



THE NORTH CAROLINA GOLF ECONOMY

FULL REPORT

This report was commissioned by
GOLF 20/20 for the
North Carolina Alliance for Golf
and prepared by SRI International





The North Carolina Golf Economy

Published April 2013 through an agreement with



CONTENTS

STUDY OVERVIEW.....	1
ANALYTICAL FRAMEWORK	1
A. Golf Industry Cluster Definition.....	1
B. Data Sources.....	3
THE SIZE OF NORTH CAROLINA’S GOLF ECONOMY	5
A. Core Industries	5
Golf Facility Operations	5
Golf Facility Capital Investments	6
Golf-Related Supplies	7
Associations, Major Tournaments & Charitable Giving.....	8
B. Enabled Industries	11
Golf Real Estate	11
Golf-Related Hospitality/Tourism.....	12
GOLF’S ECONOMIC IMPACT IN NORTH CAROLINA.....	14
DETAILED METHODOLOGY & DATA SOURCES.....	17
A. Golf Facility Operations	17
B. Golf Facility Capital Investments	21
C. Golf-Related Supplies	23
D. Associations, Major Tournaments & Charitable Giving.....	26
E. Golf Real Estate	27
F. Golf-Related Hospitality/Tourism.....	29
G. Golf’s Economic Impact.....	31
BIBLIOGRAPHY	33

Acknowledgements

This report was prepared by SRI in agreement with GOLF 20/20, the Carolinas Golf Course Superintendents Association, the Carolinas Golf Association, the Carolinas Section of The PGA of America, the Carolinas Chapter of the Club Managers Association of America, and the North Carolina Chapter of the Golf Course Owners Association. In addition, support for this report comes from the following national allied organizations: CMAA, GCSAA, LPGA, NCGOA, PGA of America, PGA TOUR, and USGA.

The North Carolina Golf Economy study was conducted by Nancy Chan, Jennifer Ozawa, Peter Ryan, Chris Schreck, and Liz Tennant at SRI International with contributions from individuals representing certain North Carolina Associations of Golf (in alphabetical order): Corinne Grimaldi (CMAA-C), Tim Kreger (CGCSA), Jack Nance, CAE (CGA), Del Ratcliff (PGA), and Ron Schmid (PGA).

ACRONYMS

CGA	Carolinas Golf Association
CGCSA	Carolinas Golf Course Superintendents Association
CPGA	Carolinas Section of The Professional Golfers' Association of America
CMAA	Club Managers Association of America
CMAA-C	Carolinas Chapter of the Club Managers Association of America
GCBA	Golf Course Builders Association of America
GRAA	Golf Range Association of America
GCSAA	Golf Course Superintendents Association of America
LPGA	Ladies Professional Golf Association
NGF	National Golf Foundation
NCGCOA	North Carolina Golf Course Owners Association
NGCOA	National Golf Course Owners Association
PGA	The Professional Golfers' Association of America
USGA	United States Golf Association
WCGA	Women's Carolinas Golf Association
WGF	World Golf Foundation

STUDY OVERVIEW

This report represents the second study estimating the impact of the golf industry on North Carolina's economy. SRI conducted a previous economic impact study for the base year 2007. During the period between the two golf economy studies (2007 and 2011), the North Carolina golf industry endured a significant U.S. economic recession (2007-2009). The effect of this recession can be seen acutely in the decline in golf real estate construction and new course construction between these two periods. By 2011, North Carolina golf facilities were experiencing some recovery, but not at the level of activity in 2007.

SRI estimates that **the North Carolina golf industry generated \$2.3 billion of economic activity in 2011.** This represents an overall decline of 11.2 percent from 2007 (when the estimated size of the golf economy was \$2.6 billion), primarily reflecting a contraction in new golf home and new course construction. Retail sales of golf equipment also declined slightly during this period. Relative strengths were in core golf facility operations, a modest recovery in existing facility capital investment, and nominal growth in golf-related travel relative to 2007, which increased by 12.0 percent, 8.4 percent, and 9.9 percent, respectively. By comparison, inflation grew by 6.6 percent over this same five-year time period.¹ When the indirect and induced economic activity driven by golf's core and enabled industry segments are taken into consideration, SRI estimates that **the game of golf supported approximately \$4.2 billion of total economic activity, nearly 53,000 jobs, and \$1.3 billion of wage income in 2011.**

ANALYTICAL FRAMEWORK

Current economic studies of the golf industry in different states emphasize various factors and outcomes. For example, one may focus largely on the turf industry, while another might examine the impact of sports and recreation-related tourism more broadly. Ideally, one would want to include all the key activities and industries that are enabled by and benefit from the game of golf. To meet this goal, SRI has developed a standardized, economic impact framework that can be employed to measure a comprehensive set of golf-driven industry components. This state-level framework draws on the conceptual model of the golf economy developed in SRI's 2000 national-level *The Golf Economy Report* and the 2005 state-level *The Virginia Golf Economy Report*.

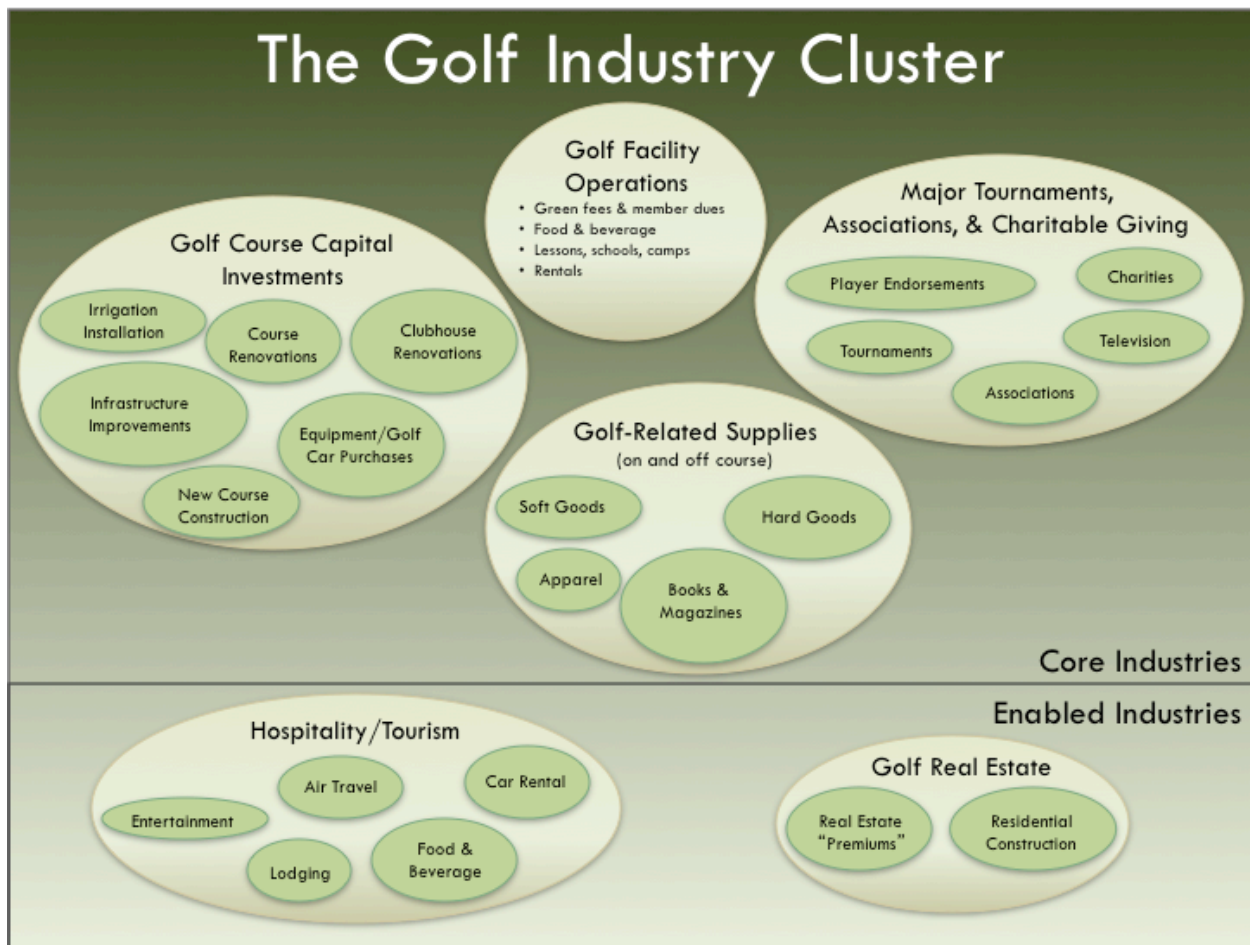
A. GOLF INDUSTRY CLUSTER DEFINITION

To arrive at economic impact, one must first estimate the size of the golf economy in the state. This entails mapping out where the golf industry begins and ends, and then estimating the size of each of these industry segments. We divide the golf industry cluster into two main categories: (1) core

¹ U.S. Bureau of Economic Analysis, GDP Deflator.

industries and (2) enabled industries (see figure below). The golf industry cluster begins with the golf facilities themselves and with those other core industries that produce goods and services used to operate facilities and to play the game: golf equipment and golf apparel manufacturers, golf course architects and course builders, turf maintenance equipment and service providers, and club management services. The game of golf further enables a number of other industries, such as golf-related tourism and real estate development.

We detail these industry segments and estimate their size in the following section. Having defined the core and enabled golf industries, it is possible to estimate the size of each industry segment and to total them for an overall estimate of the size of the golf economy. Multipliers can then be applied to calculate the ripple effects of these economic activities in terms of: (1) impact on total state economic output and (2) impact on total state employment. However, this process is complicated by the fact that, while most of these industries produce golf-related goods and services, the firms themselves may not limit their activities exclusively to the golf industry. For example, Nike produces golf shoes, but also running, tennis, basketball, and other shoes. Therefore, in general, our approach is to include only those firms and sales that are directly attributable to the game of golf. In so doing, we use a number of different estimation techniques to ensure that our final estimates are reasonable and robust.



Moreover, additional data challenges and location factors make estimation more difficult at the state-level than the national-level. For example, many of the major golf equipment manufacturers have production facilities in just a few states. Similarly, several of the major golf association headquarters are located in Florida. The presence of such firms, associations, or a number of well-known courses will change the size of golf’s economic impact in the state considerably. Therefore, one should consider the size of the golf economy and the game’s economic impact in the state in relation to the size of the overall economy and other major industries in that state.

B. DATA SOURCES

SRI developed its framework for measuring state golf economies based on a broad set of existing sources and data. Although there have been several state-level impact studies conducted in the past by numerous golf constituencies, few have used a similar methodology, resulting in very different estimates depending on the golf economy elements included. A great deal of data is collected on the golf economy by many organizations on a regular basis. For example, government agencies, national golf associations, and national associations in the enabled industries collect data on different industry elements periodically—annually, every few years, or every five years. In addition, these data are based on a relatively consistent set of inputs by large numbers of constituents. Therefore, the principal challenges involve acquiring the data, inflating or deflating the estimates for the proper target year, and then combining them to represent the entire golf economy in the target year. The core and enabled industry indicators and data sources we have identified are as follows:

State Golf Economy Indicators and Data Sources		
Indicator	Primary source	Cross-validation source
Golf Facility Operations		
# of golf course facilities by type	PGA Facility Database, multiple years (2006-2011 data)	NGF Facility Database, multiple years; state golf associations; 2007 Economic Census
Avg. revenues by type of facility	PGA Facility Operations Survey, multiple years (2006-2011 data)	2007 Economic Census; National Golf Foundation; state task force
# of rounds by facility type	2006 PGA Compensation Survey (2005 data)	National Golf Foundation
Golf Course Capital Investments		
Avg. capital investment by type of facility	GCSAA Compensation Survey (2005, 2007, 2009, 2011 data)	National Golf Foundation; state task force
# of golf courses under construction in current year	National Golf Foundation (2007-2011 data)	NGF Construction database; state task force
Avg. cost of construction per new course	Golf Course Builders Association of America	State task force; interviews with golf course builders in state

Golf-Related Supplies

Golf-related manufacturing exports	Company annual reports; SEC filings; interviews	Company interviews; state task force
Golf equipment	National Sporting Goods Association (2007-2011 data)	2006 PGA Compensation Survey (2005 data)
Golf apparel	National Sporting Goods Association (2007-2011 data)	2006 PGA Compensation Survey (2005 data)
Golf media	Magazine Publishers of America for golf magazine sales; <i>Bowker Annual of Library and Book Trade Information</i> (2007-2011 data)	Amazon and Barnes & Noble for top golf book sales

Major Tournaments

# of major tournaments held in state	State task force	PGA TOUR, LPGA
Visitor attendance at tournaments, tournament revenues	Major golf associations	State tourism agency; national golf associations; state golf associations

Associations & Charitable Giving

# of major state-level golf associations	State counterparts of national golf associations	State task force
Annual expenditures/budgets	State golf associations	IRS Form 990
Revenues raised through charitable golf events	National Golf Foundation	Sampling of golf professionals and club managers to identify # of tournaments and average amount raised

Real Estate

# of residential golf courses under construction	National Golf Foundation	Online research
# of lots per course	Real estate development site plans; interviews with real estate developers	Real estate agents
Avg. construction costs per home and real estate premium	Interviews with real estate developers	Real estate agents

Hospitality/Tourism

# of golf travelers or # of golf-related trips to the state	TNS Travel America or TIA/D.K. Shifflet & Associates	State department of tourism/recent surveys/studies
Avg. spending per traveler or per trip	TNS Travel America or TIA/D.K. Shifflet & Associates	State department of tourism/recent surveys/studies; National Golf Foundation

THE SIZE OF NORTH CAROLINA’S GOLF ECONOMY

The table below presents SRI’s estimates for the size of each of the six golf industry segments and the overall golf economy in 2007 and 2011. SRI estimates the total size of North Carolina’s golf economy in 2011 was approximately \$2.331 billion, down from \$2.626 billion in 2007. The decline in the North Carolina golf economy was driven primarily by weaknesses in two industry segments: golf real estate and golf course capital investments, primarily new course construction.

Size of North Carolina’s Golf Economy in 2007 and 2011 by Industry Segment (\$ millions)		
	2007	2011
CORE INDUSTRIES		
Golf Facility Operations	\$1,030.8	\$1,154.8
Golf Course Construction and Capital Investments	\$153.2	\$86.4
Golf-Related Supplies (retail margin and manufacturing exports)	\$158.4	\$246.1
Major Golf Tournaments and Associations	\$35.8	\$35.9
Total Core Industries	\$1,378.2	\$1,523.1
ENABLED INDUSTRIES		
Real Estate	\$740.4	\$249.6
Hospitality/Tourism	\$507.8	\$557.9
Total Enabled Industries	\$1,248.2	\$807.5
TOTAL GOLF ECONOMY	\$2,626.4	\$2,330.7

Note: Column sums may not sum due to rounding of individual estimates. Numbers also have not been adjusted for inflation but are expressed as nominal dollars.

A. CORE INDUSTRIES

Golf Facility Operations

At the center of any golf economy lie the golf facilities—the largest component in terms of revenues. The revenue that flows through a golf facility comes primarily from green fees, membership fees, golf cart rentals, lessons, and associated spending on food and beverages. This revenue, in turn, supports a host of supply sectors including golf equipment and apparel designers and manufacturers, food and beverage providers, and turfgrass equipment and maintenance service providers. North Carolina’s 556 golf courses, 52 stand-alone ranges, and 44 miniature golf facilities generated \$1.155 billion of revenue

in 2011. This reflects a nominal increase of 12.0 percent from 2007 total revenues of \$1.031 billion (inflation was 6.6 percent during this same period).

North Carolina Golf Facility Revenues in 2011 (\$ billions)	
Golf Facilities	\$1.126
Practice Ranges & Alternative Facilities	\$0.029
TOTAL¹	\$1.155

Note: ¹ Golf facility revenues exclude on-course merchandise sales, which are included in the Golf-Related Supplies industry segment.

Golf is a sizeable industry, but is even more significant when compared to other popular revenue-generating sports. For example, North Carolina’s golf facilities generate revenues that represent nearly two-thirds of the combined revenue of all other professional spectator sports in the state—auto racing, football, basketball, baseball, and soccer, etc. Spectator sports excluding golf-generated revenues of \$1.792 billion in 2007, or \$1.911 billion in 2011 inflation-adjusted dollars.²

Golf Facility Capital Investments

Golf facilities generate economic impacts beyond operational revenues through investments to upgrade and maintain facilities and infrastructure, and through the construction, expansion, and renovation of courses. These investments create employment in the construction and maintenance industries and often involve the purchase of significant amounts of equipment and supplies from companies within the state. SRI’s estimate of North Carolina’s golf course capital investments is divided into two segments: (1) capital investments at existing facilities and (2) new course construction. Together, North Carolina’s golf facilities made \$86.4 million worth of capital investments in 2011: \$67.4 million of investments at existing facilities and \$18.9 million for the construction of new courses.

By comparison, North Carolina’s golf facilities made \$153.2 million in total capital investment in 2007, which includes \$62.2 million of investments at existing facilities and \$91.0 million for the construction of new courses. (When adjusted for inflation, these figures are \$163.4 million for total capital investments, \$66.3 million at existing courses, and \$97.0 million for the construction of new courses in 2011 dollars.) The sharp decline in new course construction from 2007 to 2011 stems from the financial crisis and economic recession of 2007-09.

² U.S. Census Bureau (2011). *North Carolina: 2007 Economic Census, Arts, Entertainment & Recreation Geographic Series*, July 2011.

North Carolina Golf Course Construction and Capital Investments in 2011 (\$ millions)	
Golf Course Capital Investments¹	\$67.4
New Course Construction	\$18.9
TOTAL	\$86.4

Note: ¹ Only the New Course Construction category is included in the economic impact analysis, because it represents new economic output or activity. Golf course capital investments are typically financed through golf facility revenues, so including both Golf Course Capital Investments and Golf Facility Operations in economic impact analysis would result in double-counting.

Golf-Related Supplies

North Carolina golfers spend significant sums on golf balls, golf clubs, golf apparel, and golf media (books, magazines, DVDs). The economic value that accrues to a state comes from the production of these golf-related goods, as well as retail sales of such items. North Carolina is home to some well-known global companies that design and manufacture golf grips, turf maintenance equipment, and golf apparel in the state—e.g., Golf Pride, Jacobsen, John Deere, and Peter Millar. The value of such products that are sold in North Carolina is already captured in the retail portion of the Golf-Related Supplies segment. However, the proportion of production that is shipped to customers in other states and countries is not. These companies’ value-added shipments are included in our analysis here.

North Carolina Manufacturers’ Value-Added Exports of Golf-Related Products in 2011 (\$ millions)	
TOTAL	\$174.1

In 2011, North Carolina turf maintenance equipment manufacturers were still experiencing lower sales volumes compared to 2007 due to lower capital expenditures by golf facilities during the 2007-09 recession and the weak recovery that followed in 2010. However, these declines were outweighed by the growth and increasing global market share from 2007 to 2011 of other North Carolina companies, notably Golf Pride and Peter Millar. The greater revenue from manufacturing shipments is also due to conservative assumptions made by SRI in 2007 and better data availability for some companies in 2011. North Carolina manufacturers’ total value-added shipment of golf-related products was approximately \$174.1 million in 2011. On the retail side, North Carolina retailers and golf facilities earned approximately \$72.0 million on the sale of \$179.5 million of golf equipment, apparel, and media. In total, the Golf-Related Supplies segment contributed \$246.1 million in revenues to the North Carolina economy in 2011.

By comparison, in 2007, the Golf-Related Supplies segment generated \$158.4 million (or \$168.9 million in 2011 dollars when adjusted for inflation). The total value-added shipment of golf-related products in 2007 was \$76.8 million (or \$81.9 million in 2011 dollars), and the retail margin earned was \$81.6 million (or \$87.0 million in 2011 dollars) on \$205.1 million (or \$218.7 million in 2011 dollars) of golf equipment, apparel, and media.

North Carolina Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2011 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$126.1	\$50.6
Golf Apparel (retail margin)	\$52.5	\$21.0
Golf Media (retail margin)	\$0.9	\$0.4
TOTAL	\$179.5	\$72.0

Note: This includes on-course and off-course purchases of golf equipment, apparel, and media. Column does not sum due to rounding.

Associations, Major Tournaments & Charitable Giving

Associations

Numerous associations represent the game of golf in North Carolina. The largest golf associations represent members from both North Carolina and South Carolina, including the Carolinas Section of The PGA of America, the Carolinas Golf Association, the Carolinas Golf Course Superintendents Association, the Carolinas Chapter of the Club Managers Association of America, and the Women’s Carolinas Golf Association. Also very active are state-level and regional golf associations such as the North Carolina Golf Course Owners Association, the North Carolina Women’s Golf Association, several chapters of the Executive Women’s Golf Association, as well as junior and senior golf associations. The First Tee, which introduces youth to the game and values of golf, has several chapters in North Carolina including Brunswick County, Charlotte, Cleveland County, the Lake Norman Region, the Sandhills, the Triad³, and the Triangle⁴. The Turfgrass Council of North Carolina promotes the state’s turfgrass industry through continuing education, career development, support of state university research and extension programs, environmental stewardship, and advocacy.⁵ The Carolinas Golf Foundation, which was formed by the Carolinas Golf Association in 1977, provides funding for turfgrass research projects, scholarships for

³ The Triad region includes the cities of Greensboro, Winston-Salem, and High Point.
⁴ The Triangle region includes the cities of Chapel Hill, Durham, and Raleigh.
⁵ Turfgrass Council of North Carolina, <http://www.ncturfgrass.org/about.php>, accessed January 28, 2013.

students aspiring to become golf superintendents and turfgrass managers, and junior and women's golf events.⁶

In 2011, North Carolina golf associations generated approximately \$4.9 million of expenditures. In 2007, SRI estimated expenditures by North Carolina associations to be \$3.9 million (or \$4.2 million in 2011 dollars when adjusted for inflation)—most of the increase in the 2011 estimate is attributed to the more comprehensive inclusion of smaller local golf associations in GuideStar, which is a large database of nonprofit organizations' 990 income tax filings.

Major Tournaments

In 2011, North Carolina hosted five major golf championships: two PGA TOUR events, two Champions Tour events, and one Nationwide Tour event. Formerly known as the Wachovia Championship and the Quail Hollow Championship, the Wells Fargo Championship is a PGA TOUR event played at Quail Hollow Club in Charlotte, NC. Quail Hollow is known to have one of the tougher finishes: holes 16, 17, and 18 are commonly known as the "Green Mile," with the 17th hole annually ranking among the 10 toughest par-3s on the PGA TOUR.⁷ Established in 1938, the Wyndham Championship, another PGA TOUR event, was played at Sedgefield Country Club in Greensboro, NC, in 2011. The Wyndham Championship is the last PGA TOUR event before the Playoffs for the FedEx Cup. The Greater Hickory Classic at Rock Barn is a Champions Tour event played at the Rock Barn Golf & Spa resort in Conover, NC, and the SAS Championship, another Champions Tour tournament, is held annually at the Prestonwood Country Club in Cary, NC. The Rex Hospital Open, a Nationwide Tour event, is hosted at the TPC Wakefield Plantation in Raleigh, NC.

Altogether, the five golf events in North Carolina generated approximately \$31.0 million in 2011, excluding the tournament purse and costs for TV broadcasting. In comparison, the five major tournaments in 2007 generated \$31.9 million (or \$34.0 million in 2011 dollars when adjusted for inflation).

North Carolina Major Tournament & Association Revenues in 2011 (\$ millions)	
Major Tournaments	\$31.0
Associations	\$4.9
TOTAL	\$35.9

⁶ Carolinas Golf Association / Carolinas Golf Foundation, <http://www.carolinagolf.org/mission>, accessed January 28, 2013.

⁷ *Charlotte Observer*, "Quail Hollow's Green Mile gets makeover for Wells Fargo tourney," April 21, 2012. <http://www.charlotteobserver.com/2012/04/21/3189706/quail-hollows-green-mile-gets.html#storylink=cpy>.

Charitable Giving

North Carolina's golf industry makes substantial contributions to a variety of charities. At the championship level, the Wells Fargo Championship has raised more than \$14.8 million for charity since its inception, and contributed \$1.1 million in 2011 to Charlotte-area organizations, including the tournament's primary charity, Charlotte's Teach For America, as well as Levine's Children's Hospital and Charlotte-Mecklenburg YMCA, educational foundations, youth organizations, outreach programs, and domestic violence education.⁸ The SAS Championship has donated more than \$3 million to Triangle-area charities since it began in 2001, and in 2011 benefited the YMCA of the Triangle's after school tutoring program, Y-Learning.⁹

At the local-level, The Jimmy V Celebrity Golf Classic has donated close to \$15 million since its inception to the V Foundation for Cancer Research which makes grants to fund cancer research and related programs; in 2011, proceeds from the event, which was played that year in Raleigh at the Lonnie Poole Golf Course on North Carolina State University's Centennial Campus, benefited the University of North Carolina's Lineberger Comprehensive Cancer Center.¹⁰ The 3rd Annual North Carolina Charity Golf Tournament held at North Shore Country Club in Sneads Ferry raised \$50,000 in 2011 to benefit families of patients undergoing treatment for leukemia/lymphoma at the UNC Lineberger Cancer Center in Chapel Hill.¹¹ In 2011, the 2nd Annual Forsyth Country Club Celebrity Pro-Am in Winston-Salem raised \$80,000 for The First Tee of the Triad.¹²

Golf course owners, operators, and golf professionals are happy to serve as access points for annual fundraising by local service organizations. In total, SRI estimates that the amount of charitable giving attributed to the game of golf in North Carolina was \$145.8 million in 2011, up 10.1 percent from 2007

⁸ Wells Fargo Championship, "2011 Wells Fargo Championship Raises \$1.1 Million for Charitable Contributions," October 11, 2011.

http://www.wellsfargochampionship.com/Media/PressReleases/PressReleases_2011/2011CharitableDonationAnnouncement_copy1.aspx.

Wells Fargo Championship, "2012 Wells Fargo Championship Raises \$1.3 Million for Charity," November 14, 2012.

http://www.wellsfargochampionship.com/Media/PressReleases/PressReleases_2012/2012_WellsFargoChampionship_Charity_Donation.aspx.

⁹ WRAL, "SAS: Cary golf tournament boosts local economy," September 19, 2011.

<http://www.wral.com/business/story/10155135/>.

¹⁰ Jimmy V Celebrity Golf Classic for Cancer Research, "Where the Money Goes," accessed February 5, 2013.

<http://www.golfclassic.org/about/where-money-goes.html>. *Kingdom Magazine*, "Anticipation Builds for Jimmy V Celebrity Golf Classic," August 9, 2011. <http://arnieskingdom.com/news/anticipation-builds-for-jimmy-v-celebrity-golf-classic#.URFYZuhB7C9>.

¹¹ "ProSol Teams Up with PS Charities to Raise \$50,000 at NC Golf Tourney," September 25, 2011.

<http://www.prosol1.com/prosol-teams-up-with-ps-charities-to-raise-50-000-at-nc-golf-tourney>.

¹² Green Resource, "The First Tee of the Triad," June 13, 2011. http://www.green-resource.com/wp-content/themes/greenresource/uploads/featured_news/news_06132011.pdf.

(or 3.3 percent when adjusted for inflation). In 2007, SRI estimated charitable giving to be \$132.4 million (or \$141.2 million in 2011 dollars).

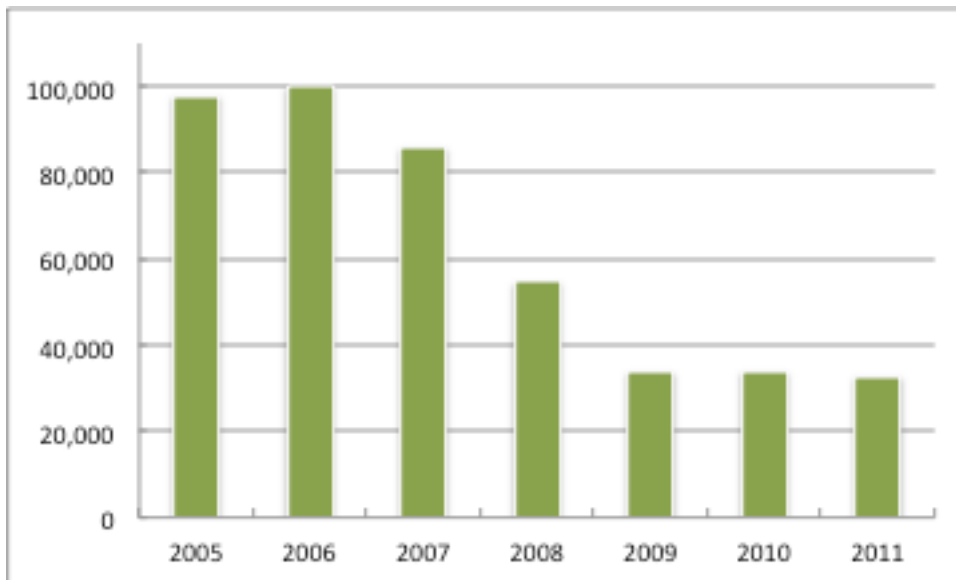
North Carolina Golf Industry's Charitable Giving in 2011 (\$ millions)	
TOTAL	\$145.8

B. ENABLED INDUSTRIES

Golf Real Estate

Real estate developers use amenities to attract new home buyers, and golf is a key amenity in many parts of the state. However, North Carolina new golf home construction followed the steep decline in the state's overall housing market, which peaked in 2006 in terms of both residential building permits and existing home sales. Compared to 2007 (the base year of the previous North Carolina golf economy study), total statewide residential building permits had declined 61.8 percent from 85,777 permits in 2007 to 32,804 permits in 2011. Figure 1 shows that, in the last three years, the number of North Carolina permits issued has remained below 35,000 per year—only a third of the 2007 level.

Figure 1 North Carolina Residential Building Permits Issued, 2005-2011



Source 1 US Census Bureau (2012). Building Permits Survey.

Consequently, in 2011, new home construction remained at record lows in many parts of North Carolina. SRI identified approximately 20 golf communities with new residential construction in 2011. Only a handful of houses were built at many of these courses, but there were exceptions: a much larger

number of homes were under construction at Heritage Wake Forest in Raleigh, Anderson Creek Golf Club in Spring Lake, and Olde Liberty Golf and Country Club in Youngsville.

SRI estimates that new golf home construction generated \$155.3 million in 2011. Furthermore, in 2011, there were approximately 168 golf communities in North Carolina, and SRI estimates the “golf” premium associated with the sale of real estate in these developments to be \$94.3 million.¹³ 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. Both new golf-related residential construction and the realized golf premium were down considerably compared to 2007; new golf-related residential construction totaled \$571.9 million in 2007 (or \$609.9 million in 2011 dollars when adjusted for inflation), and the golf premium was \$168.5 million (or \$179.7 million in 2011 dollars). The decline reflects the lingering weakness in the post-recession housing market.

North Carolina Golf Real Estate Revenues in 2011 (\$ millions)	
Golf-Related Residential Construction	\$155.3
Realized Golf Premium	\$94.3
TOTAL	\$249.6

Note: The sale of existing homes is considered a transfer of assets rather than new economic output, so the golf premium that is realized in the sale of an existing home is not included in the economic impact analysis.

Golf-Related Hospitality/Tourism

Across the country, golf has enjoyed increasing popularity among travelers, whether it is the primary motivation for a trip or is connected to other recreational time spent with friends and family, or business colleagues. In North Carolina, golf is an important tourism segment, alongside trips to the beach, mountains, and historic sites. North Carolina’s golf resorts help the state attract conferences and business meetings, and both amateur and professional golf tournaments draw people to courses in different parts of the state. The state’s “Visit North Carolina” website prominently features golf as a key tourist activity (<http://www.VisitNC.com>).

In 2011, SRI estimates golf-related tourism spending in North Carolina was \$557.9 million. This is based on the following estimates of golf trips and associated expenditures by North Carolina residents and non-residents: (1) an estimated 71,100 *day* trips with average golf trip spending of \$74 per person and (2) an estimated 905,200 *overnight* trips (which in North Carolina average 3.5 nights) with average trip

¹³ North Carolina existing home sales were down approximately 36 percent in 2011 from 2007 levels (80,184 existing homes sold in 2011 compared to 125,364 existing homes sold in 2007), according to North Carolina Association of Realtors data.

spending of \$611 per person.¹⁴ This represents an increase in real terms relative to golf-related tourism spending in 2007, which was \$507.8 million (or \$541.5 million in 2011 dollars, when adjusted for inflation). The growth in golf-related tourism spending is consistent with the overall growth in domestic visitor spending in North Carolina, as the economy recovered from the recession of 2007-09.¹⁵

North Carolina Golf-Related Travel Expenditures in 2011	
# of day trips	71,100
Average travel \$ per day trip	\$73.81
# of overnight trips	905,200
Average travel \$ per overnight trip	\$610.57
Total	\$557.9 million

Note: Numbers do not sum due to rounding.

¹⁴ All trips refer to “person-trips” which simply means the count of the total number of people taking a trip. Therefore, 71,100 day trips should be interpreted as 71,100 people who took a day trip. Also note that in 2011 overnight visitors spent an average of 3.5 nights in North Carolina. Source: TNS TravelsAmerica/North Carolina Division of Tourism, Film & Sports Development (2012), *2011 North Carolina Visitor Profile*. Page 3.

¹⁵ Total domestic visitor spending in North Carolina grew from \$16.51 billion in 2007 to \$18.41 billion in 2011. Source: US Travel Association (2012), *The 2011 Economic Impact of Travel on North Carolina Counties*, as quoted in the North Carolina’s Division of Tourism, Film & Sports Development brief, “FAST FACTS: 2011 Impact of Visitor Spending,” <https://www.nccommerce.com/tourism/research/nc-fast-facts>.

GOLF'S ECONOMIC IMPACT IN NORTH CAROLINA

Golf's impact on North Carolina's economy includes both the direct effects of economic activity in the core and enabled golf industries, as well as the indirect and induced (or multiplier) effects on other industries in 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 throughout the economy. For example, a fraction of each dollar spent at a golf course is, in turn, spent by the golf course to purchase goods and services for golf course operation—these are indirect effects. In addition, golf course employees spend their disposable income on personal goods and services, and this stimulates economic activity in a myriad of other industries—these are induced effects.

Therefore, golf's total (direct plus multiplier) economic impact includes both the direct employment and wage income of those employed in golf-related industries, as well as the secondary employment and wages supported in other sectors of the economy through subsequent purchases of goods and services by golf industry employees.

In 2011, the \$2.331 billion North Carolina golf industry supported:

- A total economic impact of \$4.242 billion for the state of North Carolina including the indirect and induced economic impacts stimulated by golf sector activity;
- A total employment impact of nearly 53,000 jobs; and
- Total wage income of \$1.289 billion.

Golf's Impact on North Carolina's Economy in 2011

INDUSTRY	DIRECT (\$ millions)	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$1,154.8	→		\$2,200.2	31,514	\$688.9
Golf Course Capital Investments*	\$86.4	→		\$41.3	392	\$13.3
Golf-Related Supplies	\$246.1	→		\$497.4	3,846	\$124.3
Tournaments & Associations	\$35.9	→		\$76.6	910	\$28.6
Real Estate **	\$249.6	→		\$338.5	3,217	\$109.1
Hospitality/Tourism	\$557.9	→		\$1,087.5	13,092	\$324.9
TOTAL	\$2,330.7	→		\$4,241.5	52,972	\$1,289.2

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$4.242 billion the portion of capital investments that is investment in existing facilities (\$67.4 million of \$86.4 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$94.3 million of \$249.6 million). This is because:

*Golf Course Capital Investments—Only new course construction has an indirect and induced economic impact. Other types of facility capital investments are typically financed through facility revenues and, therefore, are omitted to avoid double-counting.

**Real Estate—Only golf residential construction has an indirect and induced impact. The golf premium associated with golf real estate is considered a transfer of assets rather than new economic activity.

The following table compares changes in the golf industry’s direct and total economic impact on the North Carolina economy in 2007 and 2011. In 2007, the golf economy was \$2.626 billion buoyed by strong residential construction and consumer spending and the overall health of the U.S. economy. In 2011, the direct golf economy contracted to \$2.331 billion due primarily to significant declines in golf real estate and golf capital investments, primarily new course construction. The table shows the related declines in total economic output, employment, and wage income associated with the lower level of direct economic activity supported by the game of golf.

Golf’s Impact on North Carolina’s Economy in 2007 and 2011		
	2007	2011
Core and Enabled Industries		
Direct Economic Impact (\$ billions)	\$2.626	\$2.331
Total Output Impact (\$ billions)	\$5.304	\$4.242
Total Jobs Impact	68,667	52,972
Total Wage Income Impact (\$ billions)	\$1.695	\$1.289

DETAILED METHODOLOGY & DATA SOURCES

A key challenge in this study was to identify reliable state-level data sources and to develop methodologies for measuring the size of industry components for which cross-state estimates do not exist in straightforward metrics, e.g., golf real estate and off-course purchases of golf apparel and equipment. This section describes each of the core and enabled industries included in the golf economy and SRI's approach to measuring each of these segments.

A. GOLF FACILITY OPERATIONS

For this industry segment, we analyzed the number of golf facilities and average facility revenue data to derive a total facility operations estimate. Revenues for this segment include: annual or monthly membership fees, green fees, range fees, and golf car rental fees; purchases of golf apparel and equipment in pro shops; golf lessons; tournament entry fees; consumption of food and beverages; etc.

Number of golf course facilities. Many golf organizations track the number of golf facilities in a state: the National Golf Foundation (NGF), The PGA of America, and state/regional golf associations, among others. The U.S. Census Bureau also surveys golf facilities as business establishments in its Economic Census every five years. However, these organizations' calculations of the total numbers of golf facilities in each state, by type of facility, are not always consistent with each other due to: (1) absence of data for courses which are not members (e.g., The PGA tracks those courses with a PGA member) or for particular subsets of courses (e.g., municipal facilities and golf resorts are not tracked by the Census), (2) facility closures and openings, and (3) inconsistency in the classification of courses, especially resorts.

In some surveys, golf facilities are allowed to self-classify. In others, the surveying organization classifies the facility based on specific criteria. This can mean the difference between a small number of resorts (e.g., a figure that includes five-star accommodations located on or adjacent to an 18-hole course) or a much larger number of resorts (e.g., three-star hotel accommodations located near a daily fee golf course). Similarly, a resort with two 18-hole golf courses could be counted as two golf facilities or as one depending on the reporting organization. Fortunately, the variation in the number of facilities caused by these data collection methods are very small, and thus do not materially impact the overall analysis. The table below presents slightly differing estimates for the number of golf course facilities in North Carolina in 2011 or the latest available year.

Estimates of North Carolina Golf Facilities from Various Sources in 2007 and 2011

	2007 Economic Census (# of facilities, excl resorts & municipal) ¹	2011 PGA (# of facilities) ²	2011 NGF (# of facilities) ³	2011 NGF (# of 18-hole equivalent courses) ³
PRIVATE	115	179	151	158.5
PUBLIC	368	361	359	360.0
Daily fee/ semi-private		316		
Municipal		45		
Military				
University				
RESORT		30	30	36.5
TOTAL	483	570	540	555.0

Sources: ¹ U.S. Census Bureau, *2007 Economic Census*.

² Professional Golfers' Association of America (2012). *Facility Database*.

³ NGF (2012). Total Facility Supply Tables 6-14, *Golf Facilities in the U.S., 2011 edition*, pp.6-14.

The PGA of America and NGF data fall within a fairly narrow range, PGA's 570 vs. NGF's 540. The PGA's number reflects both more private and public facilities. In 2007, SRI and the North Carolina Alliance for Golf estimated there were 558 facilities (based on PGA data: 180 private facilities, 291 daily fee facilities, 57 municipal/military/university facilities, and 30 resort facilities). The facility opening and closure data tracked by NGF indicate a slight net contraction in total facilities from 2007 to 2011 of -2 facilities (there were 15 openings and at least 17 closures from 2008 to 2011, and most of the closures were daily fee facilities). For 2011, SRI adjusted its 2007 estimate based on these net -2 closures, from 558 down to 556 total facilities in 2011 (179 private facilities, 302 daily fee facilities, 45 municipal/military/university facilities, and 30 resort facilities). According to the PGA Facility Database, North Carolina had 52 golf ranges in 2011, compared to 47 in 2007.

Average revenues per facility. Facility revenue includes membership dues (where applicable), green fees, cart rental fees, and associated spending on food and beverage. The SRI team collected average revenue data from a variety of sources. Here again, the data challenge was that average facility revenues will vary significantly depending on: (1) the number of holes (e.g., a 9-hole course versus a 18-hole course) and (2) the type of facility—whether a golf course facility is private, daily fee, resort, municipal, etc.

The U.S. Census Bureau collects revenue data for golf course facilities as part of its Economic Census of all U.S. establishments every five years. Whereas facility surveys conducted by private sector organizations are often based on lower response rates (less than 30 percent), all establishments are required by law to respond to the Census Bureau survey. However, the Census Bureau data has several limitations. Many types of facilities are not included in the survey: (1) resort facilities, (2) municipal and military facilities, (3) stand-alone driving ranges, and (4) golf facilities without payroll. The latest 2007 Economic Census contains revenue, payroll, and employment data on 12,193 golf facilities broken down by state. This provides a robust estimate with which to compare other available golf facility revenue data.

The PGA collects revenue data for all 50 states on an annual basis through its Annual Operations Survey. The latest available data are from 2011, but the PGA has annual data going back to 2005. In addition, PGA revenue data are broken down by type of facility for categories for which Census data are not available—namely, resorts, municipal courses, and military courses.

Estimates of North Carolina Average Revenue per Facility Data from Various Sources from 2007 to 2011						
	Census (2007)¹	PGA (2008)²	PGA (2009)³	PGA (2010)⁴	PGA (2011)⁵	NGF (2009)⁶
Private facility	\$2,919,040	\$4,959,691	\$3,395,435	\$2,459,452	\$4,302,757	\$3,277,000
Daily fee facility	\$1,550,663	\$1,135,678	\$1,416,073	\$956,986	\$1,046,474	\$3,262,123
Resort facility	X	\$2,152,965	\$2,375,000	\$2,927,197	\$2,166,877	X
Municipal/ military/ university facility	X	\$945,317	\$792,952	\$833,749	\$988,244	\$1,269,100
Driving range	X	X	X	X	\$400,000	X
Miniature golf	\$187,355	X	X	X	X	X

Note: Bolded values are an average of North Carolina and neighboring states, due to low response sample.

Sources: ¹ U.S. Census Bureau, *2007 Economic Census*.

² Professional Golfers' Association of America (2009). *2008 Operations Survey*.

³ Professional Golfers' Association of America (2010). *2009 Operations Survey*.

⁴ Professional Golfers' Association of America (2011). *2010 Operations Survey*.

⁵ Professional Golfers' Association of America (2012). *2011 Operations Survey*.

⁶ NGF (2010). *Operating & Financial Performance Profiles of 18-hole Golf Facilities in the U.S., 2009 edition*.

Average revenue data from the Census (2007) and The PGA (2007-2011) are presented above. In consultation with the task force, SRI calculated total private, daily fee, municipal/military/university, and resort facility revenues using the 2011 PGA survey data. Driving range revenues were calculated using

2011 PGA survey data, which estimated the national median revenue figure for golf ranges in 2011, and average miniature golf facility revenue was calculated using the 2007 Census data.

The PGA reported average private facility revenue in 2011 of \$4.303 million, higher than the reported average private facility revenue in 2007 of \$3.381 million (or \$3.606 million in 2011 dollars when adjusted for inflation). This increase reflects recovery from the economic downturn, albeit not to the level in 2008.

The PGA reported average daily fee facility revenue in 2011 of \$1.046 million, which is slightly lower than the reported average revenue for daily fees in 2007 of \$1.215 million (or \$1.296 million in 2011 dollars when adjusted for inflation). While daily fee average revenue was up from 2010 (\$0.956 million), revenue had not recovered to the pre-recession level in 2007.

Municipal/military/university facilities reported average revenue of \$0.988 million in 2011, down from \$1.226 million in 2007 (or \$1.308 million in 2011 dollars), but up from a low in 2009. The PGA reported regional averages for resort facilities from 2008 to 2010 due to a low response sample. In 2011, the PGA Operations Survey had enough resort responses to report a North Carolina resort average revenue figure. Resort facilities revenue reported average revenue of \$2.167 million in 2011, which is comparable to the average revenue figure of \$2.154 million in 2007 although slightly lower in real terms (\$2.297 million in 2011 dollars).

Standalone golf ranges and miniature golf facilities experienced declines in their revenues: The PGA median value for standalone golf range revenue was \$400,000 in 2011, which is lower than the 2006 estimate of \$618,594. SRI adjusted the average revenue for miniature golf facilities for inflation. According to the Economic Census, miniature golf facilities reported average revenue of \$175,682 in 2007 (or \$187,355 in 2011 dollars).

To calculate golf facility operations revenues, SRI subtracted average on-course merchandise sales from the average golf facility revenue estimates because on-course merchandise sales are included in the Golf-Related Supplies industry segment. SRI then multiplied these adjusted average golf facility operations revenue estimates by the respective number of golf facilities. Overall, SRI estimates that North Carolina's 556 golf courses, 52 stand-alone ranges, and 44 miniature golf facilities generated \$1.155 billion of revenue in 2011. This reflects a nominal increase of 12.0 percent from 2007 total revenues of \$1.031 billion (inflation was 6.6 percent during this same period).

B. GOLF FACILITY CAPITAL INVESTMENTS

To calculate golf course capital investments, SRI collected data on two major types of investments: (1) capital investment at existing facilities and (2) new course construction.

North Carolina Golf Facility Capital Investment and New Course Construction in 2011 (\$ millions)	
Golf Course Capital Investment ¹	\$67.4
New Course Construction	\$18.9
TOTAL	\$86.4

Note: ¹ Only the New Course Construction category is included in the economic impact analysis, because it represents new economic output or activity. Golf facility capital investments is typically financed through golf facility revenues, so including both Golf Facility Capital Investments and Golf Facility Operations in economic impact analysis would result in double-counting.

Investment at existing courses. Golf facility capital investments include improvements to greens and tees, repaving of cart paths, purchases of new turf maintenance equipment and irrigations systems, and renovations of the clubhouse, pro shop, and maintenance buildings. Ordinary maintenance expenses are not included. SRI examined golf facility capital investment data from two sources: NGF and the GCSAA. The GCSAA data comes from golf facility capital budget questions included in its 2011 Compensation Survey. The data is state-level and includes the mean, median, and standard deviation of capital expenditures (not maintenance expenses). The NGF’s *2010 Operating and Financial Performance Profile* presents national estimates of capital expenditures (and also breaks out maintenance expenses separately) at: (1) daily fee facilities (average revenue of \$1,457,700, with 69.6% of daily fee facilities making average capital improvement investments of \$131,700); (2) municipal facilities (average revenues of \$1,269,100, with 70.2% of municipal facilities making average capital investments of \$189,300); and (3) private facilities (average revenues of \$3,277,000, with 82% of private facilities making capital investments of \$410,400).

SRI and the North Carolina Alliance for Golf also conducted a web-based survey of facilities in which we collected data on golf facility revenue and capital investment to validate the other data sets. After review of the state-level and national data sets, SRI decided to calculate a weighted average using the GCSAA survey median for daily fee and resort facilities, and the SRI/North Carolina Alliance for Golf survey mean for private and municipal facilities. The response to the SRI/North Carolina Alliance for Golf survey by private facilities (37 responses out of 179 total private facilities) and municipal/military/university facilities (14 responses out of 45 total facilities) was relatively high compared to the GCSAA survey response rate. SRI used the GCSAA survey median value for daily fee facilities since they account for the majority of facilities. Using the weighted average, a North Carolina golf facility invested approximately \$121,287 in 2011 for a total capital investment of \$67.4 million. Capital investments at existing facilities were slightly higher relative to 2007, when North Carolina’s total

golf facility capital investment was \$62.2 million (or \$66.3 million in 2011 dollars when adjusted for inflation).

New course construction. The NGF's *Golf Facilities in the U.S.* series is the only national source for estimates of the number of new golf courses under construction in each state. In 2011, NGF estimated that there were no new 18-hole equivalent golf course openings in North Carolina and that 2.5 were under construction.

An estimate for the average investment for each new golf course in North Carolina is derived from the Golf Course Builders Association of America's (GCBA) *Golf Course Construction and Renovation Costing Guide, Version 6*. This database of golf course construction costs is based on a survey of golf course builders around the country. Using the values provided for North Carolina and the average ("normal") costs for each of the various construction categories (see box below), GCBA estimates the average investment required to build a new golf course in North Carolina is \$7.6 million (the average estimate across the various regions of North Carolina). However, according to golf course architecture and design consultants, golf course construction alone accounts for only half of the total cost of constructing a new golf facility. An equal amount is spent on the architectural/engineering services, construction of the clubhouse, proshop, and maintenance buildings, and initial purchase of equipment and course amenities, etc. Therefore, we estimate the average cost of constructing a new 18-hole facility to be \$15.1 million.

Required Investments to Build a Golf Course:	
Mobilization	Greens Construction
Layout and Staking	Tees
Erosion Control	Bunkers
Clearing	Bridges
Selective Clearing	Bulkheading
Topsoil	Cart Paths
Excavation	Fine Grading
Rough Shaping	Seeding and/or Grassing
Drainage	
Irrigation	

This investment, however, is not entirely expended over one year but is rather disbursed over several years. 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 \$7.6 million. We applied this figure to 2.5 18-hole equivalent courses under construction in 2011. In total, SRI estimates that 2011 investment in new course construction in North Carolina was \$18.9 million. Reflecting the impact of the financial crisis and recession, this is a significantly lower level of investment relative to 2007, when the estimated total investment in new course construction was \$91.0 million (or \$97.0 million in 2011 dollars when adjusted for inflation).

C. GOLF-RELATED SUPPLIES

This section explains SRI’s methodology for calculating North Carolina manufacturers’ exports (out-of-state and overseas shipments) of golf apparel, turf maintenance equipment, and accessories. We also detail our methodology for calculating the retail margin for on-course and off-course purchases of golf equipment, golf apparel, and golf media.

Manufacturing Exports. The economic value created by golf-related supplies consists of two components: (1) design, testing, and value-added production and (2) retail sales margin. On the manufacturing side, we are concerned with the value-added production of golf-related equipment, apparel, and accessories. This is the value of the company’s wholesale revenues minus the cost of production inputs, and this value-added production is attributable to the state in which the golf club or golf mower is manufactured. We began by conducting database research to identify manufacturers of golf-related products in the state. North Carolina is home to some well-known global companies that design and manufacture golf grips, turf maintenance equipment, and golf apparel in the state: Golf Pride, Jacobsen, John Deere, and Peter Millar, etc. We estimated the value added of these companies’ out-of-state shipments of golf merchandise in 2011.

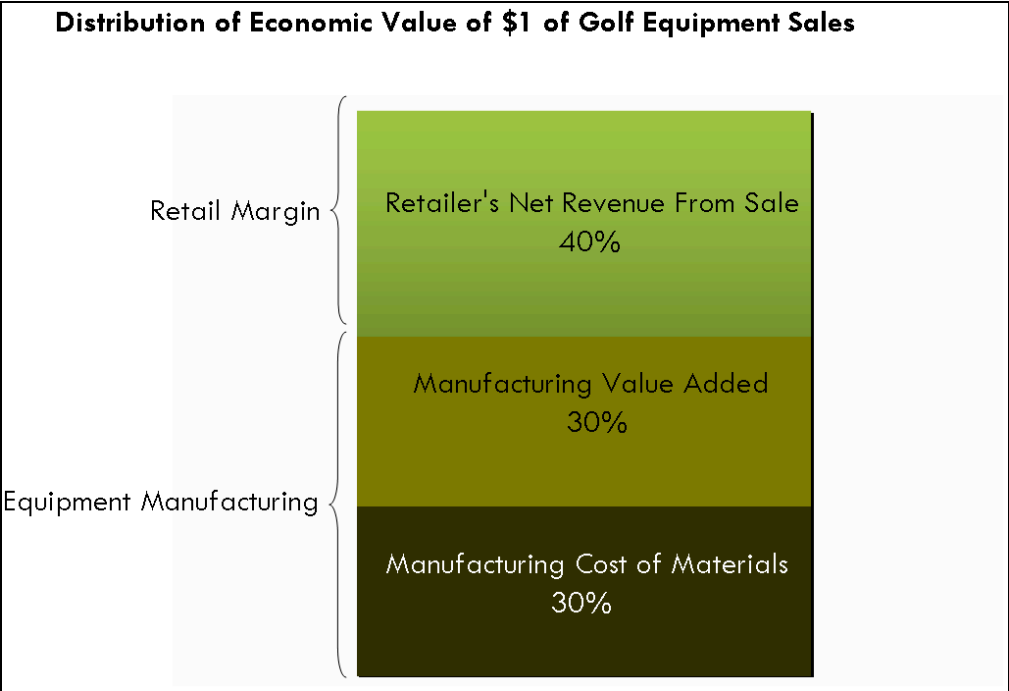
North Carolina Manufacturers’ Value-Added Exports of Golf-Related Products in 2011 (\$ millions)	
TOTAL	\$174.1

Retail Margin. On the retail side, the economic value is derived from the margin the retailer makes from the sale of the golf club, i.e., the net revenues accruing to retailers after covering the cost of purchasing the golf equipment or apparel from the wholesaler/producer.

To calculate this margin, we first estimate total sales of golf apparel and equipment at the state level and then apply the requisite retail margin percentage for economic impact analysis. In our national-level study for GOLF 20/20, SRI was able to collect national sales data from a number of sources: (1) the NGF, (2) the National Sporting Goods Association (NSGA), (3) Golf Datatech, and (4) the Census Bureau. Unfortunately, the relatively small sample size for the majority of these surveys do not allow for publication of reliable state-level estimates by these organizations. However, each year, the NSGA conducts a 100,000-household consumer panel survey for its annual *The Sporting Goods Market* publication. SRI uses these data in conjunction with the PGA’s golf facilities data for each state to derive state-level estimates of golf equipment and apparel sales.

For example, in 2011, NSGA reported total U.S. off-course and on-course purchases of individual golf clubs to be \$603.3 million. The NSGA survey found the South Atlantic region accounted for 20.6% of these purchases, or \$124.3 million. Within the South Atlantic region, one can estimate North Carolina’s

share of purchases by creating a rounds- or courses-based weight. Using either approach yields similar weights, since the number of rounds played is highly correlated with the number of 18-hole equivalent courses in a state ($r=0.93$). SRI used the number of 18-hole equivalent courses in each state, as it was easier to verify than estimated number of rounds played. North Carolina represents 17.4% of total 18-hole equivalent courses in the South Atlantic region, so this weight was applied to the region total (\$124.3 million) to estimate \$21.6 million of individual golf club sales in the state of North Carolina in 2011. Further, retail margins on final sales suggest that 40.1%, or \$8.7 million, of total sales was retained in the North Carolina economy. (See graphic below.)



North Carolina On-Course and Off-Course Golf Equipment & Apparel Purchases in 2011 (\$ millions)		
Category	Calculation	Estimate
Golf club sets	South Atlantic region's sales	\$274.9
	NC's courses-based weight	17.4%
	NC's share of sales [1]	\$47.8
Golf apparel	South Atlantic region's sales	\$301.5
	NC's courses-based weight	17.4%
	NC's share of sales, [2]	\$52.5
Golf balls	South Atlantic region's sales	\$214.2
	NC's courses-based weight	17.4%
	NC's share of sales, [3]	\$37.3
Golf clubs	South Atlantic region's sales	\$124.3
	NC's courses-based weight	17.4%
	NC's share of sales, [4]	\$21.6
Golf bags	South Atlantic region's sales	\$55.5
	NC's courses-based weight	17.4%
	NC's share of sales, [5]	\$9.7
Golf shoes	South Atlantic region's sales	\$55.7
	NC's courses-based weight	17.4%
	NC's share of sales, [6]	\$9.7
TOTAL	Sum of [1] to [6]	\$178.5
Retail sales margin	Multiply TOTAL by 40.1%	\$71.6

Source: National Sporting Goods Association (2012). *The Sporting Goods Market in 2012*, Mt. Prospect, IL: NSGA.

Golf media. Similar to golf equipment, golf media's economic contribution to the state economy has two components: value-added production and the retail sales margin. On the production side, the economic impact created by the publication of magazines or books is attributable to the state in which the magazine or book is published. On the retail side, the economic impact is derived from the margin the retailer makes from the sale of golf media, i.e., the net revenues accruing to retailers after covering the cost of purchasing the media from the wholesalers/producers. For golf magazines, we identified national golf publications with the largest circulations and the state in which they are published—no national golf magazines were published in North Carolina in 2011. Similarly, no major publishers of golf books are located in the state. However, we calculated a weight to estimate the percentage of book retailers' sales attributable to the sale of golf books in stores. Total retail golf book sales in 2011 were estimated to be \$1,994,000 with a retail sales margin of \$799,800. Golf videos and DVDs are more difficult. In SRI's previous national-level study, we were not able to identify a source with data on the

annual sales of golf-specific videos/DVDs. In the case of this current state-level study, this category was also omitted due to the absence of a reliable data source.

North Carolina On-Course and Off-Course Sales of Golf Books in 2011	
Category	Estimate
North Carolina retail book sales ¹	\$474,860,911
Golf books as % of total book sales	0.4%
Total retail golf book sales	\$1,994,416
Retail sales margin	\$799,761

Note: ¹Adjusted for inflation into 2011 dollars using the appropriate GDP deflator.

Sources: North Carolina retail book sales data from the 2007 Economic Census. Estimated percentage of golf books among total book sales derived from the 2006 *Bowker Annual of Library & Book Trade Information* and American Booksellers Association data.

North Carolina Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2011 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$126.1	\$50.6
Golf Apparel (retail margin)	\$52.5	\$21.0
Golf Media (retail margin)	\$0.9	\$0.4
TOTAL	\$179.5	\$72.0

Note: This includes on-course and off-course purchases of golf equipment, apparel, and media.

D. ASSOCIATIONS, MAJOR TOURNAMENTS & CHARITABLE GIVING

Associations. SRI gathered association revenue data for the largest national, state, and regional golf organizations from these organizations' 990 income tax filings. These include the Carolinas Section of the PGA, the Carolinas Golf Association, the Carolinas Golf Course Superintendents Association, and the Carolinas Chapter of the Club Managers Association of America. Also included are the expenditures of a number of golf foundations, as well as women's, senior, junior, and regional member golf associations.

Major Tournaments. In 2011, five major golf championships were played in North Carolina: two PGA TOUR events, two Champions Tour events, and one Nationwide Tour event. We subtracted the tournament purse and cost of television broadcasting from total tournament revenues to estimate the direct event-related spending that remained in the state. Accommodation and tourism-related expenditures from this event are captured in the Hospitality/Tourism segment of the report.

North Carolina Major Tournament & Association Revenues in 2011 (\$ millions)	
Major Tournaments	\$31.0
Associations	\$4.9
TOTAL¹	\$35.9

Charitable Giving. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in North Carolina to be \$145.8 million in 2011. This estimate is derived from a national study¹⁶ based on the number of golf facilities that hold charitable golf events, the average number of events held by each facility, and the average net proceeds donated to charities from these events. It also includes the charitable giving associated with professional golf tournaments. Charitable giving is not included in economic impact estimation because it is a direct transfer of income. Nevertheless, it is an important golf industry contribution to the state.

North Carolina Golf Industry's Charitable Giving in 2011 (\$ millions)	
TOTAL	\$145.8

E. GOLF REAL ESTATE

In analyzing golf-related residential real estate, SRI collected data on two components: (1) new golf-related residential construction and (2) the “golf” premium associated with the sale of golf community homes.

North Carolina Golf Real Estate Revenues in 2011 (\$ millions)	
Golf-Related Residential Construction	\$155.3
Realized Golf Premium	\$94.3
TOTAL	\$249.6

Note: The sale of existing homes is considered a transfer of assets rather than new economic output, so the golf premium that is realized in the sale of an existing home is not included in the economic impact analysis.

¹⁶ National Golf Foundation (2011). *The Charitable Impact Report*.

Golf-related residential construction. For this industry segment, SRI conducted research and interviews with golf real estate developers, home owners association staff, and realtors to arrive at estimates of the number of courses with new golf home construction, the size of the development, the number of homes under construction in the study base year, and the average construction costs per type of home (i.e., townhouse, condo, or single family home). The number of courses with active development was derived from new course openings over the past five years and online research. Construction values varied considerably depending on such factors as the location of golf communities within the state, the proportion of townhouses versus single-family homes, and overall real estate market conditions (e.g., high-growth metropolitan regions versus more rural parts of the state).

SRI estimates that approximately 20 golf communities were under development, to varying degrees, in North Carolina in 2011. Developments ranged from the 1,700-unit River Landing development in Wallace to the 354-home Balsam Mountain Preserve in Sylva. In 2011, only a handful of homes were built at most of these developments due to the overall economic and housing market situation. A larger number of homes (ranging from 90 to 220) were constructed at a couple of golf communities, including Anderson Creek Golf Club in Spring Lake and Heritage Wake Forest in Raleigh. The new single-family homes built in 2011 had an average construction cost of \$524,000 and a median construction cost of \$368,000. Multiplying the total number of units under construction at each course by their average construction cost and summing these values yielded a total 2011 golf-related residential construction figure of \$155.3 million. This is significantly lower than in 2007 when new golf home construction generated \$571.9 million (or \$609.9 million in 2011 dollars when adjusted for inflation), and mirrors the steep decline in new residential construction overall from its peak in 2006.

Realized golf premium. 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 is above and beyond the premium associated with a home’s other features or amenities (e.g., square footage, fixtures, landscaping, etc.). Through industry interviews, SRI arrived at a conservative golf premium estimate of \$25,000. Multiplying North Carolina’s 168 golf communities¹⁷ by the average number of housing units per golf course (720), we arrived at a total of 120,960 golf community homes. In 2011, the home turnover rate (percentage of homes sold relative to the total housing stock) was 3.1 percent in North Carolina. SRI calculated the realized golf premium by multiplying the home turnover rate by the total number of golf community homes and the average golf premium per unit. SRI estimates North Carolina’s golf real estate premium was \$94.3 million in 2011, down from \$168.5 million in 2007 (or \$179.7 million in 2011 dollars when adjusted for inflation), reflecting primarily fewer golf home sales, but also a few golf community development bankruptcies.

¹⁷ In 2007, the National Golf Foundation reported 180 North Carolina golf courses with associated golf real estate.

F. GOLF-RELATED HOSPITALITY/TOURISM

Although a large and critical golf industry segment, there are no national sources of state-level golf tourism data. SRI calculates a state's total golf tourism revenues by collecting data for two types of figures: (1) the annual number of golf-related stays and (2) average spending per stay.

Number of golf-related trips. SRI defines a "golf trip" as a North Carolina resident or non-resident traveling 50-plus miles to, through, or within the state to a unique destination and playing golf while at this destination. Golf-related trips include both overnight and day trips. This figure includes trips to North Carolina golf resort destinations (of which North Carolina has 30), golf outings while on vacation or business travel, as well as trips by North Carolina residents to play golf courses in other parts of the state. People also travel to watch professional and amateur golfers compete in tournaments played in North Carolina.¹⁸

SRI used the TNS *TravelsAmerica* estimates for North Carolina domestic visitor trips: 7.9 million day trips and 29.2 million overnight trips in 2011.¹⁹ In 2011, TNS *TravelsAmerica* estimated that approximately 0.9% of North Carolina's domestic day visitors and 3.1% of its domestic overnight visitors played golf while on a trip.²⁰ By applying this percentage to the number of North Carolina domestic day and overnight domestic visitor trips in 2011 (7.9 million day trips and 29.2 million overnight trips), SRI estimated that there were approximately 71,100 golf day trips and 905,200 golf overnight trips made in North Carolina in 2011, totaling 976,300 golf trips.

Average spending per golf stay. SRI estimated that average spending per golf trip in North Carolina in 2011 was \$74 per person per *day* trip and \$611 per person per *overnight* trip (which in North Carolina averages 3.5 nights). This includes spending on accommodation, local transportation, food and beverage,

¹⁸ In 2011, five major golf championships were played in North Carolina, including two PGA TOUR events, two Champions Tour events, and one Nationwide Tour event. These tournaments attract thousands of spectators from across the state, country, and internationally. For example, the Wells Fargo Championship played at Quail Hollow Club typically attracts up to 35,000 spectators per tournament day to Charlotte, and generates an estimated economic impact of \$40 to \$60 million for the region per year. Refer to:

http://charlotte.news14.com/content/top_stories/656883/final-preparations-made-for-wells-fargo-championship-at-quail-hollow and http://www.wellsfargochampionship.com/pages/1_5258_5262_11716_1172828_00.aspx

¹⁹ TNS *TravelsAmerica* / North Carolina Division of Tourism, Film & Sports Development (2012). *2011 North Carolina Visitor Profile*. Pages 3 and 11.

<http://www.nccommerce.com/Portals/8/Documents/Research/Visitation/2011%20North%20Carolina%20Visitor%20Profile.pdf>.

²⁰ TNS *TravelsAmerica* / North Carolina Division of Tourism, Film & Sports Development (2012). *2011 North Carolina Visitor Profile*. Page 22.

<http://www.nccommerce.com/Portals/8/Documents/Research/Visitation/2011%20North%20Carolina%20Visitor%20Profile.pdf>.

entertainment, gifts, and so on. Green fees and cart fees are not included as they are already captured in the Golf Facility Operations revenues. To estimate average golf trip expenditure, we began with national golf trip survey data from the National Golf Foundation’s *The U.S. Golf Travel Market, 2003 Edition* report²¹ and adjusted average trip spending based upon online research of North Carolina golf packages and relative price levels in North Carolina vis-à-vis the rest of the country. Multiplying the total number of golf trips (day and overnight) by average spending per golf trip (day and overnight), SRI found that total golf-related tourism spending in North Carolina was \$557.9 million in 2011. This represents an increase in real terms relative to golf-related tourism spending in 2007, which was \$507.8 million (or \$541.5 million in 2011 dollars, when adjusted for inflation); this increase is consistent with the overall increase in domestic visitor spending in North Carolina, as the economy recovered from the recession of 2007-09.²²

North Carolina Golf-Related Travel Expenditures in 2011	
# Golf person day trips	71,100
Average travel \$ per person per day trip	\$73.81
# Golf person overnight trips	905,200
Average travel \$ per person per overnight trip	\$610.57
Total	\$557.9 million

²¹ See “Average Travel Spending” table on p.16 in NGF (2003), *U.S. Golf Travel Market*, available at: <http://www.ngf.org/cgi/catalogsearchdetail.asp?ITEMNUMBER=99MR002>. SRI adjusted for inflation from 2002-2011, since 2002 is NGF’s most recent on golf travel survey.

²² Total domestic visitor spending in North Carolina grew from \$16.51 billion in 2007 to \$18.41 billion in 2011. Source: US Travel Association (2012), *The 2011 Economic Impact of Travel on North Carolina Counties*, as quoted in the North Carolina’s Division of Tourism, Film & Sports Development brief, “FAST FACTS: 2011 Impact of Visitor Spending,” <https://www.nccommerce.com/tourism/research/nc-fast-facts>.

G. GOLF’S ECONOMIC IMPACT

The impact of golf on a state’s economy includes both the direct impact of the sector itself (its core and enabled industries), as well as the indirect and induced (or multiplier) impacts that are supported by golf industry employment and expenditures.

Direct economic impact. The direct economic impact of golf is simply the size of the golf industry cluster within the state economy in terms of revenues. The “state golf economy” can be calculated by adding together the size of each of the core and enabled industries calculated in the sections above:

Direct Impact of the State Golf Economy	
+	Golf Facility Operations
+	Golf Course Capital Investments
+	Golf-Related Supplies
+	Associations, Major Tournaments & Charitable Giving
+	Golf Real Estate
+	Golf Hospitality/Tourism
=	Size of State Golf Economy

Indirect/induced economic impact (multiplier impact). Golf course facilities and the companies that provide goods and services to the golf industry, in turn, purchase goods and services from other companies. These purchases are considered the “indirect” impacts of the golf sector. Furthermore, the employees directly employed by the golf sector will spend much of their incomes in the region, creating more spending and more jobs in the economy. These impacts are considered “induced” impacts. Together, the indirect and induced impacts make up the multiplier impact of the golf economy.

Multiplier values vary from region to region, based on the unique characteristics of the state’s or region’s economy. Industries with more extensive linkages to other industries within the local economy will have a greater multiplier effect on final economic activity relative to the initial, direct effect. Conversely, economies and industry sectors dependent on a large share of imported supply will have smaller multiplier effects. For this study, the RIMS II (Regional Input-Output Multipliers), calculated by the U.S. Bureau of Economic Analysis, were used to calculate the multiplier impact of North Carolina’s golf economy.

Golf's Impact on North Carolina's Economy in 2011

INDUSTRY	DIRECT (\$ millions)	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$1,154.8	→		\$2,200.2	31,514	\$688.9
Golf Course Capital Investments*	\$86.4	→		\$41.3	392	\$13.3
Golf-Related Supplies	\$246.1	→		\$497.4	3,846	\$124.3
Tournaments & Associations	\$35.9	→		\$76.6	910	\$28.6
Real Estate **	\$249.6	→		\$338.5	3,217	\$109.1
Hospitality/Tourism	\$557.9	→		\$1,087.5	13,092	\$324.9
TOTAL	\$2,330.7	→		\$4,241.5	52,972	\$1,289.2

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$4.242 billion the portion of capital investment that is investment in existing facilities (\$67.4 million of \$86.4 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$94.3 million of \$249.6 million). This is because:

*Golf Course Capital Investments—Only new course construction has an indirect and induced economic impact. Other types of facility capital investment are typically financed through facility revenues and, therefore, are omitted to avoid double-counting.

**Real Estate—Only golf residential construction has an indirect and induced impact. The golf premium associated with golf real estate is considered a transfer of assets rather than new economic activity.

BIBLIOGRAPHY

Bowker Annual of Library & Book Trade Information 2006, 50th Edition (2006). New York, NY: R.R. Bowker.

Golf Course Builders Association of America (2010). *Guide to Estimating Cost for Golf Course Construction*. Lincoln, NE: Golf Course Builders Association of America.

Golf Course Superintendents Association of America (2005). *Compensation Survey*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America (2007). *Compensation Survey*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America (2009). *Compensation Survey*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America (2011). *Compensation Survey*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America, Environmental Institute for Golf (2007). *Golf Course Environmental Profile: Volume I, Property Profile and Environmental Stewardship of Golf Courses*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America, Environmental Institute for Golf (2009). *Golf Course Environmental Profile: Volume II, Water Use and Conservation Practices on U.S. Golf Courses*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Course Superintendents Association of America, Environmental Institute for Golf (2009). *Golf Course Environmental Profile: Volume III, Nutrient Use and Management on U.S. Golf Courses*. Lawrence, KS: Golf Course Superintendents Association of America.

Golf Datatech (2006). *On-Course Sales Data by Equipment Category*. Kissimmee, FL: Golf Datatech.

National Association of Realtors (2011). *Existing Home Sales Series*. Chicago, IL: National Association of Realtors. <http://www.realtor.org/Research.nsf/Pages/EHSdata>

National Golf Course Owners Association (2008). *Troubled Waters: Golf's Future in a Thirsty World*. Charleston, SC: National Golf Course Owners Association.

National Golf Foundation (2012). *The Charitable Impact Report*. Jupiter, FL: National Golf Foundation.

NGF (2003). *Golf Business Almanac*. Jupiter, FL: National Golf Foundation.

NGF (2003). *U.S. Golf Travel Market*. Jupiter, FL: National Golf Foundation.

NGF (2006). *Golf Industry Overview*. Jupiter, FL: National Golf Foundation.

NGF (2006). *Golf Industry Report*. Jupiter, FL: National Golf Foundation.

NGF (2011). *Operating & Financial Performance Profiles of 18-hole Facilities in the U.S., 2009 edition*, Jupiter, FL: National Golf Foundation.

NGF (2012). *Golf Facilities in the U.S.* Jupiter, FL: The National Golf Foundation.

National Sporting Goods Association (2010). *Sports Clothing Expenditures in 2009*. Mt. Prospect, IL: National Sporting Goods Association.

National Sporting Goods Association (2012). *The Sporting Goods Market in 2011*. Mt. Prospect, IL: National Sporting Goods Association.

The PGA of America (2006). *Compensation Study*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2009). *Golf Facility Database*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2007). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2008). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2009). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2010). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2011). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

The PGA of America (2012). *Operations Survey*. Palm Beach Gardens, FL: The PGA of America.

SRI International (2002). *The Golf Economy Report*. Arlington, VA: SRI International.

SRI International (2006). *The Virginia Golf Economy 2005*. Arlington, VA: SRI International.

SRI International (2008). *The North Carolina Golf Economy 2007*. Arlington, VA: SRI International.

TNS Travels America/North Carolina Division of Tourism, Film & Sports Development (2012). 2011 North Carolina Visitor Profile. Raleigh, NC: North Carolina Department of Commerce. <http://www.nccommerce.com/Portals/8/Documents/Research/Visitation/2011%20North%20Carolina%20Visitor%20Profile.pdf>

U.S. Census Bureau (2010). *2007 Economic Census: Arts, Entertainment and Recreation Industry Series*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration.

U.S. Census Bureau (2010). *North Carolina: 2007. 2007 Economic Census: Arts, Entertainment and Recreation Geographic Area Series*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration.

U.S. Census Bureau (2011). *Annual Survey of Manufacturers: 2010 Statistics for All Manufacturing by State*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration. <http://www.census.gov/manufacturing/asm/index.html>

U.S. Census Bureau (2012). Table 1: Annual Estimates of Housing Units for the United States and States: April 1, 2000 to July 1, 2011 (HU-EST2005-01). Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration.

U.S. Census Bureau (2012). Permits by State: 2004 to 2012 (P), Building Permits Survey. Washington, DC: U.S. Department of Commerce.

U.S. Department of Agriculture, Economic Research Service (2010). "Top Commodities, Exports, and Counties," *North Carolina State Fact Sheet*. <http://www.ers.usda.gov/statefacts/NC.HTM>.

U.S. Travel Association (2012), The 2011 Economic Impact of Travel on North Carolina Counties, as quoted in the North Carolina Division of Tourism, Film & Sport Development, "FAST FACTS: 2011 Impact of Visitor Spending." Raleigh, NC: North Carolina Department of Commerce. <https://www.nccommerce.com/tourism/research/nc-fast-facts>