THE VIRGINIA GOLF ECONOMY

FULL REPORT

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The Virginia Golf Economy

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ACRONYMS

CMAA	Club Managers Association of America
CMAA Vas	Virginias Chapter of the Club Managers Association of America
GCBAA	Golf Course Builders Association of America
GRAA	Golf Range Association of America
GCSAA	Golf Course Superintendents Association of America
LPGA	Ladies Professional Golf Association
MAPGA	Middle Atlantic Section of The Professional Golfers' Association of America
NGF	National Golf Foundation
NGCOA	National Golf Course Owners Association
NGCOA VA	Virginia Chapter of the National Golf Course Owners Association
PGA	The Professional Golfers' Association of America
USGA	United States Golf Association
VGCSA	Virginia Golf Course Superintendents Association
VSGA	Virginia State Golf Association
VTC	Virginia Turfgrass Council
WGF	World Golf Foundation

STUDY OVERVIEW

Virginia is home to some of the country's most challenging and historic golf courses, and golf enthusiasts enjoy the state's varied geography and long playing season. With 327 golf facilities and two professional golf championships, golf in the "Old Dominion" is more than just an enjoyable pastime—it is a key industry contributing to the vitality of local communities and the state economy. In 2012, the size of Virginia's direct golf economy was approximately $1.4 billion. Golf brings visitors to the state, drives new construction and residential development, generates retail sales, and creates demand for a myriad of goods and services. When the total economic impact of these golf-related activities is considered, Virginia's golf industry supported approximately $2.5 billion of total economic activity, nearly 30,000 jobs, and $733.4 million of wage income in 2012.

This report represents the second study estimating the impact of the golf industry on Virginia's economy. SRI conducted a previous economic impact study for the base year 2005. During the period between the two golf economy studies (2005 and 2012), the Virginia 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 2012, Virginia golf facilities were experiencing some recovery, but not at the same level of activity as in 2005.

As noted, SRI estimates that the Virginia golf industry generated $1.4 billion of economic activity in 2012. This represents an overall decline of 14.9 percent from 2005 (when the estimated size of the golf economy was $1.6 billion), primarily reflecting a contraction in new golf home and new course construction. Relative golf industry segment strengths observed in 2012 include a modest recovery in capital investment by existing facilities and real growth in golf-related travel, which increased by 20.1 percent from 2005 (or 28.5 percent in nominal terms). SRI also identified a small number of manufacturers of golf-related products and included an estimate of their value-added exports in the golf-related supplies segment in 2012. These companies and financial information about these companies were not identified in 2005. Therefore, Virginia's 2012 direct golf economy figure represents a decline from 2005 pulled down by the real estate sector that mirrors that of the national economy.

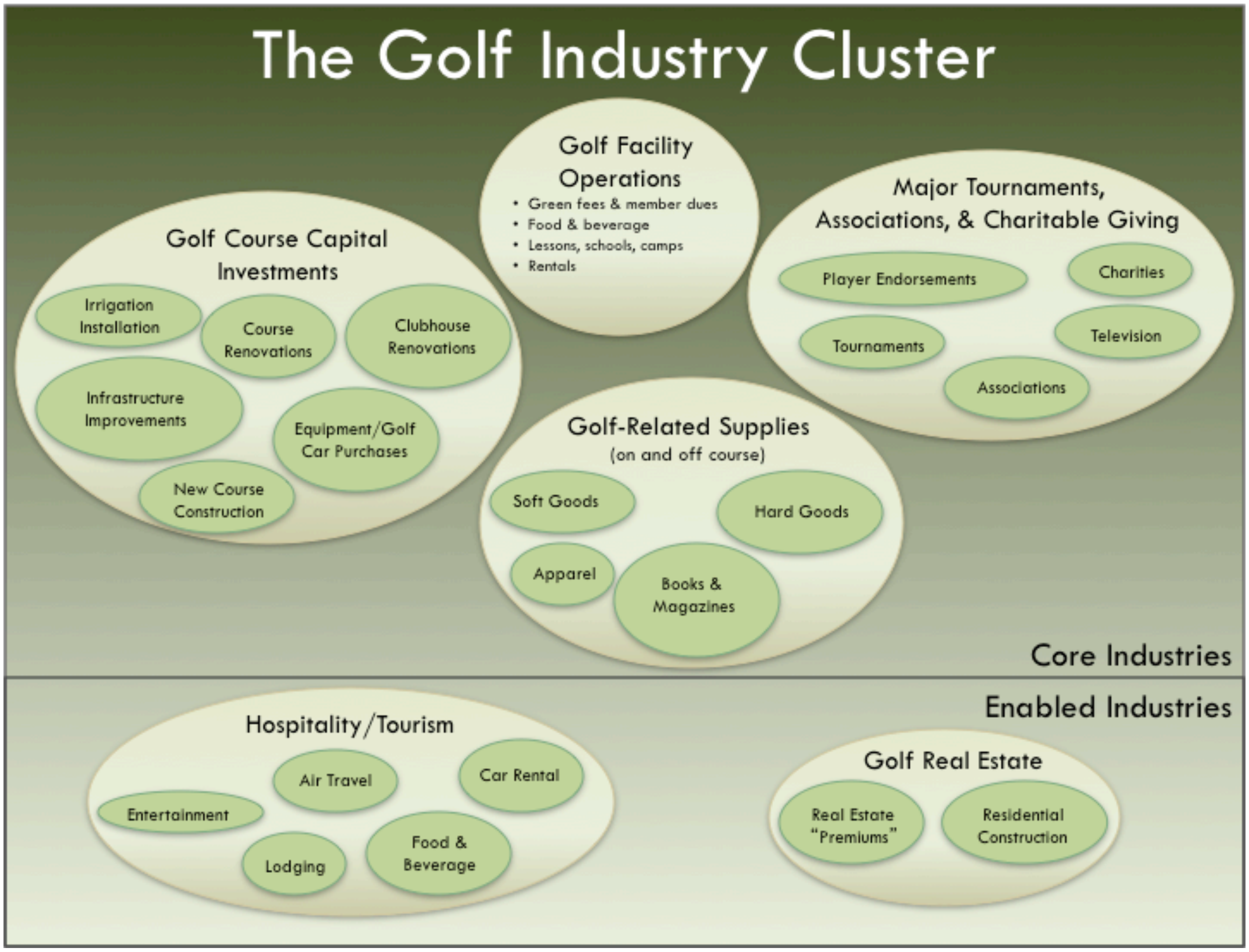
ANALYTICAL FRAMEWORK

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 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 (2006-2012 data)	NGF Facility Database, multiple years; state golf associations; 2007 Economic Census
Avg. revenues by type of facility	PGA Facility Operations Survey, multiple years (2006-2012 data)	2007 Economic Census; National Golf Foundation; state task force
# of rounds by facility type	2013 PGA Operations Survey (2012 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 (2007-2012 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 (2007-2012 data)	2006 PGA Compensation Survey (2005 data)
Golf apparel	National Sporting Goods Association (2007-2012 data)	2006 PGA Compensation Survey (2005 data)
Golf media	Magazine Publishers of America for golf magazine sales; *Bowker Annual of Library and Book Trade Information* (2007-2012 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 VIRGINIA'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 2005 and 2012. SRI estimates the total size of Virginia's golf economy in 2012 was approximately $1.354 billion, down from $1.591 billion in 2005. The decline in the Virginia 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 Virginia's Golf Economy in 2012 and 2005 by Industry Segment ($ millions)	2012	2005
CORE INDUSTRIES		
Golf Facility Operations	$714.4	$707.5
Golf Course Construction and Capital Investments	$66.4	$69.8
Golf-Related Supplies (retail margin and manufacturing exports)	$53.8	$41.2
Major Golf Tournaments and Associations	$15.3	$15.3
Total Core Industries	$849.9	$834.6
ENABLED INDUSTRIES		
Real Estate	$81.7	$427.4
Hospitality/Tourism	$422.8	$329.1
Total Enabled Industries	$504.5	$756.5
TOTAL GOLF ECONOMY	$1,354.4	$1,591.1

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. Virginia's 327 golf facilities, 48 stand-alone ranges, and 38 miniature golf facilities generated $714.4 million of revenue in 2012. This reflects a slight nominal increase of 1.0 percent from 2005 total revenues of $707.5 million (while inflation over this seven-year period was 15.4 percent).

Virginia Golf Facility Revenues in 2012 ($ millions)	
Golf Facilities	**$676.6**
Practice Ranges & Alternative Facilities	**$37.8**
TOTAL[1]	**$714.4**

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, Virginia's golf facilities generate revenues that exceed the combined revenue of all other revenue-generating spectator sports in the state—auto racing, horse race tracks, and development league baseball, hockey, and soccer, etc.[1] Spectator sports, excluding golf, generated revenues of $444.1 million in 2007, or $482.0 million in 2012 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 Virginia's golf facility capital investments is divided into two segments: (1) capital investments at existing facilities and (2) new course construction. Together, Virginia's golf facilities made $66.4 million worth of capital investments in 2012: $54.8 million of investments at existing facilities and $11.6 million for the construction of new courses.

By comparison, Virginia's golf facilities made $69.8 million in total capital investment in 2005, which includes $45.6 million of investments at existing facilities and $24.2 million for the construction of new courses. (When adjusted for inflation, these figures are $80.5 million for total capital investments, $52.6 million at existing facilities, and $27.9 million for the construction of new courses in 2012 dollars.) The decline in capital investments from 2005 to 2012 is most likely due to the financial crisis and economic recession of 2007-09, which caused new golf course and facility construction to be tabled.

[1] Virginia is home to the Triple-A level baseball team, the Norfolk Tides; minor league hockey team, the Norfolk Admirals; as well as several other minor league baseball, football, ice hockey and men's and women's soccer teams.
[2] U.S. Census Bureau (2011). *Virginia: 2007 Economic Census, Arts, Entertainment & Recreation Geographic Series*, July 2011.

Virginia Golf Facility Capital Investment and New Course Construction in 2012 ($ millions)	
Golf Facility Capital Investments[1]	$54.8
New Course Construction	$11.6
TOTAL	$66.4

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 are 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.

Golf-Related Supplies

Virginia 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. Virginia is not home to any major golf equipment or apparel manufacturers. However, there are a handful of golf-related companies that produce goods that are shipped outside the state, such as: Integrated Business Systems, a provider of IT systems for golf facilities; Bag Boy; Links Choice; and Striker Golf GPS, an iPhone golf app. The analysis focuses on companies' out-of-state sales, since the value of products that are sold in Virginia is already captured in the retail portion of the Golf-Related Supplies segment. In 2012, SRI estimates that the value-added shipment of these products outside the state generated $9.1 million, reflecting an increase from 2005, when the value of these exports was zero, since SRI did not identify any manufacturers of golf-related products.

Virginia Manufacturers' Value-Added Exports of Golf-Related Products in 2012 ($ millions)	
TOTAL	$9.1

On the retail side, Virginia retailers and golf facilities earned approximately $44.7 million on the sale of $110.7 million of golf equipment, apparel, and media. By comparison, in 2005, Virginia retailers and golf facilities earned approximately $41.2 million (or $47.5 million in 2012 dollars when adjusted for inflation) on the sale of $108.5 million (or $125.2 million in 2012 dollars) of golf-related merchandise, representing a slight decline in real terms from 2005 to 2012. Overall, from 2005 to 2012, the Golf-Related Supplies segment (consisting of value-added exports plus retail margin) experienced a net increase from $41.2 million (or $47.5 million in 2012 dollars when adjusted for inflation) to $53.8 million.

Virginia Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2012 ($ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	$75.7	**$30.6**
Golf Apparel (retail margin)	$34.2	**$13.8**
Golf Media (retail margin)	$0.8	**$0.3**
TOTAL	$110.7	**$44.7**

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

Associations, Major Tournaments & Charitable Giving

Associations and Major Tournaments

Numerous associations represent the game of golf in Virginia. The national headquarters of the Club Managers Association of America (CMAA) is located in Virginia. At the state level, the largest golf associations include the Virginia State Golf Association, the Middle Atlantic Section of The Professional Golfers' Association of America (MAPGA),[3] the Virginia Golf Course Superintendents Association, the Mid-Atlantic Association of Golf Course Superintendents,[4] the Virginia Chapter of the National Golf Course Owners Association, the Virginias Chapter of the Club Managers Association of America, and the National Capital Club Managers Association.

Also very active are the Executive Women's Golf Association chapters, as well as junior, senior, and regional member golf associations, such as the Washington Metropolitan Golf Association, the Middle Atlantic Golf Association, and the Loudoun County Junior Golf Association. The First Tee, which introduces youth to the game and values of golf, has several chapters in Virginia including Charlottesville, Danville, Hampton Roads, Harrisonburg, Prince William County, Richmond and Chesterfield, Roanoke Valley, and the Virginia Peninsula. The Middle Atlantic PGA Junior Golf Foundation, which was established by the MAPGA in 1990, is a primary promoter of junior golf in Virginia, Maryland, and the District of Columbia. The Foundation reaches over 2,500 junior golfers annually through its MAPGA Junior Tour event and associated scholarships, inner-city youth programs, junior clinics, and other junior

[3] The MAPGA consists of members in Virginia, Maryland, the District of Columbia and small portions of Pennsylvania and West Virginia.

[4] The Mid-Atlantic Association of GCS consists of members in Maryland, Virginia, the District of Columbia, Delaware, Pennsylvania, and West Virginia.

golf programs.[5] The Virginia Turfgrass Council supports its turfgrass industry members, including Virginia golf courses, through research, teaching and Cooperative extension programs.[6]

In 2012, Virginia hosted two major golf championships: an LPGA Tour event and an LPGA Symetra Tour event. The Kingsmill Championship is a women's professional golf tournament on the LPGA Tour played at Kingsmill Resort in Williamsburg, Virginia. The 2012 Kingsmill Championship event winner, Jiyai Shin, triumphed in a sudden-death playoff against Paula Creamer that extended to nine holes and a fifth day. The Eagle Classic is an event on the LPGA's official developmental golf tour, the Symetra Tour (formerly known as the LPGA Futures Tour). It is played at Richmond Country Club in Richmond, Virginia. Paola Moreno won the Eagle Classic in 2012.

Altogether, Virginia's two major golf events combined with amateur golf events and other activities supported by Virginia golf associations generated approximately $15.3 million of expenditures in 2012. This figure excludes the tournament purse and costs for TV broadcasting. In comparison, in 2005 the major golf tournaments and associations in Virginia generated $15.3 million (or $17.7 million in 2012 dollars when adjusted for inflation). The decrease in real terms from 2005 to 2012 is attributed to the lower number of professional golf tournaments hosted in Virginia in 2012 compared to 2005 when the state hosted four major golf championships, including the rotating President's Cup.

Virginia Major Tournaments & Association Revenues in 2012 ($ millions)	
TOTAL	**$15.3**

Charitable Giving

Virginia's golf industry makes substantial contributions to a number of charitable organizations. The designated charity of the LPGA's 2012 Eagle Classic was FeedMore, an umbrella organization comprising the Central Virginia Food Bank, Meals on Wheels Serving Central Virginia, and the Community Kitchen. FeedMore provides hunger relief to thousands of children, seniors, and families across 31 counties in the Central Virginia region. In the previous year, the Eagle Classic raised over $15,000 to benefit the Virginia Commonwealth University (VCU) Massey Cancer Center.[7]

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[5] Middle Atlantic PGA Foundation, http://www.mapga.com/foundationinfo/page_2/, accessed November 5, 2013.
[6] Virginia Turfgrass Council, http://vaturf.org/index.html and http://vaturf.org/foundation.html accessed November 5, 2013.
[7] NBC12, "Eagle Classic picks FeedMore as charity recipient," May 2, 2012. http://www.nbc12.com/story/18077422/eagle-classic-picks-feedmore-as-charity-recipient.

At the local level, the 21st Annual Bon Secours Richmond Health Care Foundation Charity Golf Tournament played at the Country Club of Virginia in Richmond, VA, netted approximately $150,000 in 2012 for Bon Secours Richmond's Care-A-Van Operation's mobile health units, which provide free primary, urgent and preventive health care to more than 17,000 uninsured patients in the Richmond metropolitan area annually.[8] The Holden Cup Charity Pro-Am, hosted by Belle Haven Country Club in Alexandria, VA, raised $80,000 for the Prevent Cancer Foundation in 2012, and has donated over $800,000 to cancer charities in its thirteen years of operation.[9] In 2012 the 21st annual Prevent Blindness Mid-Atlantic Swing for Sight Golf Classic, sponsored by Medarva at Stony Point Surgery Center and held at the Hermitage Country Club in Manakin-Sabot, VA, donated approximately $100,000 to support the Prevent Blindness Mid-Atlantic's "Star Pupils" school-based vision screening program, which supplies tools to aid screening and vouchers for students needing long-term vision care.[10]

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 Virginia was $80.7 million in 2012, up 25.5 percent from 2005 (or 8.8 percent when adjusted for inflation). In 2005, SRI estimated charitable giving to be $64.3 million (or $74.2 million in 2012 dollars).[11]

Virginia Golf Industry's Charitable Giving in 2012 ($ millions)	
TOTAL	**$80.7**

[8] Bon Secours Virginia Health System, Bon Secours Richmond Health Care Foundation's Annual Charity Golf Tournament, http://www.bsvaf.org/page.aspx?pid=322, accessed November 5, 2013.
[9] The Golf Wire, "Holden Cup Charity Pro-Am Raises $80,000 for Cancer Research," October 9, 2012. http://www.thegolfwire.com/stories/270837.
[10] RVANews, "Local Golf Classic raises funds for vision screenings," June 29, 2012, http://rvanews.com/sports/local-golf-classic-raises-funds-vision-screenings.
[11] SRI originally reported a golf chartable giving figure of $18.8 million in 2005 (or $21.7 million in 2012 dollars). This figure was later adjusted based on a larger survey conducted by the National Golf Foundation.

B. ENABLED INDUSTRIES

Real Estate

Real estate developers use amenities to attract new home buyers, and golf is a key amenity in many parts of the state. The development of new homes in golf communities in Virginia followed the rise in the national real estate market, which peaked in 2005 in terms of new home starts and existing home sales, and suffered from the financial crisis and recession of 2007-2009.[12] In 2012, Virginia's housing market began to see some recovery spurred by historically low mortgage rates (30-year mortgage rates below 4 percent) and improvement in the unemployment rate (declining from above 7% in 2009 to below 6% in 2012). In line with overall economic conditions, Virginia's golf communities also experienced small signs of recovery in new home construction in 2012. A handful of developments had a significant number of new homes constructed (ranging from 12 to 45 new homes), such as New Kent Vineyards at The Club at Viniterra in New Kent, Spring Creek at the Spring Creek Golf Club in Gordonsville, Old Trail Village at Old Trail Golf Club in Crozet, and Pendleton Golf Club in Ruther Glen. Examples of other golf community developments with more limited custom home construction in 2012 include: Stonehouse at The Traditions Golf Club in Toano; the Cottages on the James and Burwell's Bluff at Kingsmill Resort in Williamsburg; and Mountain Run at The Federal Club in Glen Allen, among others.

New golf-related real estate construction generated $39.6 million in 2012. Furthermore, in 2012 there were an estimated 79 golf communities (including properties on golf resorts) in Virginia, and SRI estimates the "golf" premium associated with the sale of real estate in these developments to be $42 million. 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. By comparison, in 2005, at the peak of the real estate boom, SRI estimated new golf home construction generated $341 million (or $393.5 million in 2012 inflation-adjusted dollars), and the golf premium generated $86.4 million (or $99.7 in inflation-adjusted dollars). Therefore, Virginia golf real estate was still down considerably in 2012 relative to its peak in 2005, representing a total decline of 80.9 percent in nominal terms or 83.4 percent in real terms when adjusted for inflation.

Virginia's Golf Real Estate Revenues in 2012 ($ millions)	
Golf-Related Residential Construction	**$39.6**
Realized Golf Premium	**$42.0**
TOTAL	**$81.7**

Note: Numbers do not sum due to rounding. 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.

[12] National Association of Realtors data.

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 Virginia, golf is an important tourism segment, alongside trips to state and national parks, mountains, historic sites, wineries, caverns, and beaches. Virginia'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 "Virginia is for Lovers" tourism website prominently features golf as a key outdoors and recreation activity (http://www.Virginia.org).

In 2012, SRI estimates golf-related tourism spending in Virginia was $422.8 million. This is based on the overall growth in domestic visitor spending in Virginia, as the economy recovered from the recession of 2007-09.[13] This represents an increase in real terms relative to golf-related tourism spending in 2005, which was $329.1 million (or $379.7 million in 2012 dollars, when adjusted for inflation).

Virginia Golf-Related Travel Expenditures in 2012 ($ millions)	
TOTAL	**$422.8**

[13] Total domestic visitor expenditures in Virginia grew from $16.5 billion in 2005 to $21.2 billion in 2012, at an annual rate of 3.6 percent. Source: US Travel Association (2013), *The 2012 Economic Impact of Domestic Travel on Virginia*, as quoted in the Virginia Tourism Corporation's brief, "Virginia Tourism Overview - 2012," http://www.vatc.org/uploadedFiles/Research/FastFactsEI2012.pdf.

GOLF'S ECONOMIC IMPACT IN VIRGINIA

Golf's impact on Virginia'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 2012, the $1.354 billion Virginia golf industry supported:

- A total economic impact of $2.513 billion for the state of Virginia including the indirect and induced economic impacts stimulated by golf sector activity;
- A total employment impact of nearly 30,000 jobs; and
- Total wage income of $733.4 million.

Golf's Impact on Virginia's Economy in 2012

INDUSTRY	DIRECT ($ millions)	INDIRECT	INDUCED	TOTAL OUTPUT ($ millions)	TOTAL JOBS	TOTAL WAGE INCOME ($ millions)
Golf Facility Operations	$714.4			$1,417.6	18,550	$422.7
Golf Course Capital Investments*	$66.4			$25.3	197	$7.7
Golf-Related Supplies	$53.8			$103.4	1,000	$30.4
Tournaments & Associations	$15.3			$33.1	257	$9.4
Real Estate **	$81.7			$86.0	670	$26.3
Hospitality/Tourism	$422.8			$847.5	9,245	$236.9
TOTAL	$1,354.4			$2,513.0	29,919	$733.4

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of $1.354 billion the portion of capital investments that is investment in existing facilities ($54.8 million of $66.4 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments ($42.0 million of $81.7 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 Virginia economy in 2005 and 2012. In 2005, the golf economy was $1.591 billion buoyed by strong residential construction and consumer spending and the overall health of the U.S. economy. In 2012, the direct golf economy contracted to $1.354 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 Virginia's Economy in 2012 and 2005 ($ billions)		
	2012	**2005**
Core and Enabled Industries		
Direct Economic Impact ($)	**$1.354**	**$1.591**
Total Output Impact ($)	**$2.513**	**$3.090**
Total Jobs Impact	**29,919**	**40,189**
Total Wage Income Impact ($)	**$0.733**	**$0.948**

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 Virginia in 2012 or the latest available year.

Estimates of Virginia Golf Facilities from Various Sources in 2007 and 2012				
	2007 Economic Census (# of facilities excluding resorts & municipal)[1]	2012 PGA (# of facilities)[2]	2012 NGF (# of facilities)[3]	2012 NGF (# of 18-hole equivalent courses)[3]
PRIVATE	**87**	**119**	**112**	**111.5**
PUBLIC	**176**	**208**	**193**	**184.0**
Daily fee/ semi-private	-	156	-	-
Municipal Military University	-	52	-	-
RESORT	**-**	**20**	**22**	**28.5**
TOTAL	**263**	**347**	**327**	**324.0**

Sources: [1] U.S. Census Bureau, *2007 Economic Census*.
[2] Professional Golfers' Association of America (2013). *Facility Database*.
[3] NGF (2013). Total Facility Supply Tables 6-14, *Golf Facilities in the U.S., 2013 edition*, pp.6-14.

The PGA of America and NGF data fall within a fairly narrow range, PGA's 347 vs. NGF's 327. The PGA's number reflects both more private and public facilities. In 2005, SRI and the Virginia Golf Council estimated there were 334 facilities (based on PGA data: 124 private facilities, 136 daily fee facilities, 45 municipal/military/university facilities, and 29 resort facilities). The facility opening and closure data tracked by NGF indicate a slight net contraction in total facilities from 2005 to 2012, so for 2012, SRI adjusted its 2005 estimate from 347 down to 327 total facilities in 2012 (119 private facilities, 145 daily fee facilities, 41 municipal/military/university facilities, and 22 resort facilities). According to the PGA Facility Database, Virginia had 48 golf ranges in 2012, compared to 43 in 2005.

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 2012, 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 Virginia Average Revenue per Facility Data from Various Sources from 2007 to 2012

	Census (2007)[1]	PGA (2009)[2]	PGA (2010)[3]	PGA (2011)[4]	PGA (2012)[5]	NGF (2009)[6]
Private facility	$3,216,506	$4,667,845	$3,150,154	$4,441,354	$3,768,253	**$3,277,000**
Daily fee facility	$1,379,017	$1,232,757	$1,046,612	$1,492,420	$1,220,395	**$3,262,123**
Resort facility	X	**$1,634,997**	$719,391	**$1,958,312**	**$2,396,397**	X
Municipal/ military/ university facility	X	$1,052,459	$1,299,377	$958,522	**$1,129,009**	**$1,269,100**
Driving range	X	X	X	**$400,000**	X	X
Miniature golf	$451,500	X	X	X	X	X

Note: Bolded values are an average of Virginia and neighboring states, due to low response sample, or represent national averages.

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

[2] Professional Golfers' Association of America (2010). *2009 Operations Survey*.

[3] Professional Golfers' Association of America (2011). *2010 Operations Survey*.

[4] Professional Golfers' Association of America (2012). *2011 Operations Survey*.

[5] Professional Golfers' Association of America (2013). *2012 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 (2007-2012) are presented above. In consultation with the task force, SRI calculated total private, daily fee, municipal/military/university, and resort facility revenues using the 2012 PGA survey data. Driving range revenues were calculated using 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 2012 of $3.768 million, higher than the reported average private facility revenue in 2005 of $3.096 million (or $3.572 million in 2012 dollars when adjusted for inflation).[14] This increase reflects recovery from the economic downturn of 2007-09.

The PGA reported average daily fee facility revenue in 2012 of $1.220 million, which is lower than the reported average revenue for daily fees in 2005 of $1.553 million (or $1.792 million in 2012 dollars when adjusted for inflation). This decrease in average facility revenue is also reflected at the national level during this time period, given the severity of the economic downturn and the slow recovery that followed.

Municipal/military/university facilities at the regional level reported average revenue of $1.129 million in 2012 based on PGA data. Due to the low response samples from Virginia municipals/military/university and resort facilities, SRI calculated regional averages for municipal/military/university facility revenue as well as golf resort facility revenue using PGA Operations Survey data for neighboring states in the agronomic region. The reported regional average for resort facilities in 2012 was $2.396 million, which is significantly higher than the average revenue figure of $1.424 million in 2005 (or $1.643 million in 2012 dollars). This increase in average resort revenue is also reflected at the national level over a similar time period.

Standalone golf ranges and miniature golf facilities experienced increases in their revenues: The PGA median value for standalone golf range revenue was $400,000 in 2011, which is higher than the 2005 estimate of $251,638. SRI adjusted the average revenue for miniature golf facilities for inflation. According to the Economic Census, miniature golf facilities reported average revenue of $451,500 in 2007 (or $490,115 in 2012 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 Virginia's 327 golf courses, 48 stand-alone ranges, and 38 miniature golf facilities generated $714.4 million of revenue in 2012. This reflects a nominal increase of 1.0 percent from 2005 total revenues of $707.5 million (inflation was 15.4 percent during this same period).

[14] Note that based on The PGA estimates, average revenues for private facilities in recent years ranged widely from $3.150 million to $4.668 million, as demonstrated in the chart above. This variation was in large part due to sampling issues.

B. GOLF FACILITY CAPITAL INVESTMENT

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

Virginia Golf Facility Capital Investment and New Course Construction in 2012 ($ millions)	
Golf Facility Capital Investment[1]	**$54.8**
New Course Construction	**$11.6**
TOTAL	**$66.4**

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 are 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 facilities. 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).

After review of both the state-level and national data sets, SRI used the GCSAA's data for Virginia in our capital investment calculations. The data indicate that, on average, a Virginia golf facility invested approximately $98,569, for a total capital investment of $32.2 million. In addition, SRI added the estimate of major renovation projects ($22.5 million) to its estimate for golf course capital investment in Virginia in 2012, resulting in a total of $54.8 million. Capital investments at existing facilities were slightly higher relative to 2005, when Virginia's total golf facility capital investment was $45.6 million (or $52.6 million in 2012 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 2012, NGF estimated that there were no new 18-hole equivalent golf course openings in Virginia and that 5.0 were under construction.

An estimate for the average investment for each new golf course in Virginia is derived from the Golf Course Builders Association of America's (GCBAA) *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 Virginia and the average ("normal") costs for each of the various construction categories (see box below), GCBAA estimates the average investment required to build a new golf course in Virginia is $7.7 million (the average estimate across the various regions of Virginia). However, according to golf course architecture and design consultants, golf course construction alone accounts for only a portion of the total cost of constructing a new golf facility. Approximately a third of the total cost is attributed to the architectural/engineering services, construction of the clubhouse, pro shop, 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 $11.6 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 $5.8 million. We applied this figure to 2.0 18-hole equivalent courses under construction in 2012. In total, SRI estimates that 2012 investment in new course construction in Virginia was $11.6 million. Reflecting the impact of the financial crisis and recession, this is a significantly lower level of investment relative to 2005, when the estimated total investment in new course construction was $24.2 million (or $27.9 million in 2012 dollars when adjusted for inflation).

C. GOLF-RELATED SUPPLIES

This section explains SRI's methodology for calculating Virginia 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.

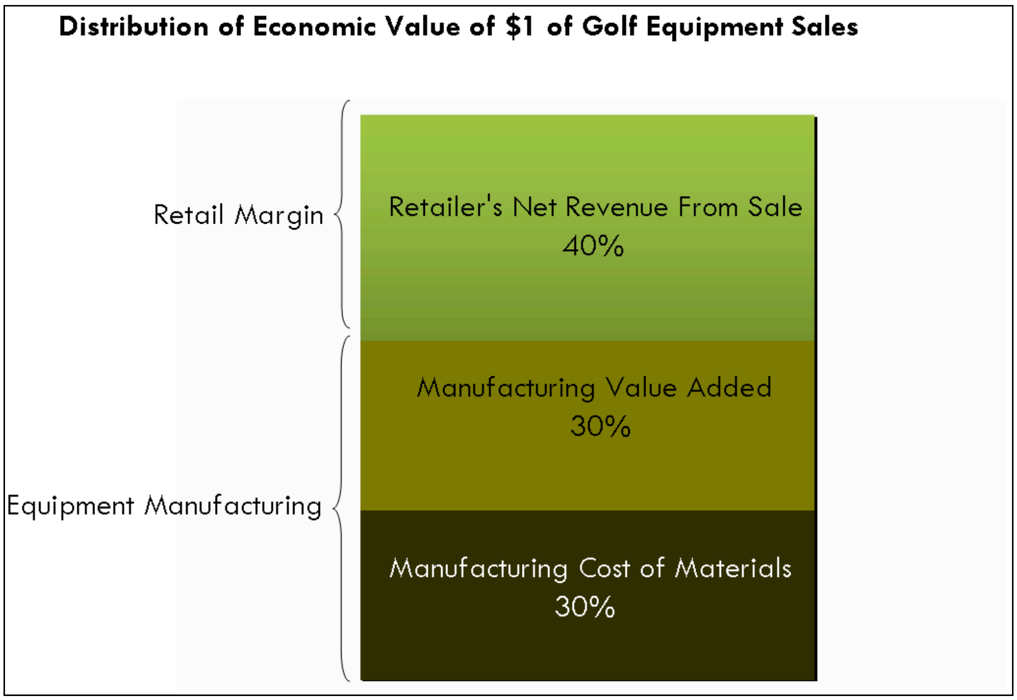
Manufacturing Exports. The economic value created by golf-related supplies consists of two components: (1) design, testing, and value-added production and (2) retail sales margin. On the manufacturing side, we are concerned with the value-added production of golf-related equipment, apparel, and accessories. 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 research to identify manufacturers of golf-related products in the state. Virginia is home to a handful of golf-related companies: Integrated Business Systems, a provider of IT systems for golf facilities; Bag Boy; Links Choice; and Striker Golf GPS, an iPhone golf app. There is also a cluster of sod farms that provide turf for the golf industry, but SRI was not able to ascertain the percentage of sales destined for out-of-state golf courses. We estimated the value added of these companies' out-of-state shipments of golf merchandise in 2012.

Virginia Manufacturers' Value-Added Exports of Golf-Related Products in 2012 ($ millions)	
TOTAL	**$9.1**

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 2012, NSGA reported total U.S. off-course and on-course purchases of individual golf clubs to be $637.8 million. The NSGA survey found the South Atlantic region accounted for 19.6% of these purchases, or $125.0 million. Within the South Atlantic region, one can estimate Virginia'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. Virginia represents 10.3% of total 18-hole equivalent courses in the South Atlantic region, so this weight was applied to the region total ($125.0 million) to estimate $12.9 million of individual golf club sales in the state of Virginia in 2012. Further, retail margins on final sales suggest that 40.4%, or $5.2 million, of total sales was retained in the Virginia economy. (See graphic below.)



Virginia On-Course and Off-Course Golf Equipment & Apparel Purchases in 2012 ($ millions)		
Category	**Calculation**	**Estimate**
Golf club sets	South Atlantic region's sales	$308.3
	VA's courses-based weight	10.3%
	VA's share of sales [1]	**$31.8**
Golf apparel	South Atlantic region's sales	$332.4
	VA's courses-based weight	10.3%
	VA's share of sales, [2]	**$34.2**
Golf balls	South Atlantic region's sales	$185.4
	VA's courses-based weight	10.3%
	VA's share of sales, [3]	**$19.1**
Golf clubs	South Atlantic region's sales	$125.0
	VA's courses-based weight	10.3%
	VA's share of sales, [4]	**$12.9**
Golf bags	South Atlantic region's sales	$57.8
	VA's courses-based weight	10.3%
	VA's share of sales, [5]	**$6.0**
Golf shoes	South Atlantic region's sales	$58.7
	VA's courses-based weight	10.3%
	VA's share of sales, [6]	**$6.0**
TOTAL	Sum of [1] to [6]	**$110.0**
Retail sales margin	**Multiply TOTAL by 40.4%**	**$44.4**

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 Virginia in 2012. 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 2012 were estimated to be $790,176 with a retail sales margin of $319,231. 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.

Virginia On-Course and Off-Course Sales of Golf Books in 2012	
Category	**Estimate**
Virginia retail book sales[1]	**$395,087,797**
Golf books as % of total book sales	**0.2%**
Total retail golf book sales	**$790,176**
Retail sales margin	$319,231

Note: [1]Adjusted for inflation into 2012 dollars using the appropriate GDP deflator.
Sources: Virginia retail book sales data from the 2007 Economic Census. Estimated percentage of golf books among total book sales derived from Book Industry Study Group/Association of American Publishers (2012), *BookStats 2012*, and SRI International (2012), *The 2011 Golf Economy Report*, Menlo Park, CA: SRI International.

Virginia Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2012 ($ millions)		
	Total purchases	**Retail sales margin**
Golf Equipment (retail margin)	$75.7	**$30.6**
Golf Apparel (retail margin)	$34.2	**$13.8**
Golf Media (retail margin)	$0.8	**$0.3**
TOTAL	$110.7	**$44.7**

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

D. ASSOCIATIONS, 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 national headquarters of the Club Managers Association of America (CMAA) which is located in Virginia, the Virginia State Golf Association, the Middle Atlantic Section of The Professional Golfers' Association of America, the Virginia Golf Course Superintendents Association, the Mid-Atlantic Association of Golf Course Superintendents, the Virginia Chapter of the National Golf Course Owners Association, the Virginias Chapter of the Club Managers Association of America, and the National Capital Club Managers Association. 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 2012, two major golf championships were played in Virginia: an LPGA Tour event and an LPGA developmental tour (the Symetra 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.

Virginia Major Tournaments & Association Revenues in 2012 ($ millions)	
TOTAL	**$15.3**

Charitable Giving. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in Virginia to be $80.7 million in 2012. This estimate is derived from a national study[15] 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.

Virginia Golf Industry's Charitable Giving in 2012 ($ millions)	
TOTAL	**$80.7**

E. 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.

Virginia's Golf Real Estate Revenues in 2012 ($ millions)	
Golf-Related Residential Construction	**$39.6**
Realized Golf Premium	**$42.0**
TOTAL	**$81.7**

Note: Numbers do not sum due to rounding. 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.

[15] 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 to arrive at estimates of the number of courses with active real estate development, the size of the development, the number of homes under construction in a given 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 metro regions versus more rural parts of the state).

SRI estimates that approximately 8 golf communities were under development, to varying degrees, in Virginia in 2012. Developments ranged from the planned 2,400-unit Old Trail development in Crozet near Charlottesville to the 120-home New Kent Vineyards development at the Club in Viniterra. Multiplying the total number of units under construction at each course by their average construction cost and summing all of these values yielded a total 2012 golf-related residential construction figure of $39.6 million.

Realized golf premium. The "golf" premium is the extra value a homeowner can expect to receive on the sale of a housing unit 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 estimate of this premium of $25,000 per unit in 2012. Multiplying the approximately 79 existing Virginia golf communities by 665, the average number of housing units per golf course, we arrive at a total of 52,535 golf community homes. In 2012, the home turnover rate (percentage of homes sold relative to the total housing stock) was 3.2 percent in Virginia. Therefore, the realized golf premium was calculated by multiplying the home turnover rate by the total number of golf community homes by the average golf premium per unit. SRI estimates Virginia's golf real estate premium was $42 million in 2012.

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 typically calculates a state's total golf tourism revenues by collecting data for two types of figures: (1) the annual number of golf-related trips and (2) average spending per trip. SRI defines a "golf trip" as a Virginia 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 Virginia golf resort destinations (of which Virginia has 22), golf outings while on vacation or business travel, as well as trips by Virginia 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 Virginia.[16]

However, while these tourism statistics were available for the estimation of Virginia's golf-related tourism spending in 2005, the Virginia Tourism Corporation (VTC) has changed tourism survey vendors since then, and, due to different survey methodologies, there are no comparable state tourism statistics available to estimate the number of golf-related trips in 2012.

Upon consultation with VTC, SRI decided the best alternate approach for estimating golf-related tourism spending in Virginia was to apply the growth in overall tourism spending over the same period, with the underlying assumption that golf-related tourism spending grew at the same rate as overall tourism spending. From 2005 to 2012, total domestic visitor expenditures in Virginia increased from $16.5 billion to $21.2 billion, at an annual rate of 3.6 percent.[17] Applying this growth rate to SRI's 2005 estimate of golf-related tourism spending, $329.1 million (or $379.7 in 2012 dollars, when adjusted for inflation), SRI calculated that total golf-related tourism spending in Virginia was $422.8 million in 2012.

Virginia Golf-Related Travel Expenditures in 2012 ($ millions)	
TOTAL	**$422.8**

[16] In 2012, two major golf championships were played in Virginia, including one LPGA event and one Symetra Tour event. These tournaments attract thousands of spectators from across the state, country, and internationally. For example, the LPGA Kingsmill Championship played at Kingsmill Resort in Williamsburg, VA attracted more than 62,000 spectators in 2012. http://vsga.org/news/tickets-for-the-2013-kingsmill-championship-on-sale/.

[17] Total domestic visitor expenditures in Virginia grew from $16.5 billion in 2005 to $21.2 billion in 2012, at an annual rate of 3.6 percent. Source: U.S. Travel Association (2013), *The 2012 Economic Impact of Domestic Travel on Virginia*, as quoted in the Virginia Tourism Corporate's brief, "Virginia Tourism Overview - 2012," http://www.vatc.org/uploadedFiles/Research/FastFactsEI2012.pdf.

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 Virginia's golf economy.

Golf's Impact on Virginia's Economy in 2012						
INDUSTRY	DIRECT ($ millions)	INDIRECT	INDUCED	TOTAL OUTPUT ($ millions)	TOTAL JOBS	TOTAL WAGE INCOME ($ millions)
Golf Facility Operations	$714.4	→	→	$1,417.6	18,550	$422.7
Golf Course Capital Investments*	$66.4	→	→	$25.3	197	$7.7
Golf-Related Supplies	$53.8	→	→	$103.4	1,000	$30.4
Tournaments & Associations	$15.3	→	→	$33.1	257	$9.4
Real Estate **	$81.7	→	→	$86.0	670	$26.3
Hospitality/Tourism	$422.8	→	→	$847.5	9,245	$236.9
TOTAL	$1,354.4	→	→	$2,513.0	29,919	$733.4

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of $1.354 billion the portion of capital investment that is investment in existing facilities ($54.8 million of $66.4 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments ($42.0 million of $81.7 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.

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