



THE INDIANA GOLF ECONOMY

FULL REPORT

This report was commissioned by
GOLF 20/20 for the
Indiana Golf Alliance,
and prepared by SRI International.





The Indiana Golf Economy

Published June 2010 through an agreement with



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Acknowledgements

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

The Indiana Golf Economy study was conducted by Nancy Chan, Jennifer Ozawa, and Peter Ryan at SRI International with contributions from individuals representing the following allied golf associations in Indiana (in alphabetical order): Matt Brookshire (IGF), Stuart Cagle (Advanced Turf Solutions), Mike David (IGA-PGA), Chip Essig (Essig Golf Management, Inc.), Tom Kern (Valle Vista Golf Club), Errol Klem (IGCOA), Emiley Matherly (Indiana Office of Tourism Development), Gary Myers (Kocolene Development Corporation), and Terry Smith (Rock Hollow Golf Club).

ACRONYMS

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
IGA	Indiana Golf Association
IGF	Indiana Golf Foundation
IGCOA	Indiana Golf Course Owners Association
IGCSAA	Indiana Golf Course Superintendents Association of America
IPGA	Indiana Section of The PGA of America
IWGA	Indiana Women's Golf Association
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

I. STUDY OVERVIEW

Home to 430 golf facilities and playing host to the PGA Tour's BMW Championship in 2012, golf in the Hoosier State is more than an enjoyable pastime—it is a key industry contributing to the vitality of Indiana's economy. In 2008, the size of Indiana's direct golf economy was approximately \$909.6 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 these golf-related activities is considered, Indiana's golf industry generated approximately \$1.7 billion of direct, indirect and induced economic output, \$530.7 million of wage income, and 21,173 jobs in 2008.

The golf industry's \$909.6 million in direct revenues supports economic activity comparable to several other important industries in the state: medical equipment manufacturing (\$5.8 billion); soybean production (\$2.4 billion); and dairy products (\$640.1 million).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 Indiana, to bring consistency to the industry measurement and reporting process. This report describes and analyzes Indiana's golf industry including the revenues and economic impact generated by the industry. Such analysis will assist Indiana's industry stakeholders² 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. Census Bureau (2005). 2002 Economic Census, Geographic Series: Medical Equipment Manufacturing (NAICS 3512) SRI used the GDP implicit price deflator to inflate 2002 industry revenue data to 2008 dollars. U.S. Department of Agriculture, Economic Research Service (2010), "Top Commodities, Exports, and Counties in 2008," Indiana State Fact Sheet.

² Key industry stakeholders comprising the Indiana Golf Alliance include representatives from the Indiana Golf Association, the Indiana Section of The PGA of America, the Indiana Golf Foundation, the Indiana Golf Course Superintendents Association, and the Indiana Golf Course Owners Association.

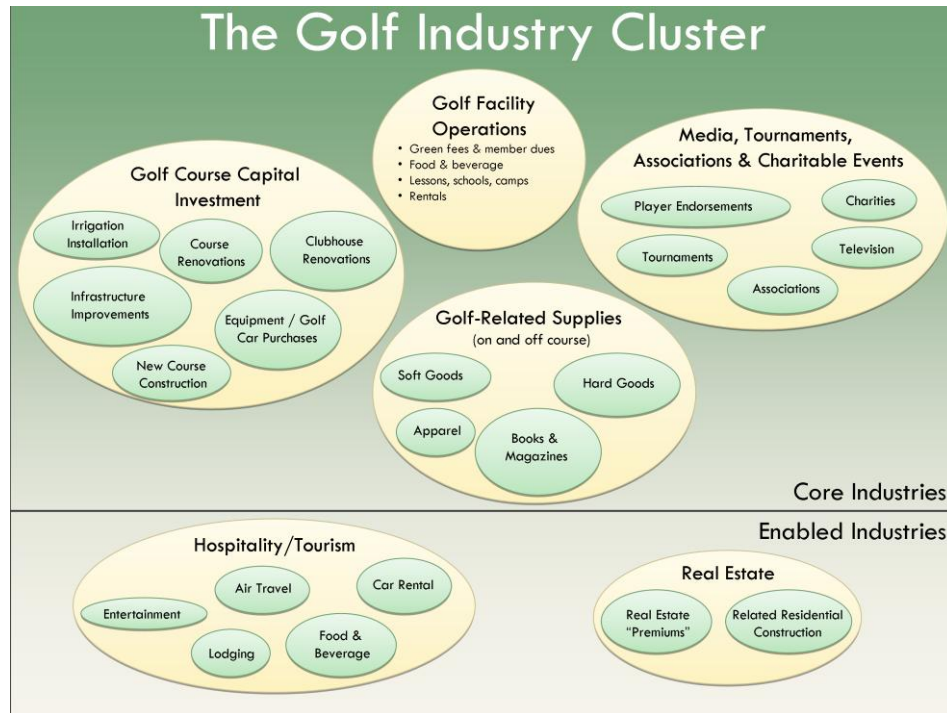
II. ANALYTICAL FRAMEWORK

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 (2006-2008 data)	2002 Economic Census; state task force; NGF Facility Database, multiple years
Avg. revenues by type of facility	PGA Facility Operations Survey, multiple years (2006-2008 data)	2002 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 data)	National Golf Foundation; state task force
Number of golf courses under construction in current year	National Golf Foundation (2007, 2008 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, 2008 data)	2006 PGA Compensation Survey (2005 data)
Golf apparel	National Sporting Goods Association (2007, 2008 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, 2008 data)	Amazon and Barnes & Noble for top golf book sales
Major Tournaments		
# of major tournaments held in state	State task force	Major golf associations
Visitor attendance at tournaments, tournament revenues	Major golf associations	State task force or state associations
Associations & Charitable Events		
# of major state-level golf associations	State counterparts of national golf associations	State task force
Annual revenues/budgets	State golf associations	State task force
# of employees	State golf associations	State task force
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; real estate/development agencies	Interviews with golf course architects and real estate developers
# of lots per course	Interviews with golf course architects and real estate developers	Golf Course Builders Association of America, National Golf Course Owners Association,

State Golf Economy Indicators and Data Sources		
Indicator	Primary source	Cross-validation source
Avg. construction costs per home and real estate premium	Interviews with real estate developers	Golf Course Builders Association of America, National Golf Course Owners
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

III. THE SIZE OF INDIANA'S GOLF ECONOMY

SRI estimates the total size of Indiana's golf economy in 2008 was approximately \$909.6 million. This estimate is comprised of \$708.6 million in core industries and an additional \$201.0 million in enabled industries, as illustrated in the table below.

Size of Indiana's Golf Economy in 2008 by Industry Segment (\$ millions)	
Core Industries	
Golf Facility Operations	\$608.9
Golf Course Construction and Capital Investment	\$43.0
Golf-Related Supplies (retail margin and manufacturing exports)	\$53.9
Major Golf Tournaments and Associations	\$2.8
TOTAL CORE INDUSTRIES	\$708.6
Enabled Industries	
Real Estate	\$64.8
Hospitality/Tourism	\$136.2
TOTAL ENABLED INDUSTRIES	\$201.0
TOTAL GOLF ECONOMY	\$909.6

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 greens 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.

Indiana’s 430 golf courses, 17 stand-alone ranges, and 42 miniature golf facilities generated nearly \$608.9 million of revenues in 2008.

Indiana Golf Facility Revenues in 2008 (\$ millions)	
Golf Facilities	\$596.5
Practice Ranges & Alternative Facilities	\$12.4
TOTAL¹	\$608.9

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

Golf Course Capital Investments

Golf facilities generate economic impacts beyond operational revenues through investments to upgrade and maintain facilities and infrastructure, and through the construction, expansion and renovation of courses. These investments create employment in the construction and maintenance industries and often involve the purchase of significant amounts of equipment and supplies from companies within the state. SRI’s estimate of Indiana’s golf course capital investment is divided into two segments: (1) capital investment at existing facilities and (2) new course construction. Together, Indiana’s golf facilities made \$43.0 million worth of capital investments in 2008: \$29.6 million of investments at existing facilities and \$13.4 million for the construction of new courses.

Indiana Golf Course Construction and Capital Investment in 2008 (\$ millions)	
Golf Course Capital Investment¹	\$29.6
New Course Construction	\$13.4
TOTAL	\$43.0

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

In 2008, Indiana golfers spent significant sums on golf balls, golf clubs, golf apparel, and golf instructional books and DVDs. The economic value that accrues to a state comes from both the production of these golf-related goods, as well as retail sales of such items. Indiana is home to a number of small custom club and golf accessories companies—e.g., Ubie Golf, Crosshairs Golf, Indiana Metal Craft, Eco Golf, etc. In 2008, Indiana manufacturers’ total value-added shipment of golf-related products was approximately \$2.4 million. On the retail side, Indiana retailers and golf facilities earned approximately \$51.5 million on the sale of \$127.1 million of golf equipment,

apparel, and media in 2008. In total, the Golfer Supplies segment contributed \$53.9 million in revenues to the Indiana economy.

Indiana Manufacturers' Value-Added Exports of Golf-Related Products in 2008 (\$ millions)	
TOTAL	\$2.4

Indiana Retailers' Net Revenues on Consumer Purchases of Golfer Supplies in 2008 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$60.3	\$24.4
Golf Apparel (retail margin)	\$66.1	\$26.8
Golf Media (retail margin)	\$0.8	\$0.3
TOTAL	\$127.1	\$51.5

Note: This includes on-course and off-course purchases of golf equipment, apparel and media. Column may not sum due to rounding. The margin does not account for unsold inventory. It is the margin on the sale of merchandise.

State Golf Associations, Tournaments and Charitable Events

Associations

Numerous associations represent the game of golf in Indiana. The major golf associations include the Indiana Golf Association (IGA), the Indiana Section of The PGA, the Indiana Golf Course Superintendents Association, the Indiana Golf Course Owners Association, the Indiana State Seniors' Golf Association, the Indiana Women's Golf Association, and regional chapters of the Club Managers Association of America and the Executive Women's Golf Association (Fort Wayne and Central Indiana chapters). The First Tee chapters of Hammond, Indianapolis, and Valparaiso support the development of young golfers in the state. The Indiana Golf Foundation, created by the IGA and the Indiana Section of The PGA, provides opportunities to learn the game and values of golf through its Gongaware Indiana Junior Golf Academy, competitive events, and other programs. In 2008, Indiana golf associations generated total revenues of \$2.8 million.

Major Tournaments

No professional golf championships were held in 2008, the base year for this study. However, in 2009, Indiana hosted the U.S. Senior Open at Crooked Stick Golf Club in Carmel, IN, and, in 2012, Indiana is slated to host the PGA Tour's BMW Championship.³ In addition, since 2003, different clubs in and around Hammond, IN, have hosted the Horseshoe Casino Classic, an LPGA FUTURES

³ In past years, Crooked Stick has hosted the PGA Championship and the U.S. Women's Championship.

Tour event, the developmental tour of the LPGA. The event is played in June of each year at the Lost Marsh Golf Course in Hammond.

Indiana State's Major Golf Tournaments & Golf Association Revenues in 2008 (\$ millions)	
Major tournaments	\$0.0
Associations	\$2.8
TOTAL	\$2.8

Charitable Giving

Indiana's golf industry makes substantial contributions to a variety of local, state, and national charities. For example, Fort Wayne Country Club and Sycamore Hills Golf Club hosted the Mad Anthonys Golf Classic in 2008 which raised \$75,000 for Children's Hope House. The facility provides accommodation for the families of critically ill children on the Lutheran Medical Park Campus. Rock Hollow Golf Club generated \$50,000 from its charitable events in support of the YMCA, Purdue University, and other organizations. Five facilities⁴ hosted YouthLinks Indiana in 2008 which raised \$190,000 for 17 youth development organizations that provide recreational programs and services for children. 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 Indiana to be \$42.3 million in 2008.

Charitable Giving by Indiana Golf Industry in 2008 (\$ millions)	
TOTAL	\$42.3

⁴ The five facilities hosting YouthLinks Indiana in 2008 were Brickyard Crossing Golf Resort, the Country Club of Indianapolis, Crooked Stick Golf Club, Meridian Hills Country Club, and Woodland Country Club.

B. Enabled Industries

Real Estate

Real estate developers use amenities to attract new home buyers, and golf is a key amenity in Indiana. The development of new golf communities in Indiana followed the rise in the national real estate market which peaked in 2005 in terms of new home starts and existing home sales. In 2008, many golf communities were mid-way through build out, with the number of new homes under construction deeply curtailed by the economic downturn. The new golf community developments offer a mix of single family homes and townhomes/condos. Examples of golf community developments with active home construction in 2008 include: Bridgewater Club, a 600-home residential golf community in Carmel, IN, with a Pete Dye championship golf course and five miles of walking and biking trails; the 330-home Sagamore Golf Club & Community, a private golf community with a Jack Nicklaus-designed course that won Golf Digest's Top Ten Best New Private Courses in 2004; and the 200-home Woodland Trails golf community at The Players Club in Yorktown, IN, just west of Muncie.

New golf-related real estate construction generated \$39.5 million in 2008. Furthermore, in 2008 there were approximately 71 golf communities in Indiana, and we estimate the "golf" premium associated with the sale of real estate in these developments to be \$25.3 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.

Indiana's Golf Real Estate Revenues in 2008 (\$ millions)	
Golf-Related Residential Construction	\$39.5
Realized Golf Premium	\$25.3
TOTAL	\$64.8

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 Indiana, golf is an important tourism segment, alongside festivals, outdoor recreation, and other spectator sports. The state's *2010 Indiana Golf & Travel Guide* directs tourists to golfing opportunities across the Hoosier state (available online at <http://www.VisitIndianaGolf.com>). In 2008, SRI estimates golf-related tourism spending in Indiana was \$136.2 million. This is based on the following estimates of golf trips and associated

expenditures by Indiana residents and non-residents: (1) an estimated 331,793 day trips with average golf trip spending of \$55, and (2) an estimated 279,251 overnight trips with average trip spending of \$422.







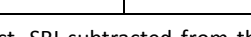
IV. GOLF'S ECONOMIC IMPACT IN INDIANA

Golf's impact on Indiana'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 2008, the \$909.6 million Indiana golf industry supported:

- A total economic impact of \$1.7 billion for the state of Indiana including the indirect and induced economic impacts stimulated by golf sector activity;
- A total employment impact of 21,173 jobs; and
- Total wage income of \$530.7 million.

Golf's Impact on Indiana's Economy (2008)						
Industry	Direct	Indirect	Induced	TOTAL OUTPUT (\$ million)	TOTAL JOBS (\$ million)	TOTAL WAGE INCOME (\$ million)
Golf Facility Operations	\$608.9			\$1,189.1	13,761	\$365.7
Golf Course Capital Investment*	\$43.0			\$32.5	286	\$9.9
Golf-Related Supplies	\$53.9			\$110.1	1,340	\$32.8
Tournaments & Associations	\$2.8			\$6.4	92	\$2.0
Real Estate **	\$64.8			\$95.8	841	\$29.1
Hospitality/Tourism	\$136.2			\$294.6	4,854	\$91.1
TOTAL	\$909.6			\$1,728.6	21,173	\$530.7

Note: To calculate golf's total economic impact, SRI subtracted from the direct golf economy impact of \$909.6 million the portion of capital investment that is investment in existing facilities (\$29.6 million of \$43.0 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$25.3 million of \$64.8 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.

V. 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 shops⁵; 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

Estimates of Indiana Golf Facilities from Various Sources, 2002-2008				
	2002 Census (# of facilities minus resorts & municipal)¹	2008 PGA (# of facilities)²	2008 NGF (# of facilities)³	2008 NGF (# of 18-hole equivalent courses)³
PRIVATE	72	93	82	77.5
PUBLIC	271	329	352	329
Daily fee/ semi-private		253		
Municipal				
Military		76		
University				
RESORT		8	13	14.5
TOTAL	343	430	447	421

Sources: 1 U.S. Census Bureau, 2002 Economic Census.

2 Professional Golfers' Association of America (2008). Facility Database.

3 NGF (2009). Total Facility Supply Tables 5-10, Golf Facilities in the U.S., 2008 edition, pp.5-10.

⁵ However, on-course merchandise sales are subtracted from facility revenue, because these sales are included in the Golf-Related Supplies industry segment.

organization. Fortunately, the variances caused by these data collection issues are very small, and thus do not materially impact the overall analysis. The table on the previous page presents slightly differing estimates for the number of golf course facilities in Indiana in 2008 or the latest available year.

The PGA and NGF total facility estimates fall within a narrow range: NGF's 447 versus PGA's 430 facilities. After analysis of different golf facility numbers in collaboration with the Indiana Golf Alliance, SRI used the PGA numbers as the basis for our assessment. SRI reclassified three of the eight golf resorts reported by The PGA as daily fee facilities based on further research. This brought the total number of daily fee facilities to 256 and the total number of golf resort facilities to five.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 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. Still, the latest 2002 Economic Census⁷ contains revenue, payroll, and employment data on 12,261 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 2008. 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.

⁶ The five golf resorts identified by SRI are: Belterra Golf Club, Chariot Run Golf Club, French Lick Springs Resort, Indiana National Golf Club (Swan Lake Golf Resort), and The Links at Grand Victoria Casino. SRI defines a golf resort as a resort that is rated over 3 stars and has a golf course on or adjacent to the property; if the golf facility is owned by the resort, it is classified as a golf resort even if not directly adjacent to the resort property.

⁷ The most recent Economic Census is the 2007 Economic Census, but state-level data on golf facilities will not be publicly available until the fall of 2010.

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 Indiana Average Revenue per Facility Data from Different Sources, 2002-2008				
	Census (2002)¹	PGA (2007)²	PGA (2008)³	NGF (2005)^{4,5}
Private facility	\$1,480,167	\$2,109,475	\$2,678,886	\$3,564,339
Daily fee facility	\$679,384	\$740,056	\$931,440	\$1,291,582
Resort facility	X	N/A	\$1,381,398	X
Municipal/military/university facility	X	\$570,938	\$1,619,924	X
Driving range	X	X	X	\$237,000
Miniature golf	\$169,095	X	X	X

Note: Bolded values are an Indiana and West Virginia average.

Sources: ¹ U.S. Census Bureau, 2002 Economic Census.

² Professional Golfers' Association of America (2008). 2007 Operations Survey.

³ Professional Golfers' Association of America (2009). 2008 Operations Survey.

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

⁵ Average golf range revenue based on facility revenues reported in Hoover's, Inc. industry database.

Average revenue data from the Census (2002), PGA (2007, 2008) and NGF (2005) are presented above. Note that the NGF average revenue figure for private facilities is a national average, not an Indiana average, and the NGF average revenue figure for daily fee facilities is a Frostbelt regional average, not Indiana specific.

Reviewing the PGA data, there are significant differences in the average revenue reported to the PGA by Indiana private facilities and municipal/military/university facilities in 2007 and 2008. In both facility type cases, the likely reasons for the discrepancies are survey sampling issues and low response rates, as opposed to strong facility revenue growth from 2007 to 2008. In consultation with the Indiana Golf Alliance, SRI validated and adjusted these revenue estimates using average revenue data from neighboring states as benchmarks, since these state share many of the same playing season and geographic characteristics as Indiana.

For private facilities, average revenues reported by the PGA in Indiana and neighboring states in 2008 fall within a very narrow range, from a low of \$2.2 million in Wisconsin to a high of \$2.8 million in Ohio. Average private facility revenues in Indiana and Illinois were very similar: \$2.652 million in Illinois and \$2.679 million in Indiana. Review of this data supported SRI's decision to use the PGA's 2008 average revenue figure of \$2,678,886 for private facilities in Indiana.

For daily fee facilities in Indiana, the 2008 PGA average revenue estimate of \$931,440 seems somewhat low relative to neighboring/regional states (which are in the \$0.96 million to \$1.3 million range). SRI adjusted this estimate by taking an average of the PGA estimates for Indiana/Illinois/Ohio in 2008, and using the resulting daily fee average revenue figure of \$1,158,542.

For municipal/military/university facilities, average revenue reported by the PGA tends to fall in a narrow range, \$0.9 million to \$1.4 million, for Indiana's neighboring states in both 2007 and 2008. The exceptions are Indiana and Iowa, both of which indicated very low average revenue in 2007 based on survey responses and Indiana which had very high relative average revenue in 2008. SRI adjusted this estimate by taking an average of the PGA estimates for Indiana/Illinois/Ohio in 2008, and using the resulting municipal/military/university average revenue figure of \$1,381,084.

The PGA survey data for Indiana and all neighboring states was very poor and, therefore, not helpful in discerning a valid average revenue estimate. Based on primary research, SRI revised the average golf resort facility revenue to be \$1,787,500.

Average driving range revenue (\$237,000) was calculated using data on standalone golf ranges in Indiana from Hoover's, Inc. industry database. Average revenue reported by standalone ranges in Hoovers was very similar to the Golf Range Association of America's 2003 survey finding of \$250,000 average revenue for standalone golf ranges in the United States. Miniature golf facility revenues were calculated using Census (2002) data adjusted for inflation to 2008 dollars using the GDP deflator.

2008 Golf Facility Operations Revenues		
Facility type	Calculation	Estimate
Private facilities	Average revenue ¹	\$2,435,788
	Number of facilities	93
	Total revenue [1]	\$226,528,321
Daily fee/semi-private facilities	Average revenue ¹	\$1,044,198
	Number of facilities	256
	Total revenue [2]	\$267,314,575
Municipal/military/university facilities	Average revenue ¹	\$1,256,215
	Number of facilities	76
	Total revenue [3]	\$95,472,353
Resort facilities	Average revenue ¹	\$1,441,680
	Number of facilities	5
	Total revenue [4]	\$7,208,400
Driving ranges	Average revenue	\$237,000
	Number of facilities	17
	Total revenue [5]	\$4,029,000

2008 Golf Facility Operations Revenues		
Facility type	Calculation	Estimate
Miniature golf facilities	Average revenue ²	\$199,135
	Number of facilities	42
	Total revenue [6]	\$8,363,689
TOTAL	Sum [1] to [6]	\$608,916,338

Note: ¹ In this table, on-course merchandise sales have been subtracted from average facility revenue, because on-course merchandise sales are included in the Golf-Related Supplies industry segment. ² Total revenues have been adjusted for inflation into 2008 dollars using the appropriate GDP deflator. Numbers in columns may not sum due to rounding.

Sources: Golf facilities average revenue data are derived from the PGA of America (2009), *2008 Operations Survey*. Driving range average revenue data are from Hoover's, Inc. industry database. Miniature golf facilities average revenue data are from the *2002 Economic Census*.

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.

Indiana Golf Course Construction and Capital Investment in 2008 (\$ millions)	
Golf Course Capital Investment¹	\$29.6
New Course Construction	\$13.4
TOTAL	\$43.0

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.

Investment at existing courses. Golf course 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, pro shop and maintenance buildings. Maintenance expenses are not included. SRI examined golf course capital investment from two sources: NGF and the GCSAA. The GCSAA data comes from golf course 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, SRI applied the GCSAA data to our Indiana capital investment calculations. We estimated average facility investments in Indiana 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 Indiana’s 430 golf courses invested an average of approximately \$68,893 in 2008, for a total capital investment of \$29.6 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 2008, NGF estimated that there were no new golf course openings in Indiana and that 3.0 18-hole equivalent courses were under construction.

An estimate for the average investment required for each new golf course in Indiana 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 Central Plains 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 Indiana is \$7.4 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 average investment in construction per course per year was \$3.7 million in 2008. We applied this figure to two of the three courses under construction in 2008; the third course under construction was at a very high-end facility, French Lick Springs Resort. Therefore, SRI used a higher construction cost estimate for this course. In total, SRI estimates that 2008 investment in new course construction in Indiana was \$13.4 million.

C. Golf-Related Supplies

This section explains our methodology for calculating Indiana manufacturers’ exports (i.e., shipments out-of-state) of high-end golf apparel, custom golf clubs, golf magazines, and other

goods purchased by golfers. 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. 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 media (e.g., magazine publishing), 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 magazine or golf ball is manufactured.

We began by working with the Indiana Golf Alliance to identify major manufacturers of golf-related products in the state. We identified a small number of companies manufacturing golf equipment and accessories in Indiana—e.g., Ubie Golf, Crosshairs Golf, Indiana Metal Craft, Eco Golf, etc. We then conducted research on these companies to ascertain: (1) if they had headquarters, product R&D/design, or production facilities in Indiana, (2) the total value of their golf-related sales, and (3) 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.

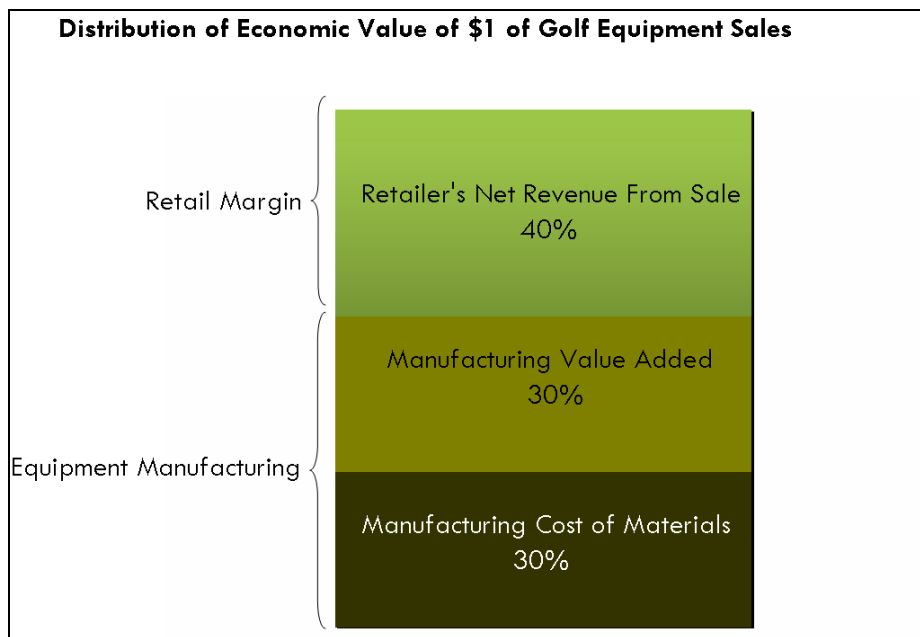
Indiana Manufacturers’ Value-Added Exports of Golf-Related Products in 2008 (\$ millions)	
TOTAL	\$2.4

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 2008, NSGA reported total U.S. off-course and on-course purchases of individual golf clubs to be \$573.9 million. The NSGA survey found the East North Central region accounted

for 14.2% of these purchases, or \$81.5 million. Within the East North Central region, one can estimate Indiana'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. Indiana represents 13.8% of total 18-hole equivalent courses in the East North Central region, so this weight was applied to the region total (\$81.5 million) to estimate \$11.2 million of individual golf club sales in the state of Indiana in 2008. Further, retail margins on final sales suggest that 40.5%, or \$4.6 million, of total sales was retained in the Indiana economy. (See graphic below.)



Indiana's On-Course and Off-Course Golf Equipment & Apparel Purchases, 2008		
Category	Calculation	Estimate (\$ million)
Golf club sets	East North Central region's sales	\$161.9
	IN's courses-based weight	13.8%
	IN's share of sales [1]	\$22.3
Golf apparel	East North Central region's sales	\$478.9
	IN's courses-based weight	13.8%
	IN's share of sales, [2]	\$66.1
Golf balls	East North Central region's sales	\$107.1

Indiana's On-Course and Off-Course Golf Equipment & Apparel Purchases, 2008		
Category	Calculation	Estimate (\$ million)
	IN's courses-based weight	13.8%
	IN's share of sales, [3]	\$14.8
Golf clubs	East North Central region's sales	\$81.5
	IN's courses-based weight	13.8%
	IN's share of sales, [4]	\$11.2
Golf bags	East North Central region's sales	\$54.6
	IN's courses-based weight	13.8%
	IN's share of sales, [5]	\$7.5
Golf shoes	East North Central region's sales	\$31.6
	IN's courses-based weight	13.8%
	IN's share of sales, [6]	\$4.4
TOTAL	Sum of [1] to [6]	\$126.4
Retail sales margin	Multiply TOTAL by 40.5%	\$51.2

Source: National Sporting Goods Association (2008). *The Sporting Goods Market in 2008*, 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 Indiana in 2008. 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 2008 were estimated to be \$737,504 with a retail sales margin of \$298,689. 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 Indiana, 2008	
Category	Estimate
Indiana retail book sales ¹	\$175,596,243
Golf books as % of total book sales	0.4%
Total retail golf book sales	\$737,504
Retail sales margin	\$298,689

Note: ¹Adjusted for inflation into 2008 dollars using the appropriate GDP deflator.

Sources: Indiana retail book sales data from the 2002 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.

Indiana Retailers' Net Revenues on Consumer Purchases of Golfer Supplies in 2008 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$60.3	\$24.4
Golf Apparel (retail margin)	\$66.1	\$26.8
Golf Media (retail margin)	\$0.8	\$0.3
TOTAL	\$127.1	\$51.5

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

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 Indiana Golf Association, the Indiana Golf Foundation, the Indiana Section of The PGA, the Indiana Golf Course Superintendents Association, the Indiana Golf Course Owners Association, the Indiana Women's Golf Association, as well as seniors and other member-based golf associations.

Major Tournaments. In 2008, Indiana hosted no professional golf tournaments, so no revenues were generated by this golf industry segment. In other years, Indiana has hosted the U.S. Senior Open, the PGA Championship, and the U.S. Women's Open.

Indiana's Major Golf Tournament & Golf Association Revenues in 2008 (\$ millions)	
Major tournaments	\$0.0
Associations	\$2.8
TOTAL	\$2.8

Charitable Events. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in Indiana to be \$42.3 million in 2008. This estimate is derived from a national study⁸ based on the number of charitable golf outings/events held; 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 Indiana’s Golf Industry in 2008 (\$ millions)	
TOTAL	\$42.3

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.

Indiana’s Golf Real Estate Revenues in 2008 (\$ millions)	
Golf-Related Residential Construction	\$39.5
Realized Golf Premium	\$25.3
TOTAL	\$64.8

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 used NGF data on new golf facility openings and construction, as well as online research to identify golf courses with residential construction in the study base year (2008). We then contacted these developments directly to collect information on the size of the development, the number of homes/townhomes/condos under construction in 2008, and the average construction costs per type of home (i.e., townhouse or single family home). Construction values can vary 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 identified only several Indiana golf communities that were under development in 2008, although the overall real estate market and economic and financial conditions in 2008 sidelined a significant share of new home construction. The golf communities that were under include the

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

600-home Bridgewater Club golf community in Carmel, IN, with a Pete Dye championship golf course and five miles of walking and biking trails; the 330-home Sagamore Golf Club & Community, a private golf community with a Jack Nicklaus-designed course that won Golf Digest's Top Ten Best New Private Courses in 2004; and the , among several others. Multiplying the total number of new homes under construction at these developments with the average construction cost per unit yielded a total 2008 golf-related residential construction figure of \$39.5 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. Multiplying the approximately 71 existing Indiana golf communities by 370, the mean number of housing units per golf course, we arrived at a total of 24,140 golf community homes. In 2008, the home turnover rate (percentage of homes sold relative to the total housing stock) was 4.2 percent in Indiana. 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 Indiana’s golf real estate premium was approximately \$25.3 million in 2008.

F. Hospitality/Tourism

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. SRI used 2006 Indiana visitor trips data from D.K. Shifflet & Associates as a baseline (82.8 million in total, including 34.1 million *day* trips and 28.7 million *overnight* trips).⁹ To approximate 2008 trips, SRI then applied the change in total U.S. domestic visitor trips from 2006 to 2008 (a decline of -2.7 percent) to arrive at an estimated 61.1 million Indiana visitor trips in 2008 (33.2 million *day* trips and 27.9 million *overnight* trips).¹⁰

⁹ D. K. Shifflet & Associates. *Indiana 2006 Visitor Profile*, p. 19.
<http://www.in.gov/tourism/pdfs/2006VisitorProfileReport.pdf>

¹⁰ For domestic person-trips in the United States, D. K. Shifflet & Associates reported that there was a decrease of -0.1 percent from 2006 to 2007, and -2.6 percent from 2007 to 2008; this translates to a decrease of -2.7 percent from 2006 to 2008 for total U.S. domestic person-trips.
<http://www.ihsglobalinsight.com/PressRelease/PressReleaseDetail12973.htm>

SRI defines a “golf trip” as a trip in which an Indiana 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. DKSA estimated that approximately 1.0 percent of Indiana’ leisure overnight visitors reported they played golf while on a trip, in 2004-2006.¹¹ This figure includes trips to Indiana golf resort destinations (of which Indiana has 5), as well as trips to play golf courses in other parts of the state. Based on the DKSA estimate as well as data from surrounding states, SRI estimated that approximately 1.0 percent of *all* Indiana visitors play golf while on a trip, both day and overnight. To estimate the number of golf trips, SRI multiplied the number of Indiana domestic trips (61.1 million total, including 33.2 million *day* trips and 27.9 million *overnight* trips) in 2008 by DKSA/SRI’s estimate of the percentage of visitors who play golf while on a trip to Indiana (1.0 percent). SRI calculated that there were 611,044 golf trips made in Indiana in 2008, including 331,793 golf *day* trips and 279,251 golf *overnight* trips.

This figure (611,044 total golf trips, day and overnight) seems plausible given the PGA of America’s estimate of 9.2 million rounds played in Indiana in 2005.¹² This translates into approximately 6.6 percent of total rounds played on Indiana courses being played by golfers from other parts of Indiana or from other states.

Average spending per golf trip. SRI estimated that average spending per golf trip in Indiana in 2008 was \$58 per day trip and \$442 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 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* report¹³ and adjusted average trip spending based upon cost of living in Indiana vis-à-vis the rest of the country, as well as other average trip expenditure research. Multiplying the total number of golf trips (day and overnight) by average spending per golf trip (day and overnight), SRI found that golf-related tourism spending in Indiana was approximately \$18.4 million for *day* trips and \$117.8 million for *overnight* trips, totaling \$136.2 million.

<https://www.dksa.com/downloads/USForecast061809.pdf>

¹¹ D. K. Shifflet & Associates. *Indiana 2006 Visitor Profile*, p. 80.

<http://www.in.gov/tourism/pdfs/2006VisitorProfileReport.pdf>

¹² 2005 was the most recent year for which the rounds data was available.

¹³ 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.

Indiana' Golf-Related Travel Expenditures in 2008	
# Golf person day trips	331,793
Average travel \$ per person per day trip	\$55.38
# Golf person overnight trips	279,251
Average travel \$ per person per overnight trip	\$421.90
Total	\$136.2 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	
Core Industries	+ Golf Facility Operations
	+ Golf Course Capital Investment
	+ Golf-Related Supplies
	+ Media, Tournaments, Associations
Enabled Industries	+ Real Estate
	+ Hospitality/Tourism
= Size of State Golf Economy	

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

Multiplier values vary from region to region, based on the unique characteristics of the state's or region's economy. Industries with more extensive linkages to other industries within the local

economy will have a greater multiplier effect on final economic activity relative to the initial, direct effect. Conversely, economies and industry sectors dependent on a large share of imported supply will have smaller multiplier effects. For this study, the RIMS II (Regional Input-Output Multipliers), calculated by the U.S. Bureau of Economic Analysis, were used to calculate the multiplier impact of Indiana’s golf economy.

Golf’s Impact on Indiana’s Economy (2008)						
Industry	Direct	Indirect	Induced	TOTAL OUTPUT (\$ million)	TOTAL JOBS (\$ million)	TOTAL WAGE INCOME (\$ million)
Golf Facility Operations	\$608.9			\$1,189.1	13,761	\$365.7
Golf Course Capital Investment*	\$43.0			\$32.5	286	\$9.9
Golf-Related Supplies	\$53.9			\$110.1	1,340	\$32.8
Tournaments & Associations	\$2.8			\$6.4	92	\$2.0
Real Estate **	\$64.8			\$95.8	841	\$29.1
Hospitality/Tourism	\$136.2			\$294.6	4,854	\$91.1
TOTAL	\$909.6			\$1,728.6	21,173	\$530.7

Note: To calculate golf’s total economic impact, SRI subtracted from the direct golf economy impact of \$909.6 million the portion of capital investment that is investment in existing facilities (\$29.6 million of \$43.0 million) and the portion of real estate that is the realized golf premium associated with the sale of real estate in existing developments (\$25.3 million of \$64.8 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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