7 TEconomy Partners and SRI International. *The North Carolina Golf Economy 2007 and 2011*. * 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

¹⁰ National Golf Foundation. *2012 and 2017 Golf Facilities in the U.S.*

¹¹ The calculation of the \$56.0 million golf premium generated through existing home sales is based on the use of the North Carolina Association of Realtors home sales data rather than the National Association of Realtors data. The NAR data reported a much higher level of home sales which resulted in a much higher turnover rate (3.12%) and premium calculation in 2011 (\$94.3 million). The NAR no longer reports state-level home sales data, and this function has been pushed out to the state realtor associations. Therefore, TEconomy recalculated the 2011 premium based on a revised turnover rate (1.85%) using the NCAR total home sales data for 2011.



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 North Carolina golf task force and 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 North Carolina’s 181 existing golf communities by the average number of housing units per golf course by the home turnover rate. TEconomy estimates that in 2016, the home turnover rate (percentage of homes sold relative to the total housing stock) was 3.1 percent in North Carolina up from 1.9 percent in 2011.



Golf Tourism

Direct Impact

Golf is a popular outdoor recreational activity and spectator sport that spurs travel—both day trips and extended vacations. In addition to business and leisure travel, golf drives significant tourism activity as a spectator sport. The Wells Fargo Championship and Wyndham Championship have both drawn approximately 30,000 spectators per day in recent years, with the Wyndham setting a record by attracting 143,000 spectators over the four-day tournament in 2015. Junior, senior, and other amateur and member-guest tournaments also bring visitors to different parts of the state. In 2016, TEconomy estimates that North Carolina's golf-related tourism expenditures totaled \$250.3 million. This is down from \$313.9 million in 2011 and represents a - 4.4% compound annual growth rate, due largely to a full percentage point decline in the number of overnight visitors who said they played golf while on a trip.¹² This metric should be tracked in future years to see if it is a survey response outlier or a trend.

Table 7. North Carolina Golf Tourism (\$M): 2007, 2011, and 2016

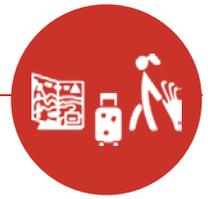
	2007	2011	2016
Golf Trips	1,020,303	1,155,454	950,076
Average Spending per Trip (\$)	\$263/\$57	\$288/\$74	\$285/\$62
Overnight trip/Day trip			
Total Travel Expenditures (\$)	\$232,462,491	\$313,888,791	\$250,302,409

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 visitors conducted or commissioned by state departments of tourism. Visit North Carolina, formerly the North Carolina Division of Tourism, Film, and Sports Development, contracted with the research company TNS for data on North Carolina visitors. TNS has been collecting these data for North Carolina via survey since 2006. The data show that total domestic visitor trips

¹² Total North Carolina overnight visitor trips grew from 44.22 million in 2011 to 54.53 million in 2015 (latest available data at time of this study).



reached 54.5 million in 2015 (latest available data) up from 44.2 million in 2011 representing a 4.3% compound annual growth. This is split into approximately 42.8 million overnight trips and 11.7 million day trips.

By contrast, the share of people who reported playing golf while on a North Carolina overnight trip fell from 3.1% of overnight trips in 2011 to 2.0% of overnight trips in 2015. Therefore, despite strong growth in overnight trips over this period, the number of overnight golf trips fell from 1,067,299 to 856,380. The percentage of people who reported playing golf while on a day trip also fell, but the percentage decline was smaller than the overall growth in day trips. Golf day trips grew from 88,155 in 2011 to 93,696 day trips in 2015 reflecting improving economic conditions. However, the overall decline in people who played golf on overnight trips resulted in total golf trips (both overnight and day trips) falling from 1,155,454 to 950,076 trips.

For average trip spending, TEconomy also drew on TNS data published in Visit North Carolina's *2015 North Carolina Visitor Profile*. The survey found average person trip spending of \$285 for overnight trips, and \$62 for day trips. The average party size was approximately 2.2 people, and the average trip length was 3 days for overnight trips. Therefore, average spending for a travel party was \$628 for a two-night, three-day trip.

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 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 specific economic activity stemming from 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 the of golf industry's and related supplier firms' 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 expenditure or 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 North Carolina-specific model and data from IMPLAN to create a golf industry-specific model. 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 in the state economy. An advantage of IMPLAN is that it also estimates total state/local and federal taxes generated by the golf industry in the form of income, sales, property, and other taxes.

Most, but not all, of North Carolina'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 retail (e.g., shopping for gifts/souvenirs and gasoline purchases) 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. North Carolina Golf's Total Economic Impact in 2016 by Industry Segment (\$ millions)

	Output	Employment	Compensation	State and Local Taxes
CORE INDUSTRIES				
 Golf Facility Operations	\$2,058.80	25,251	\$678.29	\$89.90
 Golf Course Construction	\$38.66	362	\$13.65	\$1.33
 Golf-Related Supplies	\$863.35	4,408	\$203.34	\$27.78
 Major Golf Tournaments and Associations	\$74.81	581	\$34.75	\$3.53
Total Core Industries	\$3,035.62	30,601	\$930.04	\$122.53
ENABLED INDUSTRIES				
 Golf Residential Construction	\$396.47	2,920	\$126.28	\$12.07
 Golf Tourism	\$305.81	3,158	\$99.38	\$17.18
Total Enabled Industries	\$702.28	6,077	\$225.66	\$29.26
TOTAL	\$3,737.90	36,678	\$1,155.70	\$151.79

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina state model. Note: rounded figures.

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Appendix: 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	18,756	\$401,947,487	\$629,113,775	\$1,125,786,624	\$47,252,548	\$95,045,880
Indirect Effect	2,966	\$129,525,107	\$256,786,597	\$452,504,104	\$18,958,107	\$33,766,862
Induced Effect	3,529	\$146,821,989	\$272,511,161	\$480,513,459	\$23,686,010	\$37,376,270
Total Effect	25,251	\$678,294,583	\$1,158,411,533	\$2,058,804,187	\$89,896,665	\$166,189,012
Multiplier	1.35	1.69	1.84	1.83		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina 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	246	\$8,341,908	\$10,447,979	\$21,500,000	\$508,045	\$1,594,066
Indirect Effect	45	\$2,366,419	\$3,957,124	\$7,520,445	\$343,695	\$567,863
Induced Effect	71	\$2,946,091	\$5,469,655	\$9,640,649	\$476,019	\$750,131
Total Effect	362	\$13,654,418	\$19,874,758	\$38,661,094	\$1,327,759	\$2,912,060
Multiplier	1.47	1.64	1.90	1.80		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina 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	2,410	106,671,930	220,149,517	550,383,576	13,279,752	29,083,454
Indirect Effect	940	52,662,064	89,344,171	168,936,022	7,395,817	12,726,855
Induced Effect	1,058	44,008,295	81,685,657	144,025,707	7,101,320	11,203,464
Total Effect	4,408	203,342,289	391,179,344	863,345,305	27,776,889	53,013,773
Multiplier	1.83	1.91	1.78	1.57		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina 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	319	22,893,880	29,533,485	39,743,783	1,902,698	4,671,534
Indirect Effect	81	4,345,619	6,272,513	10,490,287	413,783	930,196
Induced Effect	181	7,508,741	13,938,724	24,572,729	1,212,328	1,911,686
Total Effect	581	34,748,240	49,744,722	74,806,799	3,528,809	7,513,416
Multiplier	1.82	1.52	1.68	1.88		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina 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	1,619	\$68,921,390	\$107,186,362	\$218,097,904	\$3,661,429	\$14,806,229
Indirect Effect	645	\$30,103,021	\$47,580,316	\$89,178,821	\$4,007,657	\$6,998,847
Induced Effect	656	\$27,256,616	\$50,602,420	\$89,194,605	\$4,403,202	\$6,939,889
Total Effect	2,920	\$126,281,026	\$205,369,097	\$396,471,330	\$12,072,288	\$28,744,965
Multiplier	1.80	1.83	1.92	1.82		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina state model

Table A1-6. Golf Tourism

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	2,207	\$57,369,740	\$95,145,557	\$169,188,054	\$11,063,047	\$13,993,669
Indirect Effect	434	\$20,517,010	\$36,270,565	\$66,293,639	\$2,652,464	\$5,013,860
Induced Effect	517	\$21,488,902	\$39,888,231	\$70,325,349	\$3,468,365	\$5,470,735
Total Effect	3,158	\$99,375,653	\$171,304,353	\$305,807,041	\$17,183,876	\$24,478,264
Multiplier	1.43	1.73	1.80	1.81		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina state model

Table A1-7. Total, North Carolina Golf Industry

Impact Type	Employment	Labor Income	Value Added	Output	State & Local Tax Revenues	Federal Tax Revenues
Direct Effect	25,557	\$666,146,335	\$1,091,576,674	\$2,124,699,941	\$77,667,520	\$159,194,835
Indirect Effect	5,110	\$239,519,241	\$440,211,286	\$794,923,319	\$33,771,522	\$60,004,482
Induced Effect	6,012	\$250,030,633	\$464,095,847	\$818,272,498	\$40,347,243	\$63,652,177
Total Effect	36,678	\$1,155,696,209	\$1,995,883,808	\$3,737,895,757	\$151,786,285	\$282,851,494
Multiplier	<i>1.44</i>	<i>1.73</i>	<i>1.83</i>	<i>1.76</i>		

Source: TEconomy Partners, LLC analysis using IMPLAN North Carolina state model