

THE KENTUCKY GOLF ECONOMY

FULL REPORT

This report was commissioned by
GOLF 20/20 for the
Kentucky Golf Council
and prepared by SRI International.



A large, light green outline map of the state of Kentucky, centered on the page. The text "The Kentucky Golf Economy" is written in a dark green, serif font across the middle of the map.

The Kentucky Golf Economy

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The Kentucky Golf Economy study was conducted by Nancy Chan, Jennifer Ozawa, and Peter Ryan at SRI International with contributions from Mark Hill (KGA/KPGA) and Scott Bender (Griffin Gate Marriott Resort & Spa).

Photo credits from the cover: (top) Griffin Gate Golf Club, Griffin Gate Marriott Resort & Spa, Lexington, KY (*Marriott International, Inc.*); (bottom) Valhalla Golf Club, Louisville, KY – Host of The 2008 Ryder Cup (*The PGA of America*)

ACRONYMS

CMAA	Club Managers Association of America
GCBA	Golf Course Builders Association of America
GCSAA	Golf Course Superintendents Association of America
KCMAA	Kentucky Chapter of the Club Managers Association of America
KGA	Kentucky Golf Association
KIGCSA	Kentuckiana Golf Course Superintendents Association
KPGA	Kentucky Section of The PGA of America
GRAA	Golf Range Association of America
LPGA	Ladies Professional Golf Association
NGCOA	National Golf Course Owners Association
PGA	The Professional Golfers' Association of America
USGA	United States Golf Association
WGF	World Golf Foundation

STUDY OVERVIEW

Home to 281 golf facilities and host to The 2008 Ryder Cup, golf in the Bluegrass State is more than just an enjoyable pastime—it is a key industry contributing to the vitality of Kentucky’s economy. In 2009, the size of Kentucky’s direct golf economy was approximately \$379.1 million. 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 Kentucky’s golf-related activities is considered, the golf industry generated approximately \$710.1 million of direct, indirect and induced economic output, \$218.7 million of wage income, and 11,000 jobs in 2009.

While Kentucky is known for its automobile manufacturing industry, the golf industry’s \$379.1 million in direct revenues supports economic activity comparable to several other important industries in the state: medical equipment and supplies manufacturing (\$308.7 million), horse breeding (\$780.0 million), and distilleries (\$2.5 billion).¹

Historically, many state-level economic studies surrounding the game of golf have been conducted across the country. However, no comprehensive, standardized framework was employed in these prior studies. This made it difficult to monitor a state’s industry growth over time and to make state-to-state or regional comparisons. To ameliorate this problem, SRI International and GOLF 20/20 are currently working with key golf stakeholders in several states, including Kentucky, to bring consistency to the industry measurement and reporting process. This report describes and analyzes Kentucky’s golf industry including the revenues and economic impact generated by the industry. Such analysis will assist Kentucky’s industry stakeholders in raising awareness of the impact of golf to state and local policymakers.

There are many potential uses for such an analysis:

- § Defining the range of core and enabled industries associated with the game of golf;
- § Clearly articulating, for policymakers and regulatory agencies, the employment and revenue-generating contributions of the golf industry to the state economy; and
- § Building credibility and recognition of the golf industry as a significant business sector and a driver of economic activity in the state.

¹ U.S. Department of Agriculture, Economic Research Service (2010), “Top Commodities, Exports, and Counties in 2008,” Kentucky State Fact Sheet. U.S. Census Bureau (2010). 2007 Economic Census, Manufacturing Geographic Area Series: Medical Equipment and Supplies Manufacturing (NAICS 33911) and Distilleries (NAICS 31214). SRI used the GDP implicit price deflator to inflate 2007 industry revenue data to 2009 dollars.

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 on p.3). 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 (2006-2009 data)	NGF Facility Database, multiple years; state golf associations; 2007 Economic Census
Avg. revenues by type of facility	PGA Facility Operations Survey, multiple years (2006-2009 data)	2007 Economic Census; National Golf Foundation; state task force
# of rounds by facility type	2006 PGA Compensation Survey (2005 data)	National Golf Foundation
Golf Course Capital Investments		
Avg. capital investment by type of facility	GCSAA Compensation Survey (2005, 2007, 2009 data)	National Golf Foundation; state task force
Number of golf courses under construction in current year	National Golf Foundation (2007-2009 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 (2007-2009 data)	2006 PGA Compensation Survey (2005 data)
Golf apparel	National Sporting Goods Association (2007-2009 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> (2007-2009 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 Events		
# 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	TIA/D.K. Shifflet & Associates	State department of tourism/recent surveys/studies
Avg. spending per traveler or per trip	TIA/D.K. Shifflet & Associates	State department of tourism/recent surveys/studies; National Golf Foundation

THE SIZE OF KENTUCKY'S GOLF ECONOMY

SRI estimates the total size of Kentucky's golf economy in 2009 was approximately \$379.1 million. This estimate is comprised of \$245.9 million in core industries and an additional \$133.2 million in enabled industries, as illustrated in the table below.

Size of Kentucky's Golf Economy in 2009 by Industry Segment (\$ millions)	
CORE INDUSTRIES	
Golf Facility Operations	\$201.8
Golf Course Construction and Capital Investment	\$18.9
Golf-Related Supplies (retail margin and manufacturing exports)	\$22.1
Major Golf Tournaments and Associations	\$3.1
Total Core Industries	\$245.9
ENABLED INDUSTRIES	
Real Estate	\$40.3
Hospitality/Tourism	\$92.9
Total Enabled Industries	\$133.2
TOTAL GOLF ECONOMY	\$379.1

A. CORE INDUSTRIES

Golf Facility Operations

At the center of any golf economy lies 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 manufacturers, food and beverage providers, and turfgrass equipment and maintenance service providers. Kentucky's 281 golf courses, 15 stand-alone ranges, and 10 miniature golf facilities generated \$201.8 million of revenue in 2009.

Kentucky Golf Facility Revenues in 2009 (\$ millions)	
Golf Facilities	\$194.3
Practice Ranges & Alternative Facilities	\$7.5
TOTAL¹	\$201.8

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

This is a sizeable industry, but even more significant when compared to other popular revenue-generating sports. For example, Kentucky’s golf facilities generate revenues comparable to all other spectator sports in the state combined—including horse racing, auto racing and other popular spectator sports. Spectator sports excluding golf generated revenues of \$345.7 million in 2007, or \$356.5 million in 2009 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 turf maintenance industries and often involve the purchase of significant amounts of equipment, supplies and services from companies within the state. SRI’s estimate of Kentucky’s golf facility capital investment is divided into two segments: (1) capital investment at existing facilities and (2) new course construction. Together, Kentucky’s golf facilities made \$18.9 million worth of capital investments in 2009: \$14.9 million of investments at existing facilities and \$4.0 million for the construction of new courses.

Kentucky Golf Course Construction and Capital Investment in 2009 (\$ millions)	
Golf Course Capital Investment¹	\$14.9
New Course Construction	\$4.0
TOTAL	\$18.9

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

Golf-Related Supplies

Kentucky 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. Kentucky is home to a small number of companies that manufacture custom clubs and accessories in the state, e.g., Louisville Golf Club Company, Middleground Golf, Stryker Golf, etc. In 2009, Kentucky manufacturers’ total value-added shipment of golf-related products was approximately \$2.52 million. Kentucky retailers and golf facilities earned approximately \$19.6 million on the sale of \$51.8 million of golf equipment, apparel, and media in 2009. In total, the Golf-Related Supplies segment contributed \$22.1 million in revenues to the Kentucky economy.

² U.S. Census Bureau (2010). *Kentucky: 2007 Economic Census, Arts, Entertainment & Recreation Geographic Series*, July 2010.

Kentucky Manufacturers' Value-Added Exports of Golf-Related Products in 2009 (\$ millions)	
TOTAL	\$2.52

Kentucky Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2009 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$40.5	\$15.3
Golf Apparel (retail margin)	\$11.0	\$4.1
Golf Media (retail margin)	\$0.4	\$0.2
TOTAL	\$51.8	\$19.6

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

Associations, Tournaments & Charitable Giving

Associations

Numerous associations represent the game of golf in Kentucky. The largest golf associations include the Kentucky Golf Association (KGA) and the Kentucky Section of The PGA of America. Other regional and state-level associations include the Kentuckiana and Bluegrass Chapters of the Golf Course Superintendents Association, the Kentucky Chapter of the Club Managers Association of America, the Kentucky Senior Golf Association, the Women's Kentucky State Golf Association, and the Executive Women's Golf Association (Louisville Region chapter). The First Tee chapters of Lexington, Louisville, Owensboro, and Pine Mountain, as well as the Youth Golf Coalition, support the development of young golfers in the state. Also, the Kentucky Golf Foundation, formed as a joint effort between the KGA and the Kentucky Section of The PGA, promotes junior golf in the state. In 2009, Kentucky golf associations generated total revenues of \$3.1 million.

Major Tournaments

Major golf championships generate significant economic impact for local economies because of the large number of players, officials and golf enthusiasts they bring to a state, as well as the money spent on hosting the event. In recent years, Kentucky has hosted two PGA Championships, in 1996 and 2000, and one Senior PGA Championship in 2004. However, it is The Ryder Cup of 2008 for which Kentucky is best known. The Ryder Cup is a biennial golf tournament which constitutes a seminal rivalry between

U.S. and European teams of professional golfers. The tournament is played over three days and alternates venues between the United States and Europe. In September of 2008, The Ryder Cup was played at the Valhalla Golf Club in Louisville, Kentucky culminating in a U.S. win over the European team and breaking a run of three consecutive European wins at The Ryder Cup. The Ryder Cup in 2008 drew an estimated 240,000 spectators over the course of the tournament and practice round. Economic impact estimates of hosting The Ryder Cup vary, but are sizeable ranging from \$50 million to \$115 million depending on general economic conditions, weather, etc.³ For the purposes of this current study which uses 2009 as the base year, no major golf championships were played in Kentucky.

Kentucky's Major Golf Tournament & State Golf Association Revenues in 2009 (\$ millions)	
Major Tournaments	\$0.0
Associations	\$3.1
TOTAL¹	\$3.1

Charitable Giving

Kentucky's golf industry makes substantial contributions to a variety of charities. For example, The Ryder Cup generated \$2.6 million in 2008 in proceeds, benefiting the Folds of Honor Foundation to support scholarships for families of veterans who either perished or were wounded while serving in Iraq or Afghanistan, select colleges and universities for Play Golf America University programming, and other charities.⁴ Kentucky golf clubs host several events in support of a number of local, state and national charities. Hurstbourne Country Club in Louisville hosted the "Fore the Kids" golf tournament in 2009, which raised over \$100,000 to benefit Kosair Children's Hospital and the Ronald McDonald House Charities of Kentuckiana. Since 1981, the Children's Charity Celebrity Golf Classic has raised over \$2.1 million for children's charities in Central Kentucky; in 2009 the Classic was held at Greenbrier Golf and

³ The 2006 Ryder Cup in Ireland generated an estimated €43 million to €67.7 million (\$54.5 million to \$86.2million converted at €1=1.27274 USD; the 2008 Ryder Cup in Kentucky generated an estimated \$50 million to \$115 million. See "Kentucky Welcomes the 2008 Ryder Cup Captain,"

http://www.thinkkentucky.com/cednews/nov2006/enews_nov06_rydercup.htm; Anderson Economic Group (2006), "Likely Economic Impact to Ireland from the 2006 Ryder Cup,"

<http://www.andersoneconomicgroup.com/Portals/0/upload/Doc1961.pdf>; Davis, Alex (2008), "Ryder Cup's economic impact is open to debate," *Courier-Journal*, 8 Sept. 2008,

http://www.andersoneconomicgroup.com/Portals/0/upload/Louisville_RyderDebate090808.pdf; FFGOLF,

http://www.ffgolf.org/multimedia/medias/10_633960590635468750.pdf; Blitz, Roger (2010), "Ryder Cup--A Decade of Buildup for Three Days of Golf," *Financial Times*, 29 Sept. 2010, <http://www.ft.com/cms/s/0/50166228-caae-11df-a860-00144feab49a.html>.

⁴ PGA, The Ryder Cup. http://www.pgamedia guide.com/rydercup_history.cfm

Country Club and Andover Golf and Country Club, both in Lexington, and generated approximately \$550,000 in net proceeds. 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 Kentucky to be \$27.4 million in 2009.

Charitable Giving by Kentucky Golf Industry in 2009 (\$ millions)	
TOTAL	\$27.4

B. ENABLED INDUSTRIES

Real Estate

Real estate developers use amenities to attract new home buyers, and golf is a key amenity in several new golf community developments in the greater Lexington and Louisville metropolitan areas, as well as elsewhere in the state. The development of new golf communities in Kentucky followed the rise in the national real estate market which peaked in 2005 in terms of new home starts and existing home sales.⁵ In 2009, many golf communities were mid-way through build out, but financing for new home construction was difficult to obtain. There were new homes constructed at large developments in the state, such as the 1,268-unit Triple Crown Country Club, a rolling, tree-lined course in Union, KY, in northern Kentucky near Cincinnati, OH. Examples of golf community developments elsewhere in the state include Persimmon Ridge, a golf community near Louisville with views of woodlands and waterways and an Arthur Hills-designed course that won Golf Digest's "Outstanding Design Award" in 2007, and Boone's Trace in Richmond, KY, a wooded countryside community set along the Kentucky River with an 18-hole golf course known as "The Bull" that was named "One of the Best Places to Play" in 2009 by Golf Digest.

New golf-related real estate construction generated \$22.1 million in 2009. Furthermore, in 2009 there were an estimated 48 golf communities in Kentucky, and SRI estimates the "golf" premium associated with the sale of real estate in these developments to be \$18.2 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.

Kentucky's Golf Real Estate Revenues in 2009 (\$ millions)	
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⁵ National Association of Realtors data.

Golf-Related Residential Construction	\$22.1
Realized Golf Premium	\$18.2
TOTAL	\$40.3

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.

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 Kentucky, golf is an important tourism segment, alongside the state's other outdoor and recreational activities such as fishing, boating, hiking and camping, as well as popular attractions including thoroughbred racing, horse farms and vineyards. The state's tourism website features golf as a key activity (<http://www.kentuckytourism.com>). In 2009, SRI estimates golf-related tourism spending in Kentucky was \$92.9 million. This is based on the following estimates of golf trips and associated expenditures by Kentucky residents and non-residents: (1) an estimated 198,000 *day* trips with average golf trip spending of \$54, and (2) an estimated 199,000 *overnight* trips with average trip spending of \$414.

Kentucky's Golf-Related Travel Expenditures in 2009	
# of day trips	198,000
Average travel \$ per day trip	\$54.30
# of overnight trips	199,000
Average travel \$ per overnight trip	\$413.68
Total	\$92.9 million








GOLF'S ECONOMIC IMPACT IN KENTUCKY

Golf's impact on Kentucky'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 the overall 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 2009, the \$379.1 million Kentucky golf industry supported:

- § A total economic impact of \$710.1 million for the state of Kentucky including the indirect and induced economic impacts stimulated by golf sector activity;
- § A total employment impact of 11,000 jobs; and
- § Total wage income of \$218.7 million.

Golf's Impact on Kentucky's Economy (2009)						
INDUSTRY	DIRECT	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS (\$ millions)	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$201.8			\$401.6	6,853	\$127.6
Golf Course Capital Investment*	\$18.9			\$9.4	87	\$2.7
Golf-Related Supplies	\$22.1			\$45.3	506	\$12.8
Tournaments & Associations	\$3.1			\$5.4	70	\$1.7
Real Estate **	\$40.3			\$51.7	482	\$15.1
Hospitality/Tourism	\$92.9			\$196.7	3,010	\$58.8
TOTAL	\$379.1			\$710.1	11,008	\$218.7

Note: To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$379.1 million the portion of capital investment that is investment in existing facilities (\$14.9 million of \$18.9 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$18.2 million of \$40.3 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.

Numbers in columns may not sum due to rounding.

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 cart 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 course facilities as business establishments in its Economic Census every five years. However, these organizations' calculations of the total numbers of golf courses 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 themselves. 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 variances caused by these data collection issues 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 Kentucky in 2009 or the latest available year.

Estimates of Kentucky Golf Facilities from Various Sources, 2007-2009

	2007 Economic Census (# of facilities, excl resorts & municipal) ¹	2009 PGA (# of facilities) ²	2009 NGF (# of facilities) ³	2009 NGF (# of 18-hole equivalent courses) ³
PRIVATE	79	106	87	79.5
PUBLIC	144	166	184	158.5
Daily fee/ semi-private		113		
Municipal		53		
Military				
University				
RESORT		9	9	10.5
TOTAL	223	281	280	248.5

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

² Professional Golfers' Association of America (2009). *Facility Database*.

³ NGF (2010). Total Facility Supply Tables 5-10, *Golf Facilities in the U.S., 2009 edition*, pp.5-10.

The PGA of America and NGF data fall within a very narrow range, PGA's 281 vs. NGF's 280. The differences in numbers of facilities by type is largely due to classification differences. To resolve the discrepancies, SRI conducted further research to reclassify the individual facilities and arrived at the following estimates: 80 private facilities, 194 public facilities (130 daily fee facilities and 64 municipal/military/university facilities), and 7 golf resort facilities.⁶

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 low 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

⁶ The golf resorts identified by SRI include the Griffin Gate Marriott Resort & Spa as well as Kentucky State Resort Parks: Barren River State Resort Park, Dale Hollow Lake State Resort Park, Lake Barkley State Resort Park, Kentucky Dam Village State Resort Park, Pennyrile Forest State Resort Park, and Pine Mountain State Resort Park.

military facilities, (3) stand-alone driving ranges and (4) golf course facilities without payroll. In addition, in 2002 the national economy was just emerging from an economic recession which is likely to have negatively impacted the golf industry. 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 recently began collecting revenue data for all 50 states on an annual basis through its Annual Operations Survey. The latest available data are from 2009, 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—resorts, municipal courses, and military courses.

As an additional validity check, we also examined NGF revenue data. However, it is important to note that NGF does not provide state-level facility data. It presents average revenue data for: (1) public (daily fee) facilities for two regions (Sunbelt and Frostbelt) by fee level (mid-range and premium) and (2) private facilities—a national average—by fee level (mid-range and premium). For the table, below, SRI calculated a single NGF national average revenue figure for each category by using the sample size and mean.

Estimates of Kentucky Average Revenue per Facility Data From Different Sources, 2002-2009				
	Census (2007) ¹	PGA (2008) ²	PGA (2009) ³	NGF (2005) ^{4,5}
Private facility	\$1,253,278	\$1,641,665	\$2,129,945	\$3,564,339
Daily fee facility	\$677,292	\$429,227	\$457,400	\$1,291,582
Resort facility	X	\$419,208	N/A	X
Municipal/military/university facility	X	\$761,491	\$829,877	X
Driving range	X	X	X	\$350,000
Miniature golf	\$218,700	X	X	X

Note: The PGA's resort facility average revenue are an average of Kentucky and neighboring states.

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

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

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

⁴ NGF (2006). *Operating & Financial Performance Profiles of 18-hole Golf Facilities in the U.S., 2006 edition*.

⁵ Golf Range Association of America (2006).

Average revenue data from the Census (2007), The PGA (2008, 2009) and NGF (2005) are presented above. In consultation with the Kentucky Golf Task Force, SRI calculated total municipal/military/university facility revenues using the 2009 PGA survey data. However, the PGA's reported daily fee facility revenue is very low compared to the average daily fee revenue reported in the 2007 Economic Census, while the PGA's reported private facility revenue is very high relative to what was reported in the 2007 Economic Census. Because the private and daily fee response rates to the PGA

survey was relatively low in 2008 and 2009, SRI used the 2007 Census data for private and daily fee facilities, and adjusted these figures downwards by 5% to account for the impact of the recession. This yielded average private facility revenue of \$1.191 million (as opposed to the PGA's reported \$2.130 million) and average daily fee facility revenue of \$643,427 (as opposed to the PGA's reported \$457,400). The golf resort response rate to the PGA survey data was also very low, so based on primary research, SRI revised the average golf resort facility revenue to be \$552,000. Driving range revenues were calculated using the Golf Range Association of America's estimate of average revenue figure for golf ranges in 2006 (the latest available data), and miniature golf facilities were calculated using the 2007 Census data.

To calculate golf facility operations revenues, SRI subtracted out 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 Kentucky's 281 golf courses, 15 stand-alone ranges, and 10 miniature golf facilities generated \$201.8 million of revenue in 2009.

B. GOLF COURSE CAPITAL INVESTMENT

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

Kentucky Golf Facility Capital Investment and New Course Construction in 2009 (\$ millions)	
Golf Course Capital Investment ¹	\$14.9
New Course Construction	\$4.0
TOTAL	\$18.9

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 investment is typically financed through golf facility revenues, so including both Golf Facility Capital Investment and Golf Facility Operations in economic impact analysis would result in double-counting.

Investment at existing courses. Golf facility capital investment includes improvements to greens and tees, repaving of cart paths, purchases of new turf maintenance equipment and irrigations systems, and renovations of the clubhouse, proshop 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 2005 and 2008 Compensation Surveys. The 2008 data is broken down by: (1) type of facility, (2) number of holes at the facility and (3) agronomic region. The NGF's *2006 Operating and Financial Performance Profile* presents

estimates of capital expenditures at: (1) public facilities by fee level (mid-range and premium) and divided into two regions (Sunbelt and Frostbelt); and (2) private facilities by size (those with revenues of less than \$3 million and those with revenues above \$3 million).

After review of both data sets and upon consultation with the Kentucky Golf Task Force, SRI used the GCSAA estimates as the basis for our Kentucky capital investment calculations and made adjustments to account current economic conditions. We estimated average facility investments in Kentucky using the known distribution and type characteristics of facilities in the state. (See preceding section on number of facilities for sources.) These imply that each of Kentucky's 281 golf courses invested an average of approximately \$53,147 in 2009, for a total capital investment of \$14.9 million.

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 2009, NGF estimated that there were 0.5 new 18-hole equivalent golf course openings in Kentucky and that 0.5 were under construction.

An estimate for the average investment for each new golf course in Kentucky is derived from the Golf Course Builders Association of America's *2008 Guide to Estimating Cost for Golf Course Construction*. This database of golf course construction costs is based on a survey of golf course builders around the country and is divided into four construction regions. Using the values provided for High Piedmont and Coastal Lowlands and the average ("normal") costs for each of the various construction categories (see box below), we estimate the average investment required to build a new golf course in Kentucky is \$8.1 million.

To Build a Golf Course: Required Investments	
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 0.5 courses under construction in 2009 and the 0.5 new openings represented an average annual investment of \$4.0 million per 18-hole equivalent golf course, for a total of \$4.0 million.

C. GOLF-RELATED SUPPLIES

This section explains our methodology for calculating Kentucky manufacturers' exports (out-of-state and overseas shipments) of golf apparel, golf 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) value-added production and (2) the retail sales margin. On the manufacturing, or production side, we are concerned with the value-added production of golf equipment, golf apparel, and golf 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 ball is manufactured.

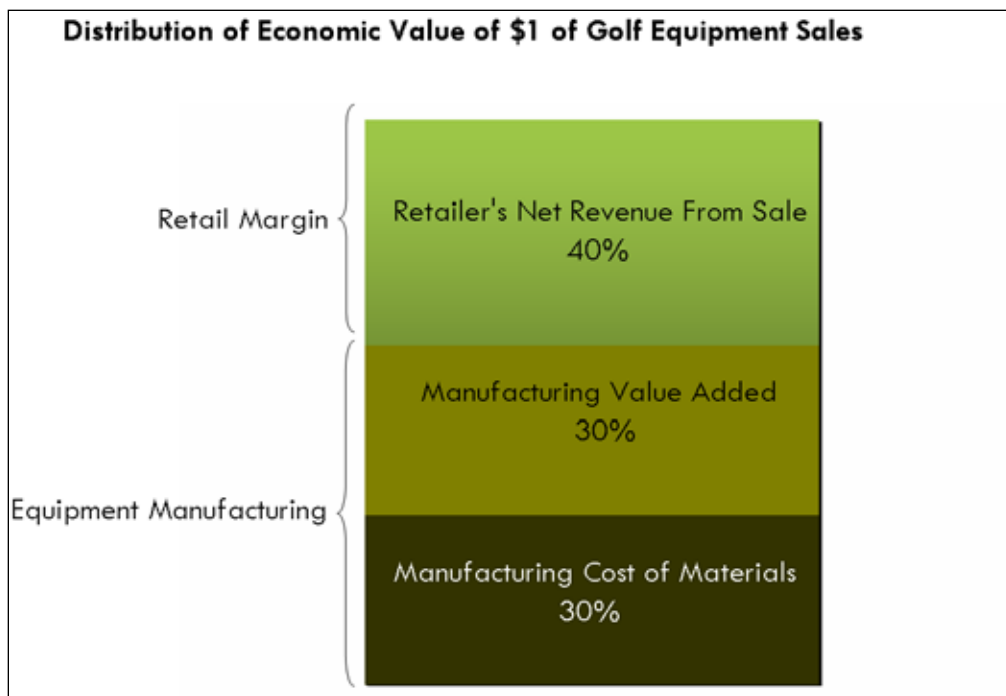
We began by conducting database research to identify manufacturers of golf-related products in the state. We identified a small number of companies that manufacture custom golf clubs and accessories in Kentucky—Louisville Golf Club Company, Middleground Golf, Stryker Golf, etc. We then conducted research on these companies to ascertain: (1) the total value of their golf-related sales, and (2) the percentage of these sales that were out-of-state. Finally, we extrapolated value-added output from each company's revenues using value-added data from the Census's *Survey of Manufacturers*.

Kentucky Manufacturers' Value-Added Exports of Golf-Related Products in 2009 (\$ millions)	
TOTAL	\$2.52

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 2009, NSGA reported total U.S. off-course and on-course purchases of individual golf clubs to be \$532.0 million. The NSGA survey found the East South Central region accounted for 2.5% of these purchases, or \$13.3 million. Within the East South Central region, one can estimate Kentucky'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. Kentucky represents 27.7% of total 18-hole equivalent courses in the East South Central region, so this weight was applied to the region total (\$13.3 million) to estimate \$3.7 million of individual golf club sales in the state of Kentucky in 2009. Further, retail margins on final sales suggest that 37.8%, or \$1.4 million, of total sales was retained in the Kentucky economy. (See graphic below.)



Kentucky's On-Course and Off-Course Golf Equipment & Apparel Purchases, 2009		
Category	Calculation	Estimate (\$ millions)
Golf club sets	East South Central region's sales	\$81.4
	KY's courses-based weight	27.7%
	KY's share of sales [1]	\$22.6
Golf apparel	East South Central region's sales	\$39.6
	KY's courses-based weight	27.7%
	KY's share of sales, [2]	\$11.0
Golf balls	East South Central region's sales	\$26.2
	KY's courses-based weight	27.7%
	KY's share of sales, [3]	\$7.2
Golf clubs	East South Central region's sales	\$13.3
	KY's courses-based weight	27.7%
	KY's share of sales, [4]	\$3.7
Golf bags	East South Central region's sales	\$11.6
	KY's courses-based weight	27.7%
	KY's share of sales, [5]	\$3.2
Golf shoes	East South Central region's sales	\$13.5
	KY's courses-based weight	27.7%
	KY's share of sales, [6]	\$3.7
TOTAL	Sum of [1] to [6]	\$51.4
Retail sales margin	Multiply TOTAL by 37.8%	\$19.4

Source: National Sporting Goods Association (2010). *The Sporting Goods Market in 2009*, 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 Kentucky in 2009. 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 2009 were estimated to be \$415,000 with a retail sales margin of \$157,000. 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.

On-Course and Off-Course Sales of Golf Books in Kentucky, 2009	
Category	Estimate
Kentucky retail book sales ¹	\$98,921,206
Golf books as % of total book sales	0.4%
Total retail golf book sales	\$415,469
Retail sales margin	\$157,047

Note: ¹Adjusted for inflation into 2009 dollars using the appropriate GDP deflator. Sources: Kentucky retail book sales data from the *2007 Economic Census*. Estimated percentage of golf books among total book sales derived from the *2006 Bowker Annual of Library & Book Trade Information* and American Booksellers Association data.

D. STATE GOLF ASSOCIATIONS, TOURNAMENTS & CHARITABLE EVENTS

Associations. SRI gathered association revenue data for the largest state and regional golf organizations from these organizations' 990 income tax filings. These include the Kentucky Golf Association, the Kentucky Section of the PGA, the Kentuckiana and Bluegrass Chapters of the Golf Course Superintendents Association, the Kentucky Chapter of the Club Managers Association of America, the Kentucky Senior Golf Association, the Women's Kentucky State Golf Association, and the Executive Women's Golf Association (Louisville Region chapter).

Major Tournaments. Major golf championships generate significant economic impact for local economies because of the large number of players, officials and golf enthusiasts they bring to a state, as well as the money spent on hosting the event. In recent years, Kentucky has hosted two PGA Championships, in 1996 and 2000, and one Senior PGA Championship in 2004. However, it is The Ryder Cup of 2008 for which Kentucky is best known. The Ryder Cup is a biennial golf tournament which constitutes a seminal rivalry between U.S. and European teams of professional golfers. The tournament is played over three days and alternates venues between the United States and Europe. In September of 2008, The Ryder Cup was played at the Valhalla Golf Club in Louisville, Kentucky culminating in a U.S. win over the European team and breaking a run of three consecutive European wins at The Ryder Cup. The Ryder Cup in 2008 drew an estimated 240,000 spectators over the course of the tournament and practice round. Economic impact estimates of hosting The Ryder Cup vary, but are sizeable ranging from

\$50 million to \$115 million depending on general economic conditions, weather, etc.⁷ For the purposes of this current study which uses 2009 as the base year, no major golf championships were played in Kentucky.

Kentucky's Major Golf Tournament & State Golf Association Revenues in 2009 (\$ millions)	
Major Tournaments	\$0.0
Associations	\$3.1
TOTAL¹	\$3.1

Charitable Events. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in Kentucky to be \$27.4 million in 2009. This estimate is derived from a national study⁸ based on the number of charitable golf outings/events held each year; the discounted fees, services and staff time for these events; as well as 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.

Charitable Giving by Kentucky Golf Industry in 2009 (\$ millions)	
TOTAL	\$27.4

⁷ The 2006 Ryder Cup in Ireland generated an estimated €43 million to €67.7 million (\$54.5 million to \$86.2million converted at €1=1.27274 USD; the 2008 Ryder Cup in Kentucky generated an estimated \$50 million to \$115 million. See "Kentucky Welcomes the 2008 Ryder Cup Captain," http://www.thinkkentucky.com/cednews/nov2006/enews_nov06_rydercup.htm; Anderson Economic Group (2006), "Likely Economic Impact to Ireland from the 2006 Ryder Cup," <http://www.andersoneconomicgroup.com/Portals/0/upload/Doc1961.pdf>; Davis, Alex (2008), "Ryder Cup's economic impact is open to debate," *Courier-Journal*, 8 Sept. 2008, http://www.andersoneconomicgroup.com/Portals/0/upload/Louisville_RyderDebate090808.pdf; FFGOLF, http://www.ffgolf.org/multimedia/medias/10_633960590635468750.pdf; Blitz, Roger (2010), "Ryder Cup--A Decade of Buildup for Three Days of Golf," *Financial Times*, 29 Sept. 2010, <http://www.ft.com/cms/s/0/50166228-caae-11df-a860-00144feab49a.html>.

⁸ National Golf Foundation (2002). *The Charitable Impact Report*, November 2002.

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.

Kentucky’s Golf Real Estate Revenues in 2009 (\$ millions)	
Golf-Related Residential Construction	\$22.1
Realized Golf Premium	\$18.2
TOTAL	\$40.3

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 average size of the development, the average 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, golf task force input 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 15 to 20 golf communities were under development, to varying degrees, in Kentucky in 2009. Developments ranged from the 1,268-unit Triple Crown Country Club development in Union to the 46-unit Keene Run Golf Club development in Nicholasville. In 2009, an average of only 6 single family homes were constructed per course due to the economic downturn and particular difficulty in securing financing for new home construction. The new homes built in 2009 had an average construction cost of \$260,000. 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 2009 golf-related residential construction figure of \$22.1 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 2009. Multiplying the approximately 48 existing Kentucky golf communities by 400, the median number of

housing units per golf course, we arrive at a total of 19,200 golf community homes. In 2009, the home turnover rate (percentage of homes sold relative to the total housing stock) was 3.8 percent in Kentucky. 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 Kentucky's golf real estate premium was \$18.2 million in 2009.

F. 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. A number of organizations conduct surveys monitoring changes in trip volume and traveler preferences. Some of these surveys include golf participation questions, such as the Travel Industry Association (TIA) of America's TravelScope® surveys, now conducted by D.K. Shifflet & Associates (DKSA) and marketed as TravelScope®/Directions®. To maintain consistency with golf tourism estimates calculated for other states, SRI used the most recent DKSA estimate available for total Kentucky visitor trips: 40.8 million in 2004 (20.35 million day trips and 20.42 million overnight trips).⁹ Applying the growth rate in U.S. visitor trips from 2004 to 2009 (-0.6% CAGR) to the 2004 figure, SRI estimates that the total number of visitor trips in Kentucky in 2009 was 39.6 million (19.78 million day trips and 19.85 million overnight trips).¹⁰

There are no estimates available for the percentage of Kentucky's visitors who played golf while on a trip, so SRI used the average of comparable statistics from surrounding states (Illinois, Indiana, Ohio, Tennessee, and Virginia) as a basis for our estimate of 1.0% of all trips in Kentucky as golf-related. This amounts to 396,000 golf trips (198,000 day and 199,000 overnight) in Kentucky in 2009. SRI defines a "golf trip" as a trip in which a Kentucky resident or non-resident travels 50-plus miles to, through, or within the state and plays golf while on this trip. Golf-related trips include both overnight and day trips. This figure includes trips to Kentucky golf resort destinations (of which Kentucky has seven), as well as trips to play golf courses in other parts of the state.

Average spending per golf trip. SRI estimated that average spending per golf trip in Kentucky in 2009 was \$54 per day trip and \$414 per overnight trip. This includes spending on accommodation, local transportation, food and beverage, entertainment, gifts and so on. Greens fees and cart fees are not

⁹ D.K. Shifflet & Associates (DKSA), as provided by the Kentucky Department of Travel.

¹⁰ The estimates for the number of domestic person trips in the U.S. were 1.953 billion in 2004 and 1.898 billion in 2009, according to the U.S. Travel Association. Based on these figures, the U.S. compound annual growth rate (CAGR) in domestic person trips from 2004 to 2009 was calculated to be -0.6 percent. (<http://www.ustravel.org/sites/default/files/page/2009/09/ForecastSummary.pdf>).

included as they are already captured in the Golf Facility Operations revenues. To estimate average golf trip expenditure, we began with national golf trip survey data from the National Golf Foundation's *The U.S. Golf Travel Market, 2003 Edition* report¹¹ and adjusted average trip spending based upon online research of Kentucky golf packages and relative price levels in Kentucky vis-à-vis the rest of the country. Multiplying the total number of golf trips (day and overnight) by average spending per golf trip (day and overnight), SRI found that total golf-related tourism spending in Kentucky was \$92.9 million in 2009.

Kentucky's Golf-Related Travel Expenditures in 2009	
# Golf person day trips	198,000
Average travel \$ per person per day trip	\$54.30
# Golf person overnight trips	199,000
Average travel \$ per person per overnight trip	\$413.68
Total	\$92.9 million

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 Investment
+	Golf-Related Supplies
+	Media, Tournaments, Associations
+	Real Estate
+	Hospitality/Tourism
=	Size of State Golf Economy

¹¹ 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 2002-2008, since 2002 is NGF's most recent on golf travel survey.

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 Kentucky’s golf economy.

Golf's Impact on Kentucky's Economy (2009)						
INDUSTRY	DIRECT	INDIRECT	INDUCED	TOTAL OUTPUT (\$ millions)	TOTAL JOBS (\$ millions)	TOTAL WAGE INCOME (\$ millions)
Golf Facility Operations	\$201.8			\$401.6	6,853	\$127.6
Golf Course Capital Investment*	\$18.9			\$9.4	87	\$2.7
Golf-Related Supplies	\$22.1			\$45.3	506	\$12.8
Tournaments & Associations	\$3.1			\$5.4	70	\$1.7
Real Estate **	\$40.3			\$51.7	482	\$15.1
Hospitality/Tourism	\$92.9			\$196.7	3,010	\$58.8
TOTAL	\$379.1			\$710.1	11,008	\$218.7

Note: To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$379.1 million the portion of capital investment that is investment in existing facilities (\$14.9 million of \$18.9 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$18.2 million of \$40.3 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.

Numbers in columns may not sum due to rounding.

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