

THE HAWAII GOLF ECONOMY

FULL REPORT

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and prepared by SRI International.






The Hawaii Golf Economy

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CONTENTS

I. STUDY OVERVIEW	1
II. ANALYTICAL FRAMEWORK	2
A. Golf Industry Cluster Definition	2
B. Data Sources.....	4
III. THE SIZE OF HAWAII’S GOLF ECONOMY	5
A. Core Industries	5
B. Enabled Industries	8
IV. GOLF’S ECONOMIC IMPACT IN HAWAII.....	10
V. DETAILED METHODOLOGY & DATA SOURCES	11
A. Golf Facility Operations.....	11
B. Golf Course Capital Investment	15
C. Golf-Related Supplies.....	17
D. State Golf Associations, Tournaments & Charitable Events	19
E. Real Estate.....	20
F. Hospitality/Tourism.....	21
G. Golf’s Economic Impact.....	24
BIBLIOGRAPHY.....	26

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ACRONYMS

APGA	Aloha Section of the Professional Golfers' Association
HAG	Hawaii Alliance for Golf
CMAA	Club Managers Association of America
DBEDT	Department of Business, Economic Development & Tourism
GCBA	Golf Course Builders Association of America
GRAA	Golf Range Association of America
GSCAA	Golf Course Superintendents Association of America
HGCSA	Hawaii Golf Course Superintendents Association
HGRA	Hawaii Golf Representatives Association
HSGA	Hawaii State Golf Association
HSWGA	Hawaii State Women's Golf Association
HTA	Hawaii Tourism Authority
LPGA	Ladies Professional Golf Association
NGCOA	National Golf Course Owners Association
PGA	Professional Golfers' Association of America
USGA	United States Golf Association
WGF	World Golf Foundation

I. STUDY OVERVIEW

Golf in the Aloha State is more than an enjoyable pastime. With 83 courses, over a quarter of which are five-star golf resorts, and several championship golf events, golf is an integral part of Hawaii's recreation and tourism-driven economy. In 2007, the size of Hawaii's direct golf economy was approximately \$1.4 billion. Golf brings visitors to the state, drives new construction and residential development, generates retail sales, and creates demand for a myriad of goods and services. When the total economic impact of these golf-related activities is considered, Hawaii's golf industry generated approximately \$2.5 billion of direct, indirect and induced economic output, \$854.0 million of wage income and nearly 30,187 jobs in 2007.

With \$1.4 billion in revenues in 2007, the golf industry is considerably larger than the agricultural sector (\$613.4 million) and comparable to revenues generated by full-service restaurants (\$1.4 billion).¹ The broader tourism sector contributed \$12.8 billion to Hawaii's economy in 2007.²

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. SRI International and GOLF 20/20 are currently working with key golf stakeholders in several states, including Hawaii, to bring consistency to the industry measurement and reporting process. This report describes and analyzes Hawaii's golf industry including the revenues and economic impact generated by the industry. Such analysis will assist Hawaii's industry stakeholders³ 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, 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, National Agricultural Statistics Service (2005), 2002 Census of Agriculture State Profile: Hawaii Agricultural Overview and U.S. Census Bureau (2005), 2002 Economic Census, Geographic Series: Full-Service Restaurants (NAICS 7221). SRI used the GDP implicit price deflator to inflate 2002 industry revenue data to 2007 dollars.

² Hawaii Department of Business, Economic Development & Tourism (2008). *2007 Annual Visitor Research Report*.

³ Key industry stakeholders comprising the Hawaii Golf Task Force include representatives from the Hawaii Alliance for Golf (HAG): the Aloha Section of the PGA (APGA), the First Tee Hawaii, the Hawaii Golf Course Superintendents Association (HGCSA), the Hawaii Golf Representatives Association (HGRA), the Hawaii State Golf Association (HSGA), and the Hawaii State Women's Golf Association (HSWGA).

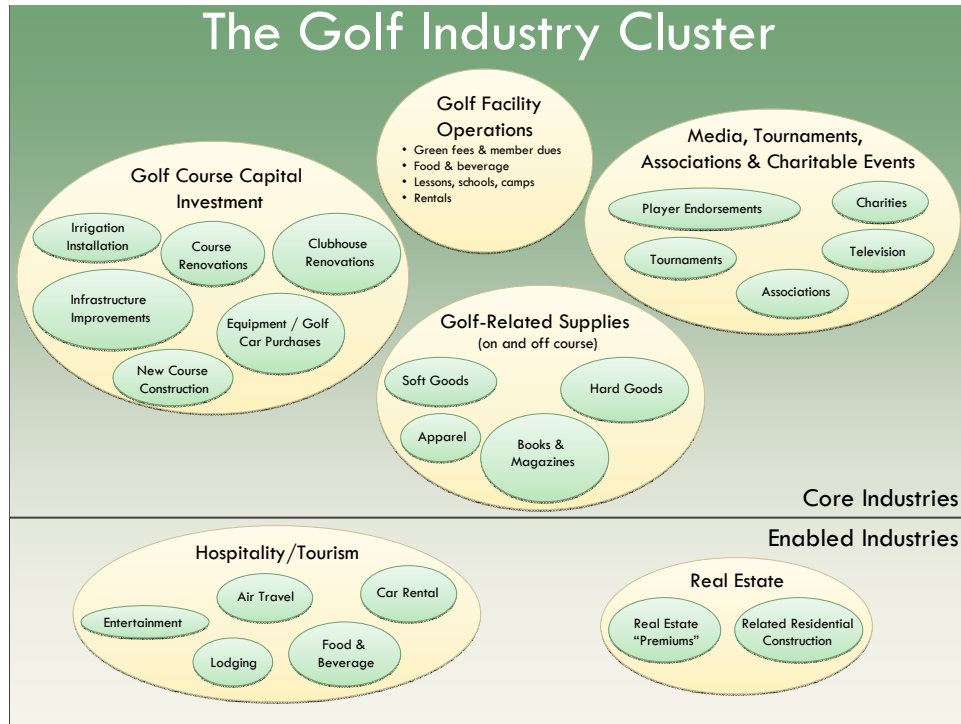
II. ANALYTICAL FRAMEWORK

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 our 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). 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	2008 PGA Facility Database (2007 data)	2002 Economic Census; state task force; 2008 NGF Facility Database
Avg. revenues by type of facility	2007 and 2008 PGA Facility Operations Survey (2006 and 2007 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 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 data)	2006 PGA Compensation Survey (2005 data)
Golf apparel	National Sporting Goods Association (2007 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> (2006 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 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,
Avg. construction costs per home and real estate premium	Interviews with real estate developers	Golf Course Builders Association of America, National Golf Course Owners

State Golf Economy Indicators and Data Sources		
Indicator	Primary source	Cross-validation source
Hospitality/Tourism		
# of golf travelers or # of golf-related trips to the state	DBEDT Annual Visitor Research Report (2007 data)	TIA/DKS&A
Avg. spending per traveler or per trip	DBEDT Annual Visitor Research Report (2007 data)	Market Trends Pacific study; National Golf Foundation

III. THE SIZE OF HAWAII'S GOLF ECONOMY

SRI estimates the total size of Hawaii's golf economy in 2007 was approximately \$1.4 billion. This estimate is comprised of \$383.5 million in core industries and \$980.1 million in enabled industries, as illustrated in the table below.

Size of Hawaii's Golf Economy in 2007 by Segment (\$ million)	
Core Industries	
Golf Facility Operations	\$299.4
Golf Course Construction and Capital Investment	\$38.4
Golf-Related Supplies	\$19.1
Major Golf Tournaments and Associations	\$26.6
Total Core Industries	\$383.5
Enabled Industries	
Real Estate	\$538.4
Hospitality/Tourism	\$441.7
Total Enabled Industries	\$980.1
TOTAL GOLF ECONOMY	\$1,363.6

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, 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. Hawaii's 83 golf courses, four stand-alone ranges, and five miniature golf facilities generated approximately \$299.4 million of revenues in 2007.

Hawaii Golf Facility Revenues in 2007 (\$ millions)	
Golf Facilities	\$294.3
Practice Ranges & Alternative Facilities	\$5.1
TOTAL¹	\$299.4

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

This is a sizeable industry, but even more significant when compared to other popular forms of recreation. For example, Hawaii's golf facilities generated revenues comparable to that of sport fishing and wildlife watching. Sport fishing and wildlife watching, including related travel, generated revenues of \$331 million in 2006.⁴

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 Hawaii's golf course capital investment is divided into two segments: (1) capital investment at existing facilities and (2) new course construction. Together, Hawaii's golf facilities made \$38.4 million worth of capital investments in 2007: \$15.3 million of investments at existing facilities and \$23.1 million for the construction and renovation of courses.

Hawaii Golf Course Construction and Capital Investment in 2007 (\$ millions)	
Golf Course Capital Investment ¹	\$15.3
New Course Construction	\$23.1
TOTAL	\$38.4

Note: ¹ Only the New Course Construction category is included in the economic impact analysis, because it represents new economic output or activity. Golf course capital 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 2007, Hawaii golfers spent significant sums on golf balls, golf clubs, golf apparel, and golf instructional books and DVDs. According to the National Sporting Goods Association, dollar sales of golf equipment continued their year-on-year gains in 2007. Golf equipment and apparel sales have been on a positive growth trajectory since 2003, although consumer spending has slowed

⁴ U.S. Department of the Interior, Fish and Wildlife Service, and the U.S. Department of Commerce, U.S. Census Bureau (2006). *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.

in the second half of 2008. Hawaii retailers and golf facilities earned approximately \$19.1 million on the sale of \$48.1 million of golf equipment, apparel, and media in 2007.

Hawaii Retailers' Net Revenues on Consumer Purchases of Golf-Related Supplies in 2007 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$41.4	\$16.5
Golf Apparel (retail margin)	\$6.3	\$2.5
Golf Media (retail margin)	\$0.4	\$0.2
TOTAL	\$48.1	\$19.1

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

State Golf Associations, Tournaments and Charitable Events

Associations

Numerous associations represent the game of golf in Hawaii. The major golf associations include the Aloha Section of the PGA, the Hawaii State Golf Association, the Hawaii Golf Course Superintendents Association, the Hawaii State Women's Golf Association, the Hawaii Golf Course Owners Association and the Hawaii Golf Representatives Association. Other important golf organizations are the Aloha Section PGA Foundation and the Hawaii Women's Golf Foundations. These philanthropic organizations are focused on developing and promoting interest in the game of golf while enhancing the lives of those that participate through new golfer developmental programs, scholarships, research, and education. Junior Golf in Hawaii is represented by the Hawaii State Junior Golf Association, independent junior golf associations on each of the islands and the First Tee Hawaii.⁵ In 2007, Hawaii golf associations generated total revenues of \$1.4 million.

Major Tournaments

In 2007, Hawaii hosted seven major golf championships, including two PGA TOUR events, three Champions Tour events, and two LPGA Tour events. The Mercedes-Benz Championship, played at Kapalua Resort's Plantation Course on Maui, is the opening event on the PGA TOUR season. The Sony Open, another PGA TOUR event, is telecast to 150 countries—making it one of the most internationally televised events in the world. The Sony Open is played each January at Waialae Country Club on Oahu. Champions Tour events include the Turtle Bay Championship (Kahuku, Oahu), the MasterCard Championship (Kona, Big Island), and Wendy's Champions Skins Game (Wailea, Maui). Altogether, golf events in Hawaii generated approximately \$25.2 million in 2007, excluding the tournament purse and costs for TV broadcasting.

⁵ The First Tee is a nationwide program that aims to introduce youth to the game and values of golf.

Hawaii's Major Golf Tournaments & State Golf Association Revenues in 2007 (\$ millions)	
Major tournaments	\$25.2
Associations	\$1.4
TOTAL	\$26.6

Charitable Events

Hawaii's golf industry makes substantial contributions to a variety of charities donating rounds, services, and staff time in support of local charitable golf events. In addition, there is a significant charitable component to all the professional golf tournaments played in Hawaii. For example, each year the Sony Open generates over \$1 million in charitable proceeds benefiting more than 100 non-profit service organizations. Similarly, proceeds from the Mercedes-Benz Championship support a number of Maui charities ranging from youth after-school programs and elderly care facilities, to environmental and wildlife protection groups. Golf course owners, operators, and golf professionals are happy to extend their "Aloha" by providing valuable support and assistance to their communities. In total, SRI estimates that the amount of charitable giving attributed to the over 350 charitable golf events played in Hawaii to be \$24.8 million in 2007.

Charitable Giving by Hawaii Golf Industry in 2007 (\$ millions)	
TOTAL	\$24.8

B. Enabled Industries

Real Estate

Golf is a key feature and amenity in many new residential developments on the mainland, and this is also true in Hawaii. In addition, golf tourism has driven demand for the construction of new golf resort vacation properties on the islands. The development of both new golf communities and golf resort properties in Hawaii followed the rise in the national real estate market, which peaked in 2005 in terms of new home starts and existing home sales.⁶ Many golf communities were mid-way or nearing the end of build out in 2007, and still represented a sizable segment in the Hawaii golf economy.

Construction prices for new golf community homes in Hawaii are significantly higher than similarly high-end constructions on the mainland—two to three times the cost per square footage compared to the national average. This is due to the higher cost of land, labor and construction materials, but also due to ecological and geological considerations and the target

⁶ National Association of Realtors data.

market for new golf vacation homes and residential properties. In Hawaii, the median sales price of existing single family homes was \$586,000 in 2007⁷, and a larger share of golf communities are extremely high end compared to golf community development on the mainland. In 2007, new home construction was underway at the following golf communities across the islands: Hokulia and Kukio on the Big Island; Haleakea (Hawaii Prince) and Ocean Pointe (Hoakalei) on Oahu; Hokulani (Elleair) on Maui; Kiahuna and Puakea on Kauai; and Manele on Lanai; among others. Some examples of new vacation homes and multi-occupancy properties include: the Nihilani at the Princeville Resort on Kauai; new villas at Marriott’s Ko Olina Beach Club on Oahu; the Ritz-Carlton Residences at Kapalua Bay on Maui; and villas and condos at Mauna Lani Resort and Waikoloa Beach Resort on the Big Island.

SRI estimates new golf-related real estate construction generated \$465.8 million in 2007. Furthermore, in 2007 there were more than 23 golf communities in Hawaii, and we estimate the “golf” premium associated with the sale of real estate in these developments to be \$72.6 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.

Hawaii’s Golf Real Estate Revenues in 2007 (\$ millions)	
Golf-Related Residential Construction	\$465.8
Realized Golf Premium	\$72.6
TOTAL	\$538.4

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

Tourism is a cornerstone of Hawaii’s economy contributing \$12.8 billion of revenue, or close to one-fifth of the state’s GDP in 2007. Each year, the state’s 1.3 million inhabitants welcome an estimated 7.5 million visitors.⁸ Golf is an important tourism segment in the state, along with Hawaii’s beaches, wildlife, geological features, ocean recreation, and cultural offerings, drawing visitors from all over the world. In 2007, SRI estimates golf-related tourism spending in Hawaii was \$441.7 million. This is based on: (1) an estimated 940,355 air traveler golf trips with average golf trip spending of \$469, and (2) an estimated 5,502 cruise ship traveler golf trips with average trip spending of \$65.

⁷ UHERO Economic Information Service (2008). The State of Hawaii at a Glance, <http://uhero.prognoz.com/Glance.aspx>

⁸ Tourism revenue and visitor data come from the State of Hawaii Department of Business, Economic Development & Tourism (2008). *2007 Annual Visitor Research Report*, <http://hawaii.gov/dbedt/info/visitor-stats/visitor-research/2007-annual-research.pdf> and *2007 Visitor Satisfaction and Activity Report*, <http://hawaii.gov/dbedt/info/visitor-stats/vsat/2007-vsats-final-web.pdf>

Hawaii's Golf-Related Travel Expenditures in 2007	
# of air traveler golf trips	940,355
Average travel \$ per trip (2 nights)	\$469.35
Total golf trip expenditures (air travelers)	\$441,355,619
# of cruise ship golf trips	5,502
Average travel \$ per trip (1 day)	\$65.00
Total golf trip expenditures (cruise travelers)	\$357,630
Total	\$441.7 million








IV. GOLF'S ECONOMIC IMPACT IN HAWAII

Golf's impact on the Hawaiian 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 employment and wage income of those employed in golf-related industries, as well as the employment and wages generated in other sectors of the economy through subsequent purchases of goods and services by golf industry employees.

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 with higher import intensities will have smaller multiplier effects. In Hawaii's case, a significant amount of food and other goods are imported, in contrast to states like California or Ohio. In addition, many tourism establishments are foreign owned which means that profits leave the state.

In 2007, the \$1.4 billion Hawaii golf industry generated:

- Additional indirect and induced economic impacts resulting in a total impact of \$2.5 billion;
- A total impact of nearly 30,187 jobs; and
- Total earnings of \$854.0 million.

Golf's Economic Impacts on Hawaii's Economy (2007)						
Industry	Direct	Indirect	Induced	TOTAL OUTPUT (\$ million)	TOTAL JOBS (\$ million)	TOTAL WAGE INCOME (\$ million)
Golf Facility Operations	\$299.4			\$575.9	7,638	\$198.6
Golf Course Capital Investment*	\$38.4			\$47.0	415	\$15.8
Golf-Related Supplies	\$19.1			\$37.6	442	\$12.0
Tournaments & Associations	\$26.6			\$52.7	960	\$21.5
Real Estate **	\$538.4			\$948.6	8,366	\$319.4
Hospitality/Tourism	\$441.7			\$865.9	12,365	\$286.8
TOTAL	\$1,363.6			\$2,527.7	30,187	\$854.0

Note: Totals may not sum due to rounding. Economic impact is calculated based on \$1,275.7 million of direct golf economy revenues. Portions of two industry segments included in direct economy calculations are excluded from economic impact estimation.

*Golf Course Capital Investments—only new course construction (\$23.1 million) is included for this category as other types of facility capital investment are typically financed through facility revenues and, therefore, are omitted to avoid double-counting.

**Real Estate—the golf premium associated with golf real estate is considered a transfer of assets rather than new economic activity, so only golf-related residential construction (\$465.8 million) is included.

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 membership fees, greens fees, range fees, and cart rental fees; purchases of golf apparel and

equipment in pro shops⁹; 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) annual facility or course 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. The table below presents slightly differing estimates for the number of golf course facilities in Hawaii in 2007 or the latest available year.

Estimates of Hawaii Golf Facilities from Various Sources, 2002-2007					
	2002 Census (# of facilities minus resorts & municipal) ¹	2007 PGA Aloha Section (# of facilities) ²	2007 PGA Aloha Section (18-hole equivalent)	2007 PGA (# of facilities) ³	2007 NGF (# of facilities) ⁴
PRIVATE	6	12	11.0	12	16
PUBLIC	45	47	43.5	49	41
Daily fee/semi-private		31	29.0	32	
Municipal		9	8.5	17	
Military		7	6.0		
University					
RESORT		24	34.5	28	18
TOTAL	51	83	89.0	89	75

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

² PGA Aloha Section (2008). *2008 Aloha Section PGA Golf Courses & Staff Listing*.

³ Professional Golfers' Association of America (2008). *Facility Database*.

⁴ NGF (2008). Total Facility Supply Tables 5-10, *Golf Facilities in the U.S., 2008 edition*, pp.5-10.

⁹ However, on-course merchandise sales are subtracted from facility revenue, because on-course merchandise sales are included in the Golf-Related Supplies industry segment.

After analysis of different golf facility numbers in collaboration with the Hawaii Golf Alliance, SRI used the PGA Aloha Section's facility numbers as the basis for our assessment, as they are the most comprehensive and up-to-date. The facility numbers reported by the PGA Aloha Section, PGA headquarters, and National Golf Foundation fall within a narrow range, 75 to 89 total facilities.

Average revenues per facility. The SRI team collected average revenue data from a variety of sources. Here again, the data challenge was that average facility revenues will vary significantly depending on: (1) the number of holes (e.g., a 9-hole course versus a 18-hole course) and (2) the type of facility—whether a golf course facility is private, daily fee, resort, municipal, military, 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. The Economic Census 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 2007. PGA revenue data are reported by type of facility for categories for which Census data are not available—resorts, municipal courses, and military courses. In addition, the Golf Data Institute surveyed Hawaii golf facilities in 2005 and 2006 on behalf of the Aloha Section of the PGA. The GDI survey included revenue and expenditure questions. GDI data is reported on an 18-hole equivalent basis by facility type, whereas PGA data are reported per facility (e.g., one facility can have two 18-hole courses) by facility type.

Despite the many efforts to collect and report valid revenue data, both the PGA and GDI surveys have suffered from relatively low response rates in the private facility and daily fee facility categories. The poor response rates likely stem from the relatively high degree of foreign ownership of Hawaii golf facilities and an inability by managers to share revenue information with third-parties. Average revenue data from the Census (2002), PGA (2007), and GDI (2007) are presented below.

Estimates of Hawaii Average Revenue per Facility Data From Different Sources, 2002-2007			
	Census (2002) ¹	PGA (2007) ²	GDI (2006) ³ 18-hole equivalent
Private facility	\$4,220,833	\$4,210,614	\$2,093,285
Daily fee facility	\$2,876,600	\$3,200,000 ^b	\$2,403,485
Resort facility	X	\$7,723,430	\$4,459,829
Municipal/military/university facility	X	\$2,089,138	\$1,410,966
Driving range	X	\$618,594	X
Miniature golf	\$455,137 ^a	X	X

Note: ^a This is the average revenue of California miniature golf facilities. SRI used California data as a proxy for Hawaii miniature golf facilities, because the Census suppressed Hawaii data to protect the confidentiality of the five establishments operating in the state in 2002.

^b SRI used California daily fee facility average revenue (\$3.5 million) as a proxy and adjusted it downwards (to \$3.2 million) based on a sample of daily fee facilities in the state.

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

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

³ Golf Data Institute (2006). *2006 Base Report*.

In consultation with the Hawaii golf task force, SRI calculated total facility revenues using: (1) PGA average revenue data for *private* facilities, *daily fee* facilities, and stand-alone ranges, and (2) GDI average revenue data for golf resorts and municipal/military/university facilities. Because the PGA's average revenue for Hawaii daily fee facilities was deemed to be too high by the task force, SRI used the PGA's average revenue figure for California daily fee facilities (\$3.5 million) as a proxy and adjusted this figure downwards (to \$3.2 million) based on a phone survey of Hawaii daily fee facilities. Hawaii courses and California courses share a similar profile: year-round play and a mix of both high-end and low-end courses.

Similarly, because the U.S. Census Bureau suppressed revenue data for Hawaii's five miniature golf facilities to protect the confidentiality of individual establishments, SRI used the 2002 Census average revenue for California miniature golf facilities as a proxy. SRI adjusted for inflation over the 2002-2007 period using the GDP deflator. The average revenue figure for stand-alone ranges comes from the PGA's 2008 Operation Survey data. The table, below, illustrates SRI's calculations. Note that on-course merchandise sales have been subtracted from average facility revenue in the table below, therefore the numbers will not match those in the previous table. On-course and off-course golf merchandise sales are included in the Golf-Related Supplies segment.

2007 Hawaii Golf Facility Operations Revenues		
Facility type	Calculation	Estimate
Private facilities	Average revenue ¹	\$3,845,142
	Number of facilities	12

2007 Hawaii Golf Facility Operations Revenues		
Facility type	Calculation	Estimate
	Total revenue [1]	\$46,141,708
Daily fee/semi-private facilities	Average revenue ¹	\$2,955,652
	Number of facilities	31
	Total revenue [2]	\$91,625,208
Municipal/military/university facilities	Average revenue ¹	\$1,410,966
	Number of facilities (18-hole equivalent)	16
	Total revenue	\$18,221,966
	Adjusted for inflation² [3]	\$18,712,358
Resort facilities	Average revenue ¹	\$4,459,829
	Number of facilities (18-hole equivalent)	34.5
	Total revenue	\$134,220,445
	Adjusted for inflation² [4]	\$137,832,604
Driving ranges	Average revenue	\$618,594
	Number of facilities	4
	Total revenue [5]	\$2,474,376
Miniature golf facilities	Average revenue	\$455,137
	Number of facilities	5
	Total revenue	\$2,275,685
	Adjusted for inflation² [6]	\$2,617,059
TOTAL	Sum [1] to [6]	\$299,403,312

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 2007 dollars using the appropriate GDP deflator.

Sources: Private facility, daily fee facility, and driving range facility average revenue data come from the PGA of America (2008), *Operations Survey 2007*. Resort facility and municipal/military/university facility average revenue data are from the Golf Data Institute (2007) *2006 Base Report*. 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.

Hawaii Golf Course Construction and Capital Investment in 2007 (\$ millions)	
Golf Course Capital Investment ¹	\$15.3
New Course Construction	\$23.1
TOTAL	\$38.4

Note: ¹ Only the New Course Construction category is included in the economic impact analysis, because it represents new economic output or activity. Golf course capital 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, proshop 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 2007 Compensation Surveys. The 2007 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 Hawaii capital investment calculations. We estimated average facility investments in Hawaii 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 Hawaii's 83 golf courses invested an average of approximately \$184,000 in 2007, for a total capital investment of \$15.3 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 2007, NGF estimated that no new 18-hole equivalent golf courses opened in Hawaii and that 3.0 were under construction.

The Golf Course Builders Association of America's *2008 Guide to Estimating Cost for Golf Course Construction* puts the average investment required to build a new golf course at \$8 million, excluding the clubhouse. However, due to the following factors the cost of the three new courses¹⁰ under construction in Hawaii in 2007 ranged from \$20 million to \$30 million: (1) new golf courses in Hawaii tend to be very high end, (2) the costs of labor, construction materials and equipment on the islands are considerably higher than on the mainland, and (3) environmental and ecological considerations also increase construction costs. The entire investment is expended over more than one year. In 2007, SRI estimates that total investment in new golf course construction and renovation on Hawaii was \$23.1 million.

¹⁰ The three Hawaii courses under construction, to varying degrees, in 2007 were: Mauna Kea (Big Island), Kohanaiki (Big Island) and Hoakalei (Oahu).

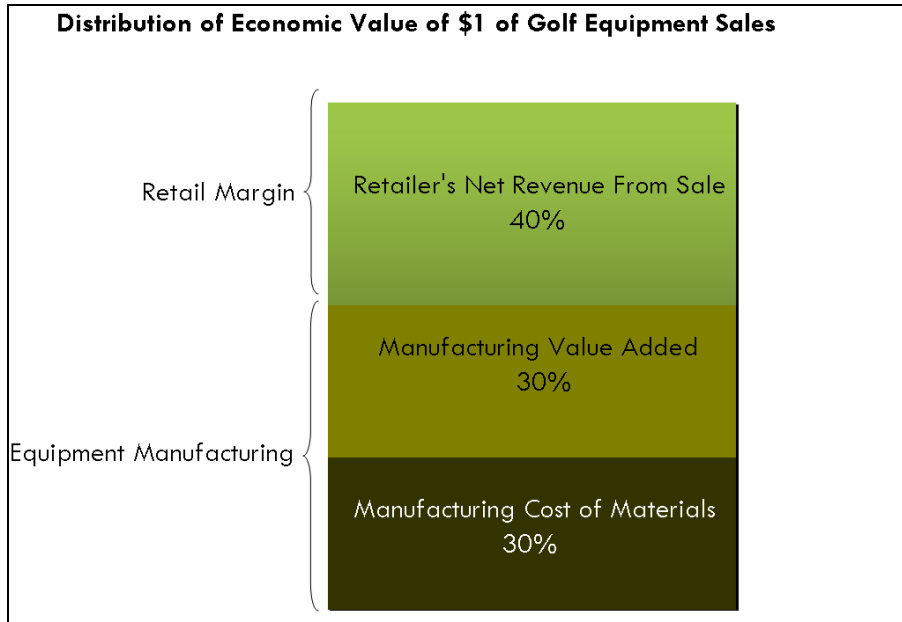
To Build a Golf Course: Required Investments	
Mobilization	Greens Construction
Layout and Staking	Tees
Erosion Control	Bunkers
Clearing	Bridges
Selective Clearing	Bulkheading
Topsoil	Cart Paths
Excavation	Fine Grading
Rough Shaping	Seeding and/or Grassing
Drainage	
Irrigation	

C. Golf-Related Supplies

This section explains our methodology for calculating the retail margin for on-course and off-course purchases of golf equipment, golf apparel, and golf media.

In the retail sector, economic impact 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 2007, NSGA reported total U.S. off-course and on-course purchases of golf club sets to be \$1.9 billion. The NSGA survey found the Pacific region accounted for 21.9% of these purchases, or \$415.5 million. Within the Pacific region, one can estimate Hawaii'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. Hawaii represents 5.9% of total 18-hole equivalent courses in the Pacific region, so this weight was applied to the region total (\$415.5 million) to estimate \$4.5 million of individual golf club sales in the state of Hawaii in 2007. Further, retail margins on final sales suggest that 39.8%, or \$24.5 million of total sales, was retained in the Hawaii economy. (See graphic below.)



Hawaii's On-Course and Off-Course Golf Equipment & Apparel Purchases, 2007		
Category	Calculation	Estimate (\$ million)
Golf club sets	Pacific region's sales	\$415.5
	HI's courses-based weight	5.9%
	HI's share of sales [1]	\$24.5
Golf apparel	Pacific region's sales	\$106.1
	HI's courses-based weight	5.9%
	HI's share of sales, [2]	\$6.3
Golf balls	Pacific region's sales	\$104.7
	HI's courses-based weight	5.9%
	HI's share of sales, [3]	\$6.2
Golf clubs	Pacific region's sales	\$77.0
	HI's courses-based weight	5.9%
	HI's share of sales, [4]	\$4.5
Golf bags	Pacific region's sales	\$62.6
	HI's courses-based weight	5.9%
	HI's share of sales, [5]	\$3.7
Golf shoes	Pacific region's sales	\$41.9
	HI's courses-based weight	5.9%
	HI's share of sales, [6]	\$2.5
TOTAL	Sum of [1] to [6]	\$47.7
Retail sales margin	Multiply TOTAL by 39.8%	\$19.0

Source: National Sporting Goods Association (2008). *The Sporting Goods Market in 2007*, Mt. Prospect, IL: NSGA.

Golf media. Just as in golf equipment and apparel sales, the economic impact associated with golf media 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. Total retail golf book sales in 2007 were estimated to be \$402,902 with a retail sales margin of \$160,355. 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 Hawaii, 2007	
Category	Estimate
Hawaii retail book sales¹	\$95,929,161
Golf books as % of total book sales	0.4%
Total retail golf book sales	\$402,902
Retail sales margin	\$160,355

Note: ¹Adjusted for inflation into 2007 dollars using the appropriate GDP deflator.
Sources: Hawaii 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.

Hawaii Retailers’ Net Revenues on Consumer Purchases of Golfer Supplies in 2007 (\$ millions)		
	Total purchases	Retail sales margin
Golf Equipment (retail margin)	\$41.4	\$16.5
Golf Apparel (retail margin)	\$6.3	\$2.5
Golf Media (retail margin)	\$0.4	\$0.2
TOTAL	\$48.1	\$19.1

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 worked with the Hawaii Alliance for Golf to collect revenue data for the largest state and regional golf organizations with headquarters in Hawaii. These included the Hawaii State Golf Association, the Aloha Section of the PGA, the Hawaii Golf Course Superintendents Association, the Hawaii State Women’s Golf Association, the Hawaii Golf Course Owners Association, the Hawaii Golf Representatives Association, the Hawaii State Junior Golf Association, The First Tee of Hawaii, and independent golf associations on each of the islands.

Other important golf organizations were the Aloha Section PGA Foundation and the Hawaii Women’s Golf Foundation.

Major Tournaments. In 2007, Hawaii hosted seven professional golf events, including two PGA TOUR events, three Champions Tour events, and two LPGA Tour events. We subtracted the tournament purse and cost of television broadcasting from total tournament revenues to estimate the revenues that remained in the state.

Hawaii’s Major Golf Tournaments & State Golf Association Revenues in 2007 (\$ millions)	
Major tournaments	\$25.2
Associations	\$1.4
TOTAL	\$26.6

Charitable Events. Overall, SRI estimates that the amount of charitable giving attributed to the game of golf in Hawaii to be \$24.8 million in 2007.¹¹ This estimate is derived from a national study¹² 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. Over 350 charitable golf events were held in Hawaii in 2007.

Charitable Giving by Hawaii Golf Industry in 2007 (\$ millions)	
TOTAL	\$24.8

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.

Golf-related residential construction. For this industry segment, SRI worked with Hawaii golf real estate developers to arrive at estimates of the number of courses with active real estate development, the 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). Courses with active development were identified through golf task force input and online research.

¹¹ SRI based its calculation on the number of rounds played in California in 2006, and adjusted the figures for inflation based on the CPI inflation rate, cross-referenced with the rate of increase in charitable giving in the United States during this period.

¹² National Golf Foundation (2002). *The Charitable Impact Report*, November 2002.

SRI estimates that approximately 17 Hawaii golf courses had active real estate development, to varying degrees, in 2007. Developments ranged from the 800-unit Bay Club at Waikoloa Beach Resort (Big Island) to the 140-unit Manor Homes development at Ocean Pointe/Hoakalei (Oahu). In 2007, the median number of single family homes under construction per course was 8, and the median number of townhouses/condos was 160. These new homes had a median construction cost of \$1,080,000 for single family homes and \$300,000 for townhouses/condos. Not every development had both single family homes and townhouses/condos. The unit size of developments varied considerably depending on whether they were timeshare properties or single family residences. Multiplying the total number of each type of unit under construction with the average construction cost per unit yielded a total 2007 golf-related residential construction figure of \$465.8 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 \$100,000 per unit. Multiplying the approximately 33 Hawaii courses with a golf real estate component by 400, the median number of housing units per golf course, we arrive at a total of 13,200 golf community homes. In 2007, the home turnover rate (percentage of homes sold relative to the total housing stock) was 5.5 percent in Hawaii. 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 Hawaii’s golf real estate premium was \$72.6 million in 2007.

Hawaii’s Golf Real Estate Revenues in 2007 (\$ millions)	
Golf-Related Residential Construction	\$465.8
Realized Golf Premium	\$72.6
TOTAL	\$538.4

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.

F. Hospitality/Tourism

Although a large and critical golf industry segment, there are no central 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. Many states used to subscribe to the Travel Industry Association (TIA) of America’s TravelScope® statistics. However, in 2005, TIA ceased collecting this primary data, and a new data set was created based on a national survey conducted by D.K. Shifflet & Associates (DKSA). Like the original TravelScope®, the new TravelScope®/Directions® provides annual data on trip volume and characteristics (such as average length of stay and average trip expenditures), but time-series comparisons are no longer possible. In addition to DKSA, TNS Travel America, a market research company, conducts an American Traveler Survey capturing similar visitor volume and expenditure data.

Because tourism is so central to the Hawaiian economy, the state’s Department of Business, Economic Development & Tourism (DBEDT) has conducted visitor-related research projects since 2001. SRI used DBEDT survey data from the *2006 Visitor Satisfaction & Activity Report* to construct our estimate of golf trips. A “golf trip” is defined as a trip in which a Hawaii resident or non resident travels 50-plus miles to or within a state and plays golf while on this trip.¹³

According to DBEDT survey data, approximately 12.5 percent of air visitors and 4.2 percent of cruise ship visitors played one or more rounds of golf while on a trip to Hawaii in 2006. This translates into 945,857 golf trips. This figure (945,857 golf trips) seems plausible given the PGA of America’s estimate of 3.8 million rounds played in Hawaii in 2005. It suggests that approximately 24.8 percent of total rounds played on Hawaii courses were played by golfers from other parts of Hawaii or from out of the state. While this is high in comparison to other states, it is compatible with the significance of the tourism sector in the state. The average share of visitor rounds at Hawaii resorts and high end daily fee facilities is 51 percent.

Average spending per golf trip. SRI estimated that average spending per golf trip in Hawaii in 2007 was \$469 per air traveler and \$65 per cruise traveler. This includes spending on accommodation, food and beverage, local transportation, and so on. Greens fees, cart fees, golf club rentals, etc., are not included as they are already captured in the Golf Facility Operations revenues. To estimate average golf trip expenditure, we analyzed data from DBEDT’s *2007 Visitor Research Report* and Market Trends Pacific’s Hawaii golf visitor survey.¹⁴ According to DBEDT data, average trip spending per person was \$1,680 in 2007, and the average length of

¹³ It does not include those travelers who visit Hawaii to see professional golf events—Hawaii hosts seven major golf championships each year—because of a lack of golf tournament-specific data.

¹⁴ See Market Trends Pacific (2003). A Golf Research Presentation, November 2003, http://www.hawaii tourism authority.org/documents_upload_path/reports/HTARES-Report-11-01-2003.pdf This research was conducted for the Hawaii Tourism Authority and the Hawaii Visitors and Convention Bureau.

stay was 9.2 days. Average spending per person per day was \$183. Visitors who stayed in condos or timeshares spent less per person per day than visitors who stayed in hotels.

Golf is one of many activities in which people participate while on vacation or business in Hawaii. To calculate average traveler spending that can be attributed to golf, SRI assumed that two nights per trip are golf-motivated based on Market Trends Pacific's Hawaii golf visitor survey data. The survey found that the average golf visitor played four rounds of golf which equates (conservatively) to two visitor days. We also assumed that the average golf traveler will spend more on accommodation and food and beverage than the average visitor to Hawaii. Market Trends Pacific's survey of Hawaii golf visitors found that the median age of golf travelers was 50 years and the median income was over \$100,000. The study also found that 61 percent of golf visitors stayed in hotels, 29 percent in condos, and 10 percent in other forms of accommodation.

Therefore, to calculate average golf trip spending for visitors staying in hotels, SRI adjusted DBEDT average per person accommodation expenditure upwards to \$139.60 per person per night. This is a conservative estimate based on SRI's assumption of double occupancy and using the minimum average golf resort daily rates (\$278.49).¹⁵ We adjusted DBEDT average per person food and beverage (F&B) and local transportation expenditure data by a similar percentage leaving other traveler expenditure categories the same as DBEDT's. SRI's daily per person expenditure for golf travelers staying in hotels compared to average traveler expenditures was \$292 versus \$183. Multiplying by two, we get average golf trip expenditures of \$583.

To calculate average golf trip spending for visitors who stayed in condos, timeshares, etc., SRI adjusted DBEDT average per person accommodation expenditure downwards based on the ratio of average hotel-only traveler spending per day to condo-only traveler spending. We also adjusted F&B expenditure downwards by the same percentage. SRI's daily per person expenditure for golf travelers staying in condos compared to the overall average was \$146 versus \$183. Multiplying by two, we get average golf trip expenditures of \$291.

Assuming 61 percent of golf travelers stay in hotels and 39 percent stay in condos, SRI found overall average golf trip expenditures of \$469 for air travelers. Total golf trip expenditures for air travelers was \$441.4 million.

Cruise ship travelers spend significantly less than air travelers, since there is no accommodation expenditure in Hawaii. SRI calculated average golf trip expenditures for cruise ship passengers to be \$65. Total golf trip expenditures for cruise ship travelers was \$357,630. Summing golf trip expenditures for both air and cruise travelers, SRI found that golf-related tourism spending in Hawaii totaled \$441.7 million in 2007.

¹⁵ SRI found median average golf resort daily rates of \$376.59.

Hawaii's Golf-Related Travel Expenditures in 2007	
# of air traveler golf trips	940,355
Average travel \$ per trip (2 nights)	\$469.35
Total golf trip expenditures (air travelers)	\$441,355,619
# of cruise ship golf trips	5,502
Average travel \$ per trip (1 day)	\$65.00
Total golf trip expenditures (cruise travelers)	\$357,630
Total	\$441.7 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 occur as golf's direct impact creates ripple effects throughout the state economy.

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 Hawaii's golf economy.

Golf's Economic Impacts on Hawaii's Economy (2007)						
Industry	Direct	Indirect	Induced	TOTAL OUTPUT (\$ million)	TOTAL JOBS (\$ million)	TOTAL WAGE INCOME (\$ million)
Golf Facility Operations	\$299.4			\$575.9	7,638	\$198.6
Golf Course Capital Investment*	\$38.4			\$47.0	415	\$15.8
Golf-Related Supplies	\$19.1			\$37.6	442	\$12.0
Tournaments & Associations	\$26.6			\$52.7	960	\$21.5
Real Estate **	\$538.4			\$948.6	8,366	\$319.4
Hospitality/Tourism	\$441.7			\$865.9	12,365	\$286.8
TOTAL	\$1,363.6			\$2,527.7	30,187	\$854.0

Note: Totals may not sum due to rounding. Economic impact is calculated based on \$1,275.7 million of direct golf economy revenues. Portions of two industry segments included in direct economy calculations are excluded from economic impact estimation.

*Golf Course Capital Investments—only new course construction (\$23.1 million) is included for this category as other types of facility capital investment are typically financed through facility revenues and, therefore, are omitted to avoid double-counting.

**Real Estate—the golf premium associated with golf real estate is considered a transfer of assets rather than new economic activity, so only golf-related residential construction (\$465.8 million) is included.

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