



THE MASSACHUSETTS GOLF ECONOMY

FULL REPORT

This report was commissioned by
GOLF 20/20 for the
Alliance of Massachusetts Golf Organizations
and prepared by SRI International



The Massachusetts Golf Economy

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ACRONYMS

AMGO	Alliance of Massachusetts Golf Organizations
CMAA	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
GCSANE	Golf Course Superintendents Association of New England
LPGA	Ladies Professional Golf Association
MGA	Massachusetts Golf Association
MOTT	Massachusetts Office of Travel & Tourism
NECMAA	New England Chapter of the Club Managers Association of America
NEGCOA	New England Chapter of the Golf Course Owners Association
NEGA	New England Golf Association
NEPGA	New England Section of The Professional Golfers' Association of America
NGF	National Golf Foundation
NGCOA	National Golf Course Owners Association
PGA	The Professional Golfers' Association of America
USGA	United States Golf Association
WGF	World Golf Foundation

STUDY OVERVIEW

With 376 golf facilities and two professional golf championships, golf in Massachusetts 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 Massachusetts direct golf economy was approximately \$1.7 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, Massachusetts' golf industry supported approximately \$2.7 billion of total economic activity, over 25,000 jobs, and \$796.8 million of wage income in 2012.

This report represents the second study estimating the impact of the golf industry on Massachusetts' economy. SRI conducted a previous economic impact study for the base year 2006. During the period between the two golf economy studies (2006 and 2012), the Massachusetts 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 golf-related supply revenues between 2006 and 2012. Despite some contraction in those sectors, however, Massachusetts' golf industry grew as a whole between 2006 and 2012. SRI estimates that the Massachusetts golf industry generated \$1.7 billion of economic activity in 2012. This represents an overall increase of 7.9 percent from 2006 (when the estimated size of the golf economy was \$1.6 billion), primarily reflecting growth in golf facility operations and in the hospitality/tourism sectors.

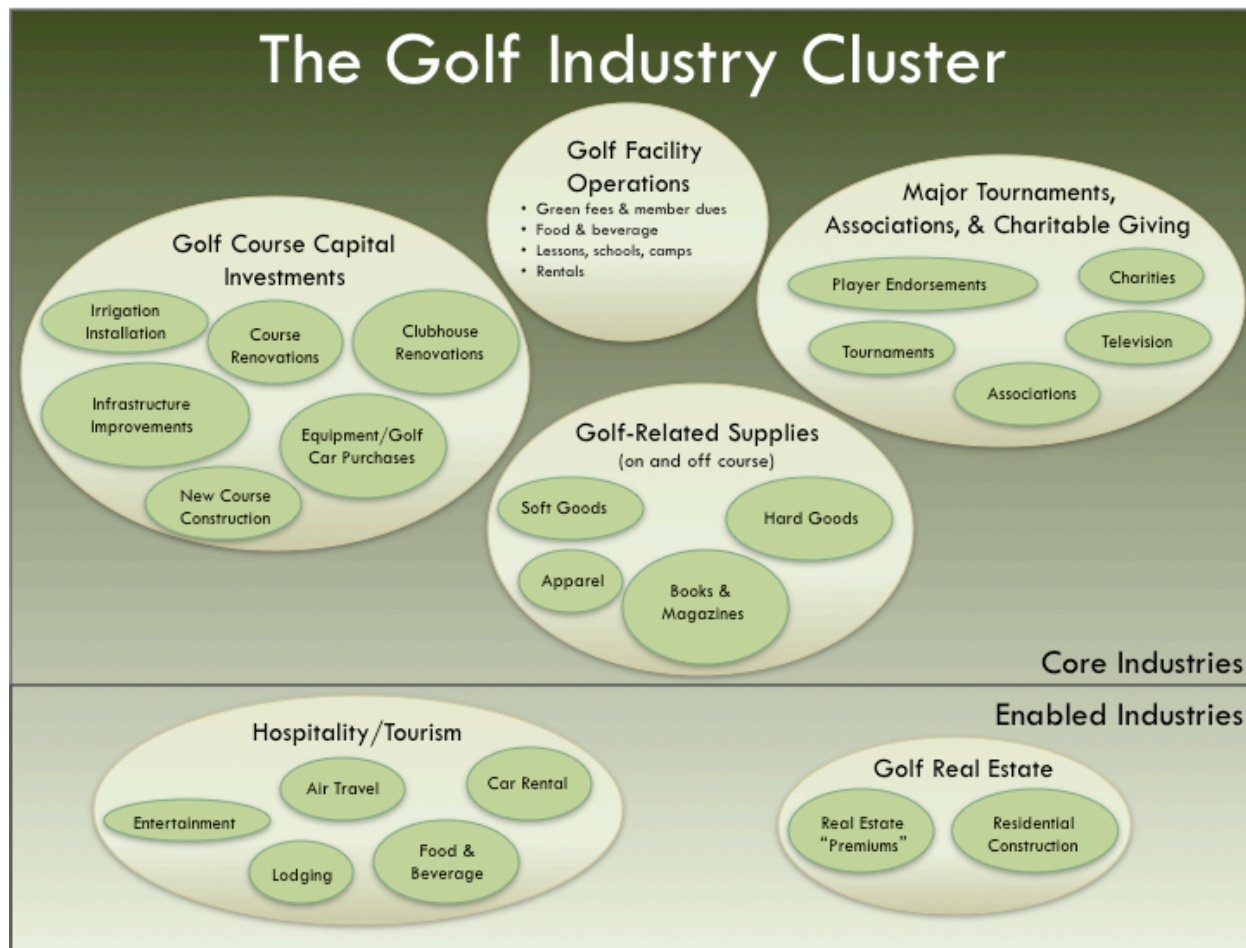
ANALYTICAL FRAMEWORK

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 2006 state-level *The Massachusetts 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; <i>Bowker Annual of Library and Book Trade Information</i> (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 MASSACHUSETTS' 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 2006 and 2012. SRI estimates the total size of Massachusetts' golf economy in 2012 was approximately \$1.74 billion, up from \$1.61 billion in 2006. The growth in the Massachusetts golf economy was driven primarily by growth in two industry segments: golf facility operations and hospitality/tourism.

Size of Massachusetts' Golf Economy in 2012 and 2006 by Industry Segment (\$ millions)		
	2012	2006
CORE INDUSTRIES		
Golf Facility Operations	\$793.2	\$649.4
Golf Course Construction and Capital Investments	\$66.9	\$60.5
Golf-Related Supplies (retail margin and manufacturing exports)	\$461.9	\$528.3
Major Golf Tournaments and Associations	\$18.6	\$19.0
Total Core Industries	\$1,340.6	\$1,257.2
ENABLED INDUSTRIES		
Real Estate	\$30.2	\$60.3
Hospitality/Tourism	\$366.7	\$292.4
Total Enabled Industries	\$396.9	\$352.7
TOTAL GOLF ECONOMY	\$1,737.5	\$1,610.0

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. Massachusetts's 376 golf courses, 53 stand-alone ranges, and 38 miniature golf facilities generated \$793.2 million of revenue in 2012. This represents an increase over the 2006 total revenue of \$649.4 million (\$719.1 million in 2012 dollars when adjusted for inflation).

Massachusetts Golf Facility Revenues in 2012 (\$ millions)	
Golf Facilities	\$761.3
Practice Ranges & Alternative Facilities	\$31.9
TOTAL¹	\$793.2

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 even more significant when compared to other popular revenue-generating sports. For example, Massachusetts' golf facilities generated revenues comparable to all other spectator sports in the state combined—football, baseball, basketball, hockey, and soccer. These five other sports generated revenues of \$840.0 million in 2007 (latest available year for this data), or \$906.2 million in 2012 inflation-adjusted dollars. ¹

Golf Facility Capital Investments

Golf facilities generate economic impacts beyond operational expenditures 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 Massachusetts's golf facility capital investments is divided into two segments: (1) capital investments at existing facilities and (2) new course construction. Together, Massachusetts's golf facilities made \$66.9 million worth of capital investments in 2012: \$63.2 million of investments at existing facilities and \$3.7 million for the construction of new courses.

By comparison, Massachusetts's golf facilities made \$60.5 million in total capital investment in 2006, which includes \$44.5 million of investments at existing facilities and \$16.0 million for the construction of new courses. (When adjusted for inflation, these figures are \$67.0 million for total capital investments: \$49.3 million at existing facilities and \$17.8 million for the construction of new courses in 2012 dollars.) The slight decrease in total capital investments in real terms from 2006 to 2012 reflects a substantial decline in new course construction, which outweighed the growth in investment at existing facilities over this period.

¹ U.S. Census Bureau (2014). *Massachusetts: 2007, 2007 Economic Census, Arts, Entertainment & Recreation Geographic Series*.

Massachusetts Golf Facility Capital Investment and New Course Construction in 2012 (\$ millions)	
Golf Facility Capital Investments¹	\$63.2
New Course Construction	\$3.7
TOTAL	\$66.9

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

Massachusetts 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. Massachusetts is home to some notable golf equipment manufacturers, such as Acushnet (parent company of the Titleist brand of golf equipment and apparel) and Callaway Golf (which formerly owned Top-Flite and still manufactures Callaway Golf balls in Chicopee). The state is also home to a handful of smaller golf-related companies: New Balance Golf, which is introducing a new line of golf shoes; Ahead, which designs and embroiders golf caps; Etonic, which designs and manufactures golf shoes; Champ Spikes; and custom putter manufacturers; among others. The analysis focuses on companies' out-of-state sales, since the value of products that are sold in Massachusetts 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 generated \$425.7 million, down from \$496.6 million in 2006 (or \$549.9 million in inflation-adjusted dollars). This decline was largely due to competitive restructuring of operations by Massachusetts manufacturers following the 2007-2009 recession.

Massachusetts Manufacturers' Value-Added Exports of Golf-Related Products in 2012 (\$ millions)	
TOTAL	\$425.7

On the retail side, Massachusetts retailers earned approximately \$36.2 million on the sale of \$89.6 million of golf equipment, apparel, and media. By comparison, in 2006, Massachusetts retailers earned approximately \$31.7 million (or \$35.1 million in 2012 dollars when adjusted for inflation) on the sale of \$78.8 million (or \$87.3 million in 2012 dollars) of golf-related merchandise, representing a slight increase in real terms from 2006 to 2012. Overall, from 2006 to 2012, the Golf-Related Supplies segment (consisting of value-added exports plus retail margin) experienced a net decrease from \$528.3 million (or \$585.0 million in 2012 dollars when adjusted for inflation) to \$461.9 million, due to a decline in golf-related manufacturing in Massachusetts during these two periods.

Massachusetts Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2012 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$67.0	\$27.1
Golf Apparel (retail margin)	\$21.9	\$8.8
Golf Media (retail margin)	\$0.7	\$0.3
TOTAL	\$89.6	\$36.2

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 Massachusetts. The largest golf associations represent members from across New England, including the New England Section of the Professional Golfers' Association (New England PGA), the Golf Course Superintendents Association of New England, the New England Chapter of the Golf Course Owners Association, and the New England Chapter of the Club Managers Association of America.² Also very active are state and regional golf associations, such as the Massachusetts Golf Association, the New England Golf Association, the Women's Golf Association of Massachusetts, the Northeast Accessible 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 program affiliates in Massachusetts. The New England Regional Turfgrass Foundation, formed through the cooperation of the seven Golf Course Superintendent Associations within the New England Region, promotes the region's turfgrass industry through conferences, seminars and support of state university research.³ Massachusetts is also home to nonprofit organizations that leverage the game of golf to support cancer care and research and college scholarships, such as Golf Fights Cancer and the Francis Ouimet Scholarship Fund, among others.

Massachusetts hosted one major golf championship in 2012: the Deutsche Bank Championship, a PGA TOUR event. The Deutsche Bank Championship is the second event of the FedEx Cup Playoffs featuring the top 100 PGA TOUR professionals. It is played annually over Labor Day weekend at the Tournament Players Club of Boston in Norton, MA.

² Many of these regional golf associations are headquartered in Massachusetts, which is the largest member base on an 18-hole equivalent basis, although these associations support tournaments and activities across the region. SRI prorated association expenditures.

³ New England Regional Turfgrass Foundation, <http://www.nertf.org>. Accessed February 15, 2014.

In 2012, the Deutsche Bank Championship event (excluding the tournament purse and costs for TV broadcasting), combined with Massachusetts golf association expenditures, generated approximately \$18.6 million. In 2006, SRI estimated combined tournament and golf association expenditures of \$19.0 million (or \$21.1 million in 2012 dollars when adjusted for inflation). The decrease in combined expenditures is due to the fact that Massachusetts hosted two championship events in 2006—the Deutsche Bank Championship and the Bank of America Championship, a Champions Tour event—but only one in 2012.⁴

Massachusetts' Major Tournaments & Association Revenues in 2012 (\$ millions)	
TOTAL	\$18.6

Charitable Giving

Massachusetts' golf industry makes substantial contributions to a variety of charities. At the championship level, the Deutsche Bank Championship has raised more than \$24 million for the Tiger Woods Foundation and local New England-area charities since its inception in 2003.⁵ Also significant are a number of nonprofit organizations that leverage charitable golf events to raise money for cancer care and research and for need-based scholarships. In 2012, the Francis Ouimet Scholarship Fund provided \$1.5 million in scholarships to awardees who have been caddies, or held jobs in golf professional or course superintendent operations at any golf course in Massachusetts, and demonstrated financial need.⁶ The Jimmy Fund Golf Program raised \$6.4 million for adult and pediatric cancer care and research in 2012 on behalf of the Dana-Farber Cancer Institute through the various charitable golf events it organizes.⁷ Golf Fights Cancer is another nonprofit organization that raises funds for cancer-related charities and research organizations and raised nearly \$350,000 in 2012.

When totaled across all facilities, charitable golf events organized at the local level also generate significant contributions for charitable causes across Massachusetts. A few examples include the Caron-Wood Charity Golf Classic, which raised over \$100,000 to support junior golfers from Cape Cod and the Islands; the Hole in the Wall Gang Camp for children with serious illnesses, founded by Paul Newman;

⁴ Bank of America ended its sponsorship of this Champions Tour event in 2008 following the financial crisis of 2007-2008.

⁵ Tiger Woods Foundation, About the Championship, <http://www.web.tigerwoodsfoundation.org/>. Accessed April 1, 2014.

⁶ Francis Ouimet Scholarship Fund, 2013 Annual Report, <http://www.ouimet.org/files/2013-Annual-Report-Online.pdf>. Accessed April 2, 2014.

⁷ While Jimmy Fund Golf Program holds charitable golf events throughout the New England region, an estimated 90 percent of monies raised are in Massachusetts.

and other charities.⁸ The NAIOP Massachusetts (Commercial Real Estate Development Association) 24th Annual Charitable Golf Tournament raised \$151,500 to support Heading Home’s programs to end homelessness. The tournament was hosted by Stow Acres Country Club and Butternut Farm Golf Club.⁹ Par 4 Technology Group organized a charity golf tournament hosted by Andover Country Club that raised \$40,000 for a scholarship fund to benefit young men and women at the Lawrence Boys and Girls Club.¹⁰ Every year, Massachusetts golf clubs host a number of charitable events like these. 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 Massachusetts was \$74.3 million in 2012.

Massachusetts Golf Industry’s Charitable Giving in 2012 (\$ millions)	
TOTAL	\$74.3

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 Massachusetts followed the rise in the national real estate market, which peaked in 2005 in terms of new home starts, and suffered from the financial crisis and recession of 2007-2009.¹¹ In 2012, Massachusetts’s housing market was experiencing some recovery, albeit not to the level of new home construction in 2006. A handful of developments had a number of new homes constructed (ranging from 12 to 20 new homes), such as the Residences at Black Rock at the Black Rock Country Club in Hingham; the Turner Hill development in Ipswich; and the Southport development in Mashpee. Examples of other golf community developments with just a few homes constructed in 2012 include: Willowbend at the Willowbend Country Club in Hyannis; the Shining Rock Homes at the Shining Rock Golf Club in Northbridge; and the Ridge Club in Sandwich, among others.

New golf-related real estate construction generated \$25.5 million in 2012. By comparison, in 2006, at the peak of the real estate boom, SRI estimated new golf home construction generated \$56.0 million (or

⁸ Caron-Wood Charity Golf Classic, The 6th Annual Caron-Wood Charity Golf Classic, Letter from the Tournament Director, <http://www.caronwoodcharitygolfclassic.com/wp-content/uploads/2013/03/caron-wood-single-pages.pdf>. Accessed April 2, 2014.

⁹ Heading Home Inc. “NAIOP Massachusetts’ 24th Annual Charitable Golf Tournament,” <http://www.headinghomeinc.org/events/naiop-massachusetts-24th-annual-charitable-golf-tournament>. Accessed 18 April 2014.

¹⁰ Par 4 Technology. “Third Annual Charity Golf Tournament,” <http://par4tech.com/third-annual-charity-golf-tournament/>. Accessed 20 April 2014.

¹¹ U.S. Census Bureau (2012). *Building Permits Survey: Massachusetts, 2005-2012*.

\$62.0 million in 2012 inflation-adjusted dollars). Furthermore, in 2012 there were an estimated 37 golf communities (including properties on golf resorts) in Massachusetts, and SRI estimates the “golf” premium associated with the sale of real estate in these developments to be \$4.7 million, up from \$4.3 million (or \$4.8 in inflation-adjusted dollars).¹² 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. Interestingly, although new home construction remains half of what it was in 2006, the sale of *existing* homes has rebounded to 2006 levels fueled by low mortgage rates, flat home prices, and a strengthening economy.

Massachusetts’ Golf Real Estate Revenues in 2012 (\$ millions)	
Golf-Related Residential Construction	\$25.5
Realized Golf Premium	\$4.7
TOTAL	\$30.2

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, family, or business colleagues. In Massachusetts, golf is a sizeable tourism segment, alongside key traveler activities such as shopping and dining, visiting beaches, and sightseeing. Massachusetts’ golf courses and 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 Massachusetts tourism website features the state’s golf courses among the many outdoor activities available in the state (<http://www.massvacation.com/explore/outdoors/golf/>).

In 2012, SRI estimates golf-related tourism spending in Massachusetts was \$366.7 million. This is based on the following estimates of golf trips and associated expenditures by Massachusetts residents and non-residents: (1) an estimated 264,200 *day* trips with average golf trip spending of \$77 per person and (2) an estimated 469,800 *overnight* trips (which in Massachusetts average 2.1 nights¹³) with average trip spending of \$737 per person.¹⁴ This represents an increase in real terms relative to golf-related tourism

¹² In 2011, the National Association of Realtors revised their existing home sales data to correct for “drift,” i.e., the variation between the Multiple Listing Service (MLS) data and property deeds data. The result was a significant downward correction in the sale of existing homes and turnover rate. In response, SRI recalculated Massachusetts’ 2006 golf premium to account for the significant decline in the turnover rate. In the previous study, SRI reported a realized golf premium of \$14.0 million, compared to the revised 2006 premium of \$4.3 million.

¹³ Massachusetts Office of Travel & Tourism (March 2013), 2012 Annual Report, <http://www.massvacation.com/wp-content/uploads/2013/11/2012-Annual-Report.pdf>.

¹⁴ All trips refer to “person-trips” which simply means the count of the total number of people taking a trip. Therefore, 264,200 day trips should be interpreted as 264,200 people who took a day trip. Trips include people

spending in 2006, which was \$292.4 million (or \$323.8 million in 2012 dollars, when adjusted for inflation). The growth in golf-related tourism spending is consistent with the overall growth in domestic visitor spending in Massachusetts, as the economy recovered from the recession of 2007-2009.¹⁵

Massachusetts Golf-Related Tourism Expenditures in 2012	
# of golf day trips	264,200
Average travel \$ per golf day trip	\$77.11
# of golf overnight trips	469,800
Average travel \$ per golf overnight trip	\$737.34
Total	\$366.7 million

traveling to Massachusetts from out of state, as well as people traveling within the state more than 50 miles from home.

¹⁵ Total domestic visitor spending in Massachusetts grew from \$12.59 billion in 2006 (or \$13.94 billion in 2012 dollars) to \$15.41 billion in 2012. Source: MOTT/U.S. Travel Association (2009), *The Economic Impact of Travel on Massachusetts Counties 2008*, http://www.massvacation.com/wp-content/uploads/2013/06/ec_imp_hist08.pdf; and MOTT/U.S. Travel Association (2013), *The Economic Impact of Travel on Massachusetts Counties 2012*, <http://www.massvacation.com/wp-content/uploads/2013/09/econ-impact-12.pdf>.

GOLF'S ECONOMIC IMPACT IN MASSACHUSETTS

Golf's impact on Massachusetts' 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 businesses and employees.

In 2012, the \$1.7 billion Massachusetts golf industry supported:

- A total economic impact of \$2.7 billion for the state of Massachusetts including the indirect and induced economic impacts stimulated by golf sector activity;
- A total employment impact of over 25,000 jobs; and
- Total wage income of \$796.8 million.

Golf's Impact on Massachusetts' Economy in 2012						
INDUSTRY	DIRECT (\$ millions)	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$793.2			\$1,131.4	14,164	\$355.2
Golf Course Capital Investments*	\$66.9			\$7.8	52	\$2.5
Golf-Related Supplies	\$461.9			\$946.3	4,863	\$245.5
Tournaments & Associations	\$18.6			\$29.2	240	\$10.3
Real Estate **	\$30.2			\$53.5	360	\$17.1
Hospitality/Tourism	\$366.7			\$542.4	5,803	\$166.3
TOTAL	\$1,737.5			\$2,710.6	25,481	\$769.8

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$1.7 billion the portion of capital investments that is investment in existing facilities (\$63.2 million of \$66.9 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$4.7 million of \$30.2 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 Massachusetts economy in 2006 and 2012. In 2006, the golf economy was \$1.61 billion buoyed by strong golf facility operations and golf supply production. In 2012, the direct golf economy expanded to \$1.74 billion due primarily to significant growth in golf facilities operations and the hospitality/tourism sectors. The golf supply production in the state contracted 12.6 percent over the period. The table shows this dichotomy, where direct economic impact has grown, but total golf output, employment, and wages, have declined.

Golf's Impact on Massachusetts' Economy in 2012 and 2006 (\$ billions)		
	2012	2006
Core and Enabled Industries		
Direct Economic Impact (\$)	\$1.738	\$1.610
Total Output Impact (\$)	\$2.711	\$3.260
Total Jobs Impact	25,481	31,685
Total Wage Income Impact (\$)	\$0.797	\$0.950

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 accommodation located on or adjacent to an 18-hole course) or a much larger number of resorts (e.g., three-star hotel accommodation 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 variations 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 Massachusetts in 2012 or the latest available year.

Estimates of Massachusetts Golf Facilities from Various Sources in 2007 and 2012

	2007 Economic Census (excludes resorts & municipal facilities) ¹	2012 PGA (# of facilities) ²	2012 Massachusetts Golf Alliance	2012 NGF (# of facilities) ³	2012 NGF (# of 18-hole equivalent courses) ³
PRIVATE	93	131	127	123	18.5
PUBLIC	235	242	219	249	88.5
Daily fee/ semi-private		187	169	192*	
Municipal Military University		55	50	57*	
RESORT		3		4	5
TOTAL	328	379	346	376	112.0

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.

Note: * Calculated by SRI based on PGA breakdown of daily fee/semi-privates versus municipal/military/university facilities.

The PGA of America and NGF data fall within a fairly narrow range, PGA's 379 vs. NGF's 376, while the MA Golf Alliance facilities estimate was lower at 346. After analysis of the different golf facility numbers and in an effort to maintain consistency with the previous study, SRI used NGF's facility numbers as the basis for our assessment. The data indicate a slight increase in total facilities from 2006 (375 facilities) to 2012 (376 facilities, comprised of 123 private facilities, 249 public facilities, and 4 golf resorts). SRI used the PGA's breakdown by type of facility to estimate the proportion of NGF reported public facilities that are daily fee/semi-private versus municipal/military/university facilities. These calculated estimates are 192 daily fee/semi-private facilities and 57 municipal/military/university facilities.

Average revenues per facility. 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.

Reported Massachusetts Golf Facility Average Revenue by Type of Facility, 2005-06 to 2012						
	Census (2007) ¹	PGA (2005- 06 avg) ²	PGA (2010) ³	PGA (2011) ⁴	PGA (2012) ⁵	NGF (2009) ⁶
Private facility	\$3,128,344	\$2,365,563	\$2,641,454	\$2,955,015	\$3,195,500	\$3,277,000
Daily fee facility	\$1,402,830	\$1,506,738	\$1,647,888	\$2,347,353	\$1,838,480	\$1,457,700
Resort facility	X	X	X	\$2,000,000	X	X
Municipal/military/university facility	X	\$1,467,909	\$1,425,536	\$1,102,553	\$1,428,169	\$1,269,100
Driving range	X	X	X	\$400,000	X	X
Miniature golf	\$243,237	X	X	X	X	X

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

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

² Professional Golfers' Association of America (2006,2007). *2005 Operations Survey and 2006 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 (2005-2012) are presented above. After review of reported average revenue data and in consultation with the task force, SRI calculated total facility revenue for traditional facilities using the 2012 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 adjusted for inflation. Although a more recent Economic Census was conducted in 2012, this data has not been publicly released at the state level yet.

The PGA's 2012 Operations Survey reported **average private facility revenue** of \$3.196 million, up significantly from SRI's calculated average in 2006 (\$2.366 million, or \$ 2.620 million in inflation-adjusted 2012 dollars).¹⁶ In 2012, the PGA reported **average daily fee revenue** of \$1.838 million. This also represents an increase from SRI's calculated average in 2006 (\$1.507 million, or \$1.669 million in inflation-adjusted 2012 dollars). The PGA reported \$1.428 million for **average municipal/military/university facility revenue** in 2012, a decline from SRI's calculated average in 2006 (\$1.468 million, or \$1.626 million in inflation-adjusted 2012 dollars). The only reported average revenue for Massachusetts **resort facilities** from 2009 to 2012 from the PGA was \$2.0 million in 2011, and that estimate was based on a regional average because of low sample size. Consequently, SRI used the PGA's 2012 average private facility revenue as a proxy for resort revenues. The PGA reported a median value for **standalone golf range** revenue of \$400,000 in 2011. SRI use the 2011 PGA average golf range revenue adjusted for inflation, or \$406,988. SRI used the latest available average revenue data for miniature golf facilities (2007) and adjusted for inflation.

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 Massachusetts's 376 golf courses, 53 stand-alone ranges, and 38 miniature golf facilities generated \$793.2 billion of revenue in 2012. This reflects a real increase since 2006, when facility operations revenue totaled \$649.4 million for the 375 facilities (or \$719.1 million in 2012 dollars when adjusted for inflation). This increase in facility operations revenue from 2006 to 2012 is driven by higher reported average revenue for private and daily fee facilities in 2012 compared to 2006.

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.

Massachusetts Golf Facility Capital Investment and New Course Construction in 2012 (\$ millions)	
Golf Facility Capital Investment¹	\$63.2
New Course Construction	\$3.7
TOTAL	\$66.9

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.

¹⁶ In the previous 2006 study, SRI took an average of the PGA 2005 and 2006 reported average revenue figures, because of some large divergences in the reported average data.

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 Massachusetts in our capital investment calculations. The data indicate that, on average, a Massachusetts golf facility invested approximately \$132,196 for a total capital investment across all golf facilities of \$49.7 million. In addition, SRI added the estimate of major renovation projects (\$13.5 million) to its estimate for golf course capital investment in Massachusetts in 2012, resulting in a total of \$63.2 million. Capital investments at existing facilities increased relative to 2006, when Massachusetts's total golf facility capital investment was \$44.5 million (or \$49.3 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 was one new 18-hole equivalent golf course openings in Massachusetts and that 0.5 were under construction.

An estimate for the average investment for each new golf course in Massachusetts 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 Massachusetts 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 Massachusetts is \$7.3 million (the average estimate across the various regions of Massachusetts). 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. An equal amount is spent on 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 \$14.7 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 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 \$7.4 million. We applied this figure to the 0.5 18-hole equivalent courses under construction in 2012. In total, SRI estimates that 2012 investment in new course construction in Massachusetts was \$3.7 million. Reflecting the impact of the financial crisis and recession, this is a significantly lower level of investment relative to 2006, when the estimated total investment in new course construction was \$16.0 million (or \$17.8 million in 2012 dollars when adjusted for inflation).

C. GOLF-RELATED SUPPLIES

This section explains SRI's methodology for calculating Massachusetts 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. Massachusetts is home to a handful of golf-related companies: Acushnet, parent company of the Titleist brand of golf equipment and apparel; Callaway Golf (which formerly owned Top-Flite and still manufactures Callaway Golf balls in Chicopee); New Balance Golf, which is introducing a new line of golf shoes; Ahead, which designs and embroiders golf caps; Etonic, which designs and manufactures golf shoes; Champ Spikes; and custom putter manufacturers; among others. We

estimated the value-added shipment of these companies' products out-of-state to be \$425.7 million in 2012.

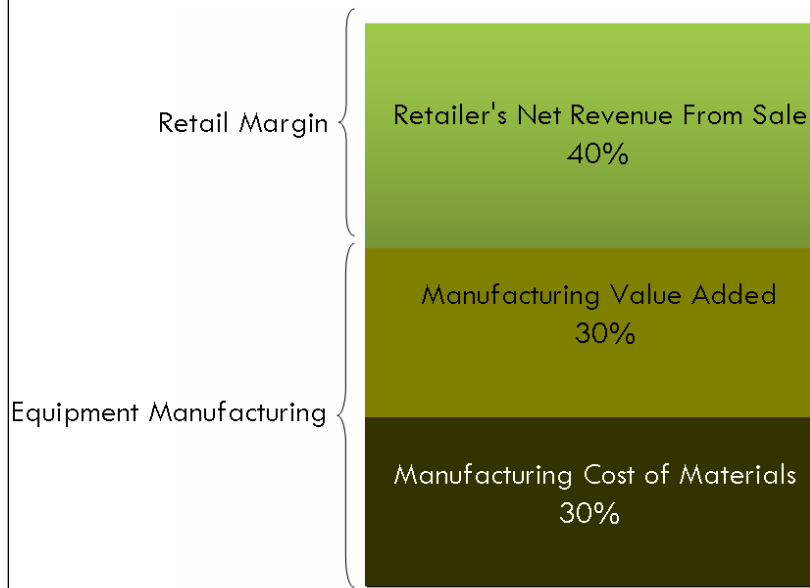
Massachusetts Manufacturers' Value-Added Exports of Golf-Related Products in 2012 (\$ millions)	
TOTAL	\$425.7

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 New England region accounted for 4.9% of these purchases, or \$31.8 million. Within the New England region, one can estimate Massachusetts'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. Massachusetts represents 40.8% of total 18-hole equivalent courses in the New England region, so this weight was applied to the region total (\$31.8 million) to estimate \$13.0 million of individual golf club sales in the state of Massachusetts in 2012. Further, retail margins on final sales suggest that 40.4%, or \$5.2 million, of total sales was retained in the Massachusetts economy. (See graphic below.)

Distribution of Economic Value of \$1 of Golf Equipment Sales



Massachusetts On-Course and Off-Course Golf Equipment & Apparel Purchases in 2012 (\$ millions)		
Category	Calculation	Estimate
Golf club sets	New England region's sales MA's courses-based weight MA's share of sales [1]	\$31.8 40.8% \$13.0
Golf apparel	New England region's sales MA's courses-based weight MA's share of sales, [2]	\$53.7 40.8% \$21.9
Golf balls	New England region's sales MA's courses-based weight MA's share of sales, [3]	\$76.8 40.8% \$31.3
Golf clubs	New England region's sales MA's courses-based weight MA's share of sales, [4]	\$31.3 40.8% \$12.8
Golf bags	New England region's sales MA's courses-based weight MA's share of sales, [5]	\$14.4 40.8% \$5.9
Golf shoes	New England region's sales MA's courses-based weight MA's share of sales, [6]	\$10.0 40.8% \$4.1
TOTAL	Sum of [1] to [6]	\$88.9
Retail sales margin	Multiply TOTAL by 40.4%	\$35.9

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 Massachusetts 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 \$696,404 with a retail sales margin of \$281,347. 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.

Massachusetts On-Course and Off-Course Sales of Golf Books in 2012	
Category	Estimate
Massachusetts retail book sales ¹	\$320,768,000
Golf books as % of total book sales	0.2%
Total retail golf book sales	\$696,404
Retail sales margin	\$281,347

Note: ¹Adjusted for inflation into 2012 dollars using the appropriate GDP deflator.

Sources: Massachusetts 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.

Massachusetts Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2012 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$67.0	\$27.1
Golf Apparel (retail margin)	\$21.9	\$8.8
Golf Media (retail margin)	\$0.7	\$0.3
TOTAL	\$89.6	\$36.2

Note: Numbers may not add due to rounding. This includes on-course and off-course purchases of golf equipment, apparel, and media.

D. ASSOCIATIONS, TOURNAMENTS & CHARITABLE GIVING

Associations. SRI gathered association expenditure data for the largest national, state, and regional golf organizations from these organizations' 990 income tax filings. These include the Massachusetts Golf Association, the New England Section of the PGA, the New England Golf Association, the Golf Course Superintendents Association of New England, the New England Golf Course Owners Association, and the New England Chapter of the Club Managers Association of America, among others. Also included are the expenditures of women's, senior, junior, and regional member golf associations and other golf-related 501(c)3 organizations.

Major Tournaments. In 2012, one major golf championship was played in Massachusetts: the Deutsche Bank Championship, a PGA 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 Tourism segment of the report.

Massachusetts Major Tournaments & Association Revenues in 2012 (\$ millions)	
TOTAL	\$18.6

Charitable Giving. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in Massachusetts to be \$74.3 million in 2012. This estimate is derived from a national study¹⁷ 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.

Massachusetts Golf Industry's Charitable Giving in 2012 (\$ millions)	
TOTAL	\$74.3

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.

Massachusetts' Golf Real Estate Revenues in 2012 (\$ millions)	
Golf-Related Residential Construction	\$25.5
Realized Golf Premium	\$4.7
TOTAL	\$30.2

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 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 developments, 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

¹⁷ National Golf Foundation (2011). *The Charitable Impact Report*.

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 7 golf communities were under development, to varying degrees, in Massachusetts in 2012. Developments ranged from the 750-unit Southport development in Mashpee to the 48-home Old Sandwich development at the Old Sandwich Golf Club in Plymouth. 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 \$25.5 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 37 existing Massachusetts golf communities by 300, the average number of housing units per golf course, we arrive at a total of 11,100 golf community homes. In 2012, the estimated home turnover rate (percentage of homes sold relative to the total housing stock) was 1.7 percent in Massachusetts. 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 Massachusetts’s golf real estate premium was \$4.7 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 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.

Number of golf-related trips. SRI defines a “golf trip” as a Massachusetts 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 Massachusetts golf resort destinations, golf outings while on vacation or business travel, as well as trips by Massachusetts residents to play golf courses in other parts of the state. People also travel to watch amateur and professional golfers compete in tournaments played in Massachusetts.¹⁸

¹⁸ In 2012, one major golf championship was played in Massachusetts, the Deutsche Bank Championship, a major event on the PGA Tour. This tournament attracts thousands of spectators and workers/volunteers each year. An economic impact study of this tournament indicated that it generated an estimated \$60 million in direct and indirect economic activity in 2010, and \$500 million over ten years. See:

The Massachusetts Office of Travel & Tourism (MOTT) provides overall tourism figures for Massachusetts each year, including number of visitor trips and visitor expenditures. Making comparisons between 2012 state tourism data and older data is difficult because MOTT changed data providers around 2008/2009.

- In 2004, MOTT reported 29.8 million domestic person trips in Massachusetts (using the Travel Industry Association of America's *TravelScope*® statistics¹⁹), and this figure was used by SRI as a basis to calculate golf tourism in the 2006 *Massachusetts Golf Economy* study.
- In 2012, MOTT reported 20.0 million domestic person trips in Massachusetts (using TNS *TravelsAmerica* statistics²⁰).

The two figures are clearly not comparable and draw upon different sources with different estimation methodologies. Lacking good time series data for tourism in Massachusetts, SRI used recent tourism growth rates in the state to impute a reasonable person trips figure for 2012 that would be comparable to the 29.8 million figure used in the last Massachusetts golf study.

- From 2009-2012, domestic person trips in Massachusetts grew by 4.4% annually (according to TNS *TravelsAmerica* data provided to SRI by MOTT).
- From 2006-2012, domestic traveler expenditures in Massachusetts grew by 3.4% annually (according to U.S. Travel Association data²¹).

Based on these figures, SRI estimates an annual 3.5% growth rate in domestic person trips in Massachusetts from 2006-2012, yielding an estimated 36.7 million domestic person trips in 2012 (a figure comparable to the 2004 TIA *TravelScope* data used in SRI's previous Massachusetts golf study). According to MOTT, "Just under two-thirds of all person trips in FY2012 included an overnight stay."²² SRI estimates that approximately 2% of domestic visitors play golf while on a trip in Massachusetts. By applying these percentages to the estimated number of Massachusetts person trips in 2012 (36.7 million), SRI estimates that there were approximately 469,800 golf overnight trips and 264,200 golf day trips made in Massachusetts in 2012, totaling 734,000 golf trips. This represents growth of 2.7% annually from SRI's estimated 626,430 Massachusetts golf trips in 2006.

<http://www.myvirtualpaper.com/doc/Golfweek-Custom-Media/2012deutschebankchampionship-opt/2012082001/51.html#51>.

¹⁹ Massachusetts Office of Travel & Tourism (2005), *Massachusetts Domestic Visitor Profile: Calendar Year 2004*. Data generated by TIA *TravelScope*.

²⁰ Massachusetts Office of Travel & Tourism (March 2013), *2012 Annual Report*. Data generated by TNS *TravelsAmerica*. <http://www.massvacation.com/wp-content/uploads/2013/11/2012-Annual-Report.pdf>.

²¹ MOTT/U.S. Travel Association (2009), *The Economic Impact of Travel on Massachusetts Counties 2008*, http://www.massvacation.com/wp-content/uploads/2013/06/ec_imp_hist08.pdf; and MOTT/U.S. Travel Association (2013), *The Economic Impact of Travel on Massachusetts Counties 2012*, <http://www.massvacation.com/wp-content/uploads/2013/09/econ-impact-12.pdf>.

²² Massachusetts Office of Travel & Tourism (March 2013), *2012 Annual Report*. Data generated by TNS *TravelsAmerica*. <http://www.massvacation.com/wp-content/uploads/2013/11/2012-Annual-Report.pdf>.

Average spending per golf trip. SRI estimates that average spending per golf trip in Massachusetts in 2012 was \$77 per person per *day* trip and \$737 per person per *overnight* trip (which in Massachusetts averages 2.1 nights). This includes spending on accommodation, local transportation, food and beverage, 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 expenditures, we began with national golf trip survey data from the National Golf Foundation's *The U.S. Golf Travel Market, 2003 Edition* report²³ and adjusted average trip spending based upon online research of Massachusetts golf packages and relative price levels in Massachusetts vis-à-vis the rest of the country (as well as for inflation through 2012). 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 Massachusetts was \$366.7 million in 2012. This represents an increase in real terms relative to golf-related tourism spending in 2006, which was \$292.4 million (or \$323.8 million in 2012 dollars, when adjusted for inflation); this increase is consistent with the overall increase in domestic visitor spending in Massachusetts, as the economy recovered from the recession of 2007-2009.²⁴

Massachusetts Golf-Related Tourism Expenditures in 2006 and 2012		
	2006	2012
# of golf day trips	206,100	264,200
Average travel \$ per golf day trip	\$69.78	\$77.11
# of golf overnight trips	420,300	469,800
Average travel \$ per golf overnight trip	\$661.47	\$737.34
Total	\$292.4 million	\$366.7 million

Note: Numbers may not sum due to rounding.

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:







²³ 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 2002-2012, since 2002 is NGF's most recent golf travel survey.

²⁴ Total domestic visitor spending in Massachusetts grew from \$12.59 billion in 2006 (or \$13.94 billion in 2012 dollars) to \$15.41 billion in 2012. Source: MOTT/U.S. Travel Association (2009), *The Economic Impact of Travel on Massachusetts Counties 2008*, http://www.massvacation.com/wp-content/uploads/2013/06/ec_imp_hist08.pdf; and MOTT/U.S. Travel Association (2013), *The Economic Impact of Travel on Massachusetts Counties 2012*, <http://www.massvacation.com/wp-content/uploads/2013/09/econ-impact-12.pdf>.

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 multipliers (Regional Input-Output Multipliers), calculated by the U.S. Bureau of Economic Analysis, were used to calculate the multiplier impact of Massachusetts’ golf economy.

Golf's Impact on Massachusetts' Economy in 2012						
INDUSTRY	DIRECT (\$ millions)	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$793.2			\$1,131.4	14,164	\$355.2
Golf Course Capital Investments*	\$66.9			\$7.8	52	\$2.5
Golf-Related Supplies	\$461.9			\$946.3	4,863	\$245.5
Tournaments & Associations	\$18.6			\$29.2	240	\$10.3
Real Estate **	\$30.2			\$53.5	360	\$17.1
Hospitality/Tourism	\$366.7			\$542.4	5,803	\$166.3
TOTAL	\$1,737.5			\$2,710.6	25,481	\$769.8

Note: Columns may not sum due to rounding. To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$1.7 billion the portion of capital investments that is investment in existing facilities (\$63.2 million of \$66.9 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$4.7 million of \$30.2 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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