Florida's Recreational Marine Industry — Economic Impact and Growth 1980 - 2005

Performed by

Thomas J. Murray & Associates, Inc.

for

Marine Industries Association of Florida, Inc.

November 2005

MARINE INDUSTRIES ASSOCIATION OF FLORIDA, INC.

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Executive Summary

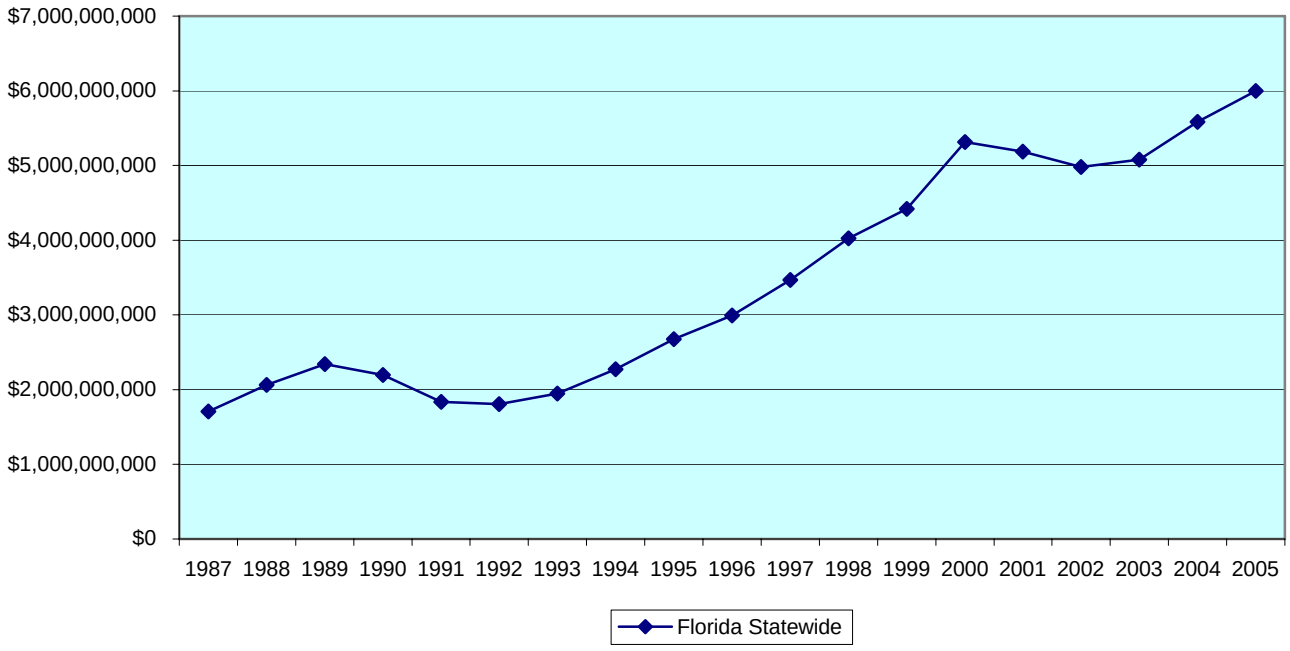
This study is an update of earlier efforts to quantify the economic significance of the recreational marine and boating industry in Florida. The report describes the trends in ownership and operation of recreational boats in Florida counties and estimates retail sales, employment, and industry output associated with the retail sale of new and used motorboats, supplies, and outboard motors by Florida's diverse marine industry.

The recreational boating industry continues to grow in Florida. Manufacturing, retailing, and service sectors comprising the industry have grown steadily with the State's resident and tourist population.

For the Fiscal Year 2005, gross retail sales of boat and motor products in Florida rose reached a record $5.9 Billion, increasing by 22% from $ 4.9 Billion statewide in 2000, at the time of the last economic impact assessment.

- During Fiscal Year 2005, Florida also took over the lead in registered recreational watercraft among boating states nationwide with 920,768 recreational boats registered. This compared to 791,410 during 2000 an increase of 129,358 (16.3%) watercraft over the four year period.
- In Fiscal Year 2005, the marine industry generated approximately $8.1 billion in direct output resulting in an estimated total economic impact in Florida of $ 18.4 billion in output, and over 220,000 related jobs.
- The marine industry of Florida contributes significantly more in terms of economic output to Florida's economy than both Florida's citrus and cruise ship industries combined.

Gross Sales $ (Kind code 28) State of Florida Fiscal Years 1987-2005



Introduction

The purpose of this study, performed on behalf of the Marine Industries Association of Florida, Inc. ("MIAF")[1] is to update previous assessments and estimate the current economic activity associated with Florida's recreational marine boating industry.

The analysis was undertaken utilizing secondary information obtained from previous economic studies relevant to Florida's recreational boating industry. The current estimates are based upon the same data and estimators detailed in the comprehensive study by McHugh and Murray in 1997[2] and updated in 2000. Additional information has been obtained from government entities, academic institutions and the boating-related industries. The report is limited in this sense. The published and unpublished data for the study were obtained from Federal, State and private sources and is considered by the authors to be the best available information.

Based upon the overall estimates of economic activity statewide, a general apportioning of the statewide impacts is provided to demonstrate recent trends, and the relative marine industry business activity in specified counties and multi-county regions of Florida.

It should be emphasized that to describe the recreational boating related industry comprehensively it is necessary to reconfigure government-associated data and report primary data for industry sectors, where it exists or has been published in the past. The impact analysis is based upon the best available information. However it is not as meaningful as would be possible with data collected with more appropriate industry definition. As has been demonstrated here and elsewhere while the boating sector is generally defined around "consumer" activity (boating), economic information gathered is classified by "accounts" or larger categories of economic

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[1] MIAF, Suite 302 7800 Red Road, Miami Florida, 33143. <www.boatflorida.org>

[2] "Florida's Recreational Marine Industry - Economic Impact and Growth 1980-1997" Dr. Richard J. McHugh in conjunction with Thomas J. Murray & Associates. October 1997. Tampa, Florida. Thomas. Murray, is a member of the faculty of the College William and Mary Graduate School of Marine Science at the Virginia Institute of Marine Science. Gloucester Point, Virginia.

activity. Given this dilemma and the sporadic collection of primary data chronicled herein, reliance upon the use of "indicators" of industry activity and trends in growth is necessitated.

Florida Recreational Marine Industry Overview – Relative Growth 1980-2005

Table 1 below depicts the growth in the marine recreation industry in three ways: the numbers of recreational motorboats registered in Florida by year; and, the corresponding level of retail sales associated with boats and related products[3] and the average gross expenditure per watercraft.

Florida's Marine Industries combined for retail sales of $5.996 billion in fiscal year 2005; an increase of $1.09 billion (22%) from the 2000 level. During 2005, 920,768 recreational boats were registered in Florida. During the most recent year Florida displaced Michigan as the top ranked state in terms of registered recreational watercraft. It also surpassed California which had been second in "numbered" watercraft. [4]

The first attempt to measure the economic impact of the recreational marine industry in Florida viewed the sector as it appeared in 1980. As discussed below the overall estimate of economic impact of the industry in that year was $1.5 billion. Since that time the level of retail sales, one measure of activity, has grown by $5.1 billion, an increase of 510% in nominal terms.

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[3] Florida Bureau of Titles and Registrations.

[4] Chapter 123 of Title 46, United States Code requires each undocumented vessel equipped with propulsion machinery to be numbered in the State in which it is principally operated. The law allows the States and other jurisdictions to create their own numbering systems as long as they meet or exceed Federal requirements. In accordance with CFR 174.123, prior to March 1 of each year, each State must prepare and submit Coast Guard Form CGHQ-3923, Report of Certificates of Number Issued to Boats, to the Coast Guard. State figures are derived from reports of the actual counts of valid boat numbers issued by States and other jurisdictions (Territories and D.C.) Their accuracy is affected primarily by the compliance of the boat owners with numbering and registration laws. Numbering estimates are derived from previous year figures for those few jurisdictions who are unable to provide the numbering data required in form CGHQ-3923.

TABLE 1 — Gross Sales $ (Kind code 28) and Florida Statewide Recreational Boats Fiscal Years 1987-2005			
Fiscal Year (July 1-June 30)	**Number Of Pleasure Boats**	**"Kind code 28 Sales" ($1000's)**	**Spending Per Boat**
FY 1987	614,189	$1,707,334	$2,780
FY 1988	644,807	2,061,574	3,197
FY 1989	670,710	2,341,171	3,490
FY 1990	687,132	2,197,632	3,198
FY 1991	685,075	1,836,060	2,680
FY 1992	683,780	1,806,958	2,642
FY 1993	677,581	1,949,473	2,877
FY 1994	695,722	2,271,511	3,265
FY 1995	713,413	2,675,597	3,750
FY 1996	731,991	2,993,554	4,090
FY 1997	755,278	3,466,868	4,590
FY 1998	769,527	4,024,659	5,230
FY 1999	791,410	4,417,948	5,582
FY 2000	823,870	4,905,062	5,953
FY 2001	839,679	4,988,970	5,941
FY 2002	857,762	4,977,133	5,504
FY 2003	886,664	5,077,760	5,512
FY 2004	915,777	5,583,016	6,021
FY 2005	920,768	5,996,265	6,512
% Change "1987-2005"	49.0%	251.0%	134.0%

Source: Kind Code 28 "Motorboat and Yacht Dealer" Gross Sales. FDOR Tax Research. Watercraft numbers.Fla. Bureau of Titles and Registrationand Florida Department of Highwayand Motor Vehicle Safety.. Florida Fiscal year runs from July 1 through June 30th. For example Fiscal year 2005 includes the period July1, 2004 through June 30, 2005.

While the long term growth of the industry and related sectors in Florida has been relatively constant there has not been a corresponding times-series analysis of the changing and deepening economic base. As is illustrated herein, there has existed no ongoing or contemporary coupling of available research components into an overall "Florida Marine Industry " sector. Indeed there has been only a series of

reports that have examined the "boating industry" by focusing upon specific sectors of the recreational boating industry typically including:

- Boat Manufacturing
- Boat Equipment Manufacturing
- Marinas and Boatyards
- Marine Trade
- Marine Services

Although completed at different times throughout the past 20 years, the expert studies have provided important credible indicators depicting the trends in recreational boating in Florida, and offer glimpses of an industry which has consistently expanded by any measurement such as employment, output, earnings and spending.

TABLE 2 — **Numbers of Recreational Watercraft Registered In Florida's Leading Marine Industry Counties 1993-2005**				
County	**2004-2005**	**1995-1996**	**1993-1994**	**% Change 1993-2005**
Broward	43,168	40,906	41,252	4.6
Dade	48,566	49,252	45,243	7.3
Pinellas	47,446	44,028	41,955	13.1
Palm Beach	37,579	31,947	30,405	23.6
Martin	14,669	13,299	12,158	20.6
Lee	44,138	32,447	30,443	44.9
Manatee	17,437	14,775	13,278	31.3
Hillsborough	40,638	36,062	35,412	14.7
Duval	29,297	28,473	27,536	6.3
Monroe	23,820	18,106	16,965	40.4
Top Ten Counties	346,758	309,295	294,647	17.7
All Other Counties	574,010	422,696	401,075	43.1
Florida Total	920,768	731,991	695,722	32.3
Source: Fla. Bureau of Titles and Registrations Florida Department of Highways and Motor Vehicle Safety.				

TABLE 3: **U.S. and Florida Retail Sales of Boats, Outboard Motors, Boat Trailers, Marine Accessories ($1,000's)**				
U.S.	**1980**	**1985**	**1995**	**2004**
Boats	$1,933,780	$3,742,569,	$4,534,890,	$10,754,000
Outboard motors	544,400,	1,293,828,	1,793,260,	2,879,000
Boat trailers	96,448,	146,800,	195,559,	228,000
Accessories	591,900,	818,265,	1,180,680,	2,421,000
Total	$3,166,528,	$6,001,462,	$7,704,389,	$16,282,000
Florida	**1980**	**1985**	**1995**	**2004**
Boats	$240,949	$543,916	$685,152	$1,248,251
Outboard motors	51,228	115,885	233,984	529,438
Boat trailers	6,857	12,919	17,209	30,795
Accessories	34,804	47,296	75,114,	305,399
Total	333,838	720,016	1,011,459,	2,113,883
Florida as % U.S.	10.5%	11.9%	13.1%	12.9%
Source: National Marine Manufacturer's Association. (13)				

TABLE 4 — **Recent Trends In Boat Related Sales ($) For Top Ten Counties Fiscal Years 1996-2000-2005**				
County	**2005 $**	**2000 $**	**1996 $**	**% Growth FY 1996-FY 2005**
Broward	$1,724,955,430	$1,412,200,000	$848,422,518	103%
Pinellas	477,785,167	370,970,000	220,408,673	117%
Dade	436,961,747	351,700,000	302,499,767	44%
Palm Beach	574,401,432	335,930,000	186,416,572	208%
Manatee	231,071,580	255,530,000	135,805,561	70%
Lee	266,666,149	240,190,000	118,427,734	125%
Martin	299,395,934	180,820,000	128,202,318	133%
Hillsborough	243,619,036	169,970,000	130,706,626	86%
Monroe	163,351,044	147,390,000	87,255,589	87%
Collier	173,699,462	109,440,000	67,050,781	159%
Top Ten Counties	4,591,906,981	3,586,760,000	2,250,160,145	104%
All other Counties	1,404,358,228	1,318,302,253	743,393,409	89%
Florida Total	$5,996,265,209	$4,905,062,253	$2,993,553,554	100%

Source: Kind code 28 "Motorboat and Yacht Dealer" Gross Sales. Fla. Dept. of Revenue Tax. Florida Fiscal year runs from July 1 through June 30th. For example Fiscal year 2005 includes the period July1, 2004 through June 30, 2005.

Economic Impact Analysis

Because of the interrelationships among the many sectors of an economy, any new or induced basic economic activity will generate additional waves of economic impact. For example, the manufacturing of any product will generate additional activity among the suppliers of inputs as well as among the shippers of these goods, the warehouses and the retailers. The impact of the rental of a room at a hotel will generate activity not only for the hotel, but also indirectly generate economic activity for cleaners, suppliers, accountants and programmers whose activity supports the operation of the hotel. In an analogous way, the activities of recreational boaters will generate multiple rounds of economic activity.

Economic impact analysis is an attempt to provide an estimate of the total impact of any economy activity in any region, including the primary economic impact but also these secondary and tertiary impacts.

To perform the impact analysis, one initially needs information on the level of primary, or "basic" economic activity from which an attempt is made to estimate the total impact. For example, measuring the total impact of manufacturing requires an estimate of the volume of the production of new manufactured goods.

Secondly, information is needed on the interrelationships among the sectors of the regional economy in order to estimate the value of the inter-industry "multipliers." These multipliers can be obtained using a standard input-output model described below, of which there are a number available. These models show the impact across the spectrum of industries of some change or basic activity and it allows one to sum the impacts across industries to arrive at an aggregate impact.

The Standard Input-Output Model

Impact analysis begins with introducing a change in the output of goods and using the multiplier model to analyze the effects on a region's economic base. The standard input-output model estimates the direct, indirect, and induced economic

implications of some basic economic activity. The secondary effects (the indirect and induced impacts), along with the basic economic activity estimates, provide an estimate of the "multiplier" effects from the basic activity (direct impact).

In the standard input-output model, measures of aggregate economic activity are used as a basis for estimating the total economic impact of the activity. For example, measures of direct employment or total sales in an industry are obtained, and these are then used as a basis for evaluating the total impact. In the case of Marine Industry studies to-date, typically estimates of the retail sales by "motorboat and yacht" category (Revenue Kind code 28) were obtained and used as the base measure of the "direct impact" of the industry

Given this partial measure of the direct contribution of the industry, an estimate is made of the indirect impacts using information on the interactions between this industry and other sectors which are dependent upon the boat related industry. For example, suppliers of materials into the boat manufacturing process are also dependent upon the sale of boats in the specific revenue sector. These impacts are referred to as the "indirect impacts."

Finally, the activity and its indirect impacts will generate some increases in the general level of employment and income in the study area. The extra income generated in this way will lead to a tertiary level of economic impact through the higher level of household expenditures on goods and services, much of which, again, will be spent within the study area. These effects are referred to as the "induced impacts" of the industry.

First, some studies of these impacts use information from the Department of Commerce's RIMS-II inter-industry impacts models (Regional Inter-industry Model - Version II). This model uses a combination of direct survey data obtained through national surveys of inter-industry interaction and then, employing a number of reasonable assumptions (based upon the structure or employment structure of industries in the state or region), "shares down" these inter-industry relationships to the local or regional level.

From these hypothetical regional inter-industry relationships, output, income and employment multipliers are estimated. An alternative approach to estimating these multipliers is to perform detailed surveys of individual firms in each region to directly assess the extent of the inter-region, inter-industry interaction in estimating the appropriate multipliers. This approach was used in the analysis of the impact of recreational boating in Florida in "Economic Impact of the Marine Recreational Boating on the Florida Economy" (Milon. Et. Al ,1983)(1). This approach can be time-consuming and costly.

To summarize, in addition to direct final demand impacts, two other types of impacts are estimated: (1) indirect impacts, which measure the change in output production in supporting supply industries caused by the changing input needs of directly effected industries, and (2) induced impacts, which measure the change in regional household expenditure patterns caused by changes in household income. These impacts are really what introduce the concept of multipliers that are in turn subdivided into two types: Type I and Type II multipliers. Type I multipliers measure the direct and indirect effects per dollar of direct effects, i.e.,

Type I Multipliers = Direct + Indirect/Direct

Type I multipliers sum the results of several rounds of expenditures until through "leaks" in the economy, no further expenditures occur. Type II multipliers on the other hand, measure the overall effects including the induced impacts per dollar of direct effects, i.e.,

Type II Multipliers = Direct + Indirect + Induced/Direct

Type I and Type II multipliers can be expressed in terms of an array of economic indicators such as gross sales, gross industrial output, income, value-added, and employment.[5]

[5] The difference between gross output and gross sales is that output refers to producer's prices of goods and services, while gross sales refer to consumer prices. Gross output prevents the double counting of products and services by using margins for trade, transportation and insurance and thus yields the actual level of economic production in the region. Gross sales in some instances provides a good indicator of the volume of activity

An ongoing issue in the professional literature on economic impact and input-output analysis is the true value of the costly "survey approach" estimates relative to the "non-survey" approach. In an update of that study (Milon and Adams, 1987), the authors conclude, "These results suggest that detailed survey methods such as those employed in the original Milon et. al. (1983) study of the Florida recreational boating industry add limited additional information in relation to the extra time and cost required (italics added)." Thus, in terms of simple analysis of the aggregate impacts of activity on the regional economy, "off-the-shelf" estimates of the multiplier can suffice.

To summarize, while the previous studies outlined above are the most significant in terms of the evaluation of the recreational boating industry statewide, other publications have investigated portions of the overall marine industry and provide glimpses and benchmarks of marine industry activity.

While there were inconsistencies among the various economic assessments in terms of estimation techniques, similarities do exist between these major Florida studies in terms of the approach of viewing the "Marine industries" as comprised of five major sectors, as depicted in Table 5 below. Additionally other sector studies completed over the years add additional chronological quantifications to the acknowledged continual growth in Florida's marine recreational economy.

TABLE 5: **Estimates of Economic Impact of Florida's Marine Industries in Direct, Indirect, and Total Output 1980-1997**				
Marine Sector	**Florida Sea Grant '80**	**Florida Sea Grant '85**	**Laventhol & Horwath '85**	**MIAF '97 Estimates**
Boat & Trailer Mfg.	$852,645,497	$1,687,693,584	$1,680,273,000	$4,973,608,000
Boat Equipment Mfg.	88,414,602	121,621,227	555,685,000	1,589,259,000
Marinas & Boatyards	239,837,978	395,733,344	452,357,000	1,293,741,020
Marine Trade	277,430,377	457,758,681	776,678,000	2,221,299,000
Marine Services	18,884,656	37,769,100	38,009,000	112,506,640
Total Industry	$1,477,213,110	$2,700,575,936	$3,503,002,000	$10,190,413,600

Economic Impact Estimation-2005

When integrating the multiplier approaches developed over the years with the trend in economic activity in Florida detailed above, the estimate of overall economic activity as measured by total direct and indirect industry output is $18.44 billion during 2005.

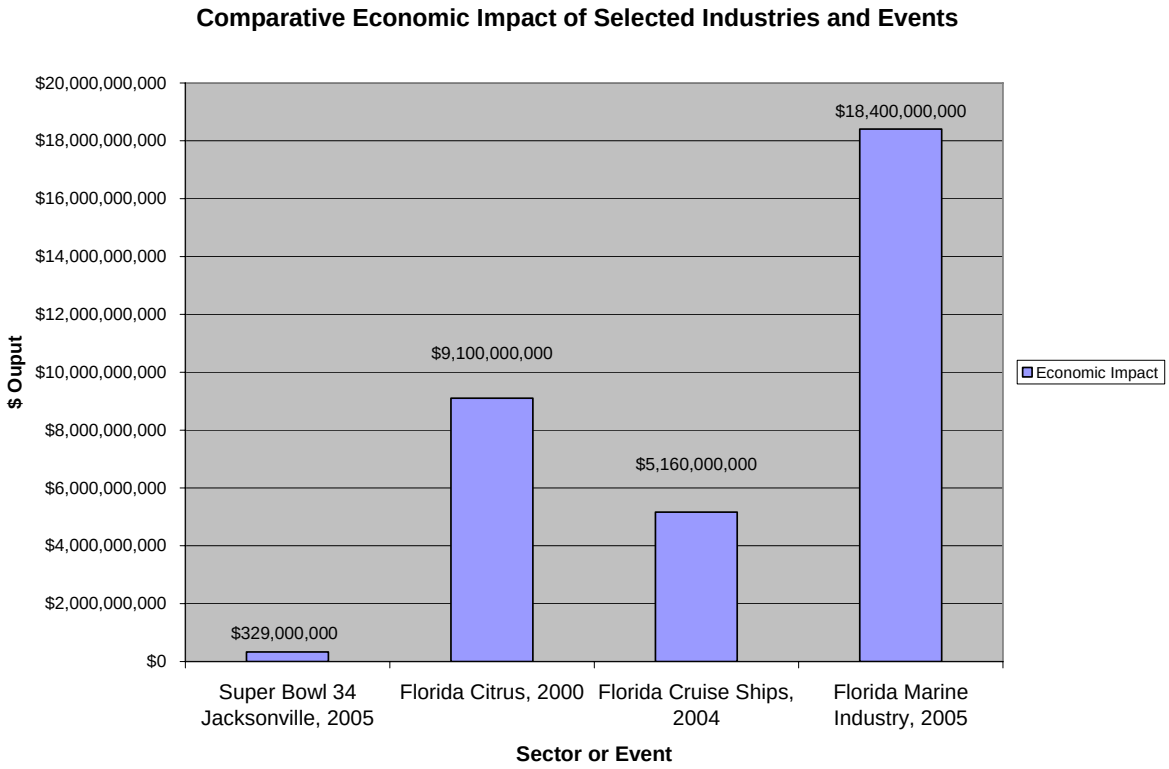
TABLE 6: **Summary of Estimated Economic Impact of Marine Industry in Direct, Indirect and Total Output ($1,000's) Florida 2005**			
Sector	**Direct Output**	**Indirect Output $**	**Total Output $**
Manufacturing	$1,770,525,184	$1,180,571,533	2,951,096,717
Wholesale Trade	$1,849,425,315	$1,285,480,835	3,134,906,150
Retail trade	$3,617,814,543	$3,209,000,379	6,826,814,922
Dockage	$1,306,058,948	$907,710,969	2,213,769,916
Marine Services	$1,959,179,590	$1,361,632,876	3,320,812,466
Total	$10,503,003,579	$7,944,396,592	$18,447,400,171

Relative Economic Impact

Many industries and events complete economic impact estimates in order to describe their respective contributions to local and regional economies as well as the overall level of economic activity. Furthermore, such estimates often are useful in describing the relative economic contributions of competitive industries, events or regions to overall economic activity.

For the sake of benchmarking the current estimate of Florida Marine Industries economic impact provided here, a comparative graph is provided below which ranks the marine industry relative to other major industries in Florida; i.e. citrus and cruise ships. Additionally comparisons with world class events such as super bowls are also useful in demonstrating the scale of contributions among sectors. The studies from which the total impact measures shown below were derived were completed using accepted standard economic impact theory and the use of standard input-output modeling. Note should be taken of the dates of the studies which, due

to available research, were not all completed simultaneously. However, they are useful in demonstrating reasonable comparisons of the overall levels of economic impact between visible industries. [6] In summary, based upon these estimates the marine industry of Florida contributes significantly more in terms of economic output to Florida's economy than both the citrus and cruise ship industry combined.



[6] The economic impact estimates respectively were produced by: Florida Citrus, University of Florida Food & Resource Economics Department; Florida Cruise Ship Industry, International Council of Cruise Ship Lines (ICCL);," Super Bowl 34 Jacksonville, 2005" prediction by NFL.

Employment Impact Estimates

Given the method of projected estimated industry output from a historical base, employment associated or necessary to produce the total output is somewhat more uncertain. For example the employment estimates associated with an impact study in Broward County may not be completely analogous to the employment impacts arising from marine industry in other less concentrated industry regions.

The total employment estimates summarized in Table 7 were arrived at by dividing the 2005 total output estimates for the State (adjusted for inflation using the U.S. Bureau of Labor Statistics Producers Price Index PPI) by the 1985 output per employee ratio from the average of the two 1985 studies: University of Florida Sea Grant ($54,477) (2) and Laventhol and Horwath ($82,916) (4); and Ernst Young ($32,741) (5) by the PPI adjustment from the 1997 base (July 1997). The three direct employment estimates were then averaged to provide the estimation herein. One need only review the 1985 studies to understand the variability in such estimations without duplicate data collection bases. The averaging is done because of the significant differences concluded by the three studies. Using the 1985 estimates further assumes no change in labor productivity between 1985 and 2005.

TABLE 7: **Summary of Employment Estimates from Primary Studies in Florida and 2005 Update Estimates**

Total Employment	MIAF Estimate 2005	MIAF Estimate 2000	Florida Sea Grant 1985	Laventhol & Horwath 1985
Boat & Trailer Mfg.	66,700	54,500	11,903	15,760
Boat Equipment Mfg.	32,700	26,300	1,916	5,210
Marinas & Boatyards	29,300	24,300	4,298	4,580
Marine Trade	90,200	72,500	4,340	13,400
Marine Services	1,800	1,450	768	350
Total Industry	220,700	181,050	23,225[7]	39,300

[7] The study only estimated "direct employment", when including the indirect and induced employments, as in the original 1980 study, total employment would equal an estimated 46,123.

Economic Activity Associated with Florida's Primary Marine Industry Regions

At the request of the MIAF, the overall impact estimates developed above are divided in the following analysis based upon individual counties or regions of counties as identified by the MIAF as logical marine industry regions for analysis. The attempt to partition the overall State estimates is completed solely for the purposes of demonstration of the more local marine industry trends.

As has been noted elsewhere, primary data collection is necessary to properly characterize any economic sub-region for use in impact analysis. Since such data collection is well beyond the scope of this report, general estimates of regional shares of the State's marine industry economic impact must suffice.

Marine Industry "Location Quotients" for Marine Industry Regions

The discussion above outlined some of the basic tenets of economic base theory. Working with the theory in a practical application necessitates that the industries of a given region (Florida) be divided between those producing for a market outside the region (exports) and those producing for local markets. The problem with further allocating the economic impact of the marine industry in Florida is determining, for example, how much of the marine industry output in, for example, Monroe County is for export (bringing in "new dollars"); and, how much is for local ("residentiary") spending. Any method used to do this without primary data collection will involve a degree of arbitrariness. One method has been developed in regional economic impact analysis to permit some inference into "export base" activity and it involves the development of "location quotients" (LQ).

The LQ compares the concentration of particular industries in a study region, (for example Monroe County) relative to some other region, in this case Florida. Hence, Florida is the "benchmark economy."

Traditionally, to derive the LQ for a given industry the investigator must have data on employment in that industry and in the total area economy, for both the benchmark and the studied economy. The LQ is obtained by dividing the percentage of total subject economy employment (in this case marine industry)

accounted for by the given industry, into the percentage of total employment that industry accounts for in the "benchmark." The LQs basically tell you what relative differences exist between industry specialization in the studied region and the benchmark economy. Because Florida Department of Labor and Employment Security's employment data (ES202 data) is not currently available for each county at the 4-digit SIC level, in order to specify employment by boating-related trade sectors, Florida Department of Revenue Kind code 28 data (on boat related retail sales) will be used as a general proxy to estimate the marine industry LQ.

For the purpose herein, an LQ will be defined as the percentage of marine-related retail sales (Kind code 28 Sales) in an industry region, relative to the total marine-related retail sales statewide ($5,996,265,000), minus Broward and Palm Beach County Kind code 28 Sales ($1,724,955,430 and $574,401,432 respectively = $3,696,908,138).[8] The LQ will provide a broad guide for dividing the statewide marine industry impacts into the relative share of the MIAF defined region.

[8] Broward County's economic impact estimates are based upon a recently completed 2005 update of a 1994 study (5) which involved extensive primary surveys of the marine industry in that county. As such, it is considered to be the best available estimate of the economic impact of the industry in the single county region. Similarly, Palm Beach County's estimates are also based upon a recent study completed in 2005 which included primary surveys and data collection in addition to trends analysis. (GEC 20)

Economic Impact Estimates by County and Region 2005

The marine industry regions are defined below:

Region [9]	Counties
1. Suncoast	Manatee & Sarasota
2. Collier	Collier
3. Tampa Bay	Pasco, Pinellas, Hillsborough, Hernando, Citrus
4. N.W. Florida	Escambia, Santa Rosa, Okaloosa, Walton, Bay
5. Big Bend	Gulf, Franklin, Wakulla, Jefferson, Taylor, Dixie, Levy
6. N. W. Fla.	Nassau, Duval, St. Johns, Flagler, Clay
7. Central Atlantic	Volusia, Brevard
8. Treasure Coast	Indian River, St. Lucie, Martin
9. Central Florida	Orange, Seminole, Lake, Polk, Osceola
10. Palm Beach	Palm Beach
11. Broward	Broward
12. Dade	Dade
13. Monroe	Monroe
14. S.W. Fla.	Charlotte, Lee

The following table summarizes the relative contribution of individual counties toward the overall economic impact in each region and the State. The economic impact estimates are derived from the level of retail sales reported in each county and expanded using output multipliers developed in the previous studies discussed above.

[9] Not all counties are included in the marine industry regional breakdown but they include both additional boat registration and boat-related economic activity. They have not been included because the attempt herein is solely to characterize the major marine industry regions. In counties where fewer than 3 firms reported sales to FDOR disclosure requirements require those sales to be added into the "other" category which is included in the state-wide sales tax data.

TABLE 8: "Trends in Economic Activity and Watercraft Registrations for Florida Counties and Marine Industry Regions - 1993-2005"					
Region 1	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Manatee	231,071,000	255,530,000	87,810,871	17,437	16,564
Sarasota	117,318,658	102,200,000	47,892,060	21,649	18,756
Region Total	348,389,658	357,730,000	135,702,931	39,086	35,320
Total Output	533,036,177	547,326,900	N/A	N/A	
Total Employment	7,080	7,270	N/A	N/A	
Region 2	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Collier	173,699,462	109,440,000	50,994,186	20,637	17,886
Region Total		N/A	N/A	N/A	
Total Output	265,760,177	167,443,200	NA	NA	
Total Employment	3,530	2,224	NA	NA	
Region 3	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Citrus	19,857,908	18,562,539	7,744,731	14,749	12,483
Hernando	3,347,576	1,517,897	2,017,940	8,276	6,427
Hillsborough	243,619,036	169,970,000	80,082,492	40,638	37,031
Pasco	41,599,309	23,843,624	10,570,554	22,071	18,560
Pinellas	477,785,167	370,970,000	187,631,617	47,446	50,030
Region Total	786,208,996	584,864,060	288,047,334	133,180	124,531
Total Output	1,202,899,764	894,842,012	NA	NA	
Total Employment	15,979	11,887	NA	NA	

Region 4	$ 2004-2005	$ 1999-2000	$ 1993-1994	# Boats 2005	# Boats 2000
Bay	97,205,001	111,730,000	13,790,159	16,993	16,106
Escambia	47,311,882	46,196,567	35,807,872	15,135	16,607
Okaloosa	162,069,610	55,166,155	37,367,059	16,989	15,932
Santa Rosa	13,082,017	11,168,116	3,812,936	11,939	9,953
Walton	2,226,815	1,605,405	2,707,734	4,439	3,350
Region Total	321,895,325	225,866,243	93,485,760	65,495	61,948
Total Output	492,499,848	345,575,352	NA	NA	
Total Employment	6,541	4,590	NA	NA	

Region 5	$ 2004-2005	$ 1999-2000	$ 1993-1994	# Boats 2005	# Boats 2000
Dixie	N/A	310,247	3,208,837	2,163	1,822
Franklin	1,042,259	2,548,345	1,069,904	2,207	1,836
Gulf	N/A	1,432,701	158,006	2,547	2,320
Jefferson	N/A	0	0	1,034	753
Levy	N/A	1,483,856	291,974	3,339	2,976
Taylor	2,124,952	23,408,085	5,996,450	3,297	3,001
Wakulla	11,411,718	6,412,861	3,576,052	3,754	3,650
Region Total	14,578,929	35,596,095	14,301,223	18,341	16,358
Total Output	22,305,761	54,462,025	NA	NA	
Total Employment	296	723	NA	NA	

Region 6	$ 2004-2005	$ 1999-2000	$ 1993-1994	# Boats 2005	# Boats 2000
Clay	39,898,415	31,003,841	15,127,255	11,193	9,232
Duval	139,498,069	122,060,000	67,456,337	29,297	29,765
Flagler[2]	877,567	145,410,000	976,138	4,178	3,278
Nassau	5,120,585	2,330,853	2,088,623	4,931	3,892
St. Johns	33,770,502	44,337,194	11,734,471	10,602	8,102
Region Total	219,165,138	345,141,888	97,382,824	60,201	54,269
Total Output	335,322,661	528,067,089	NA	NA	
Total Employment	4,455	7,015	NA	NA	
Region 7	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Brevard	143,091,696	109,100,000	27,851,675	34,234	30,105
Volusia	55,133,332	55,916,824	25,359,854	25,837	22,175
Region Total	198,225,028	165,016,824	53,211,529	60,071	52,280
Total Output	303,284,293	252,475,741	NA	NA	
Total Employment	4,028	3,353	NA	NA	
Region 8	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Indian river	16,035,645	17,874,492	12,749,633	9,449	9,002
Martin	299,395,934	180,820,000	120,805,180	14,669	14,469
St. Lucie	62,346,149	45,688,830	26,997,782	11,592	10,165
Region Total	377,777,728	244,383,322	160,552,595	35,710	33,636
Total Output	577,999,924	373,906,483	NA	NA	
Total Employment	7,678	4,967	NA	NA	

Region 9	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Orange	88,445,220	80,672,319	42,107,032	29,807	30,680
Seminole	24,344,230	33,878,323	20,332,169	17,080	18,022
Lake	29,745,863	17,666,889	13,272,743	19,570	17,706
Polk	22,606,372	22,238,109	13,939,616	27,701	25,921
Osceola	951,703	1,898,150	818,446	7,977	6,868
Region Total	166,093,388	156,353,790	90,470,006	102,135	99,197
Total Output	329,477,616	310,157,283	NA	NA	
Total Employment	3,376	3,178	NA	NA	
Region 10	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Palm Beach	574,401,432	335,930,000	144,632,551	37,579	33,855
Region Total	574,401,432	N/A	N/A	N/A	
Total Output	1,890,970,000[10]	513,972,900	NA	NA	
Total Employment	18,228	6,827	NA	NA	
Region 11	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Broward	1,724,955,430	1,412,200,000	682,772,325	43,168	42,455
Region Total	1,724,955,430	N/A	N/A	N/A	
Total Output	10,750,945,340	8,801,668,000	NA	NA	
Total Employment	134,141	109,820	NA	NA	

Region 12	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Dade	436,961,747	351,700,000	242,669,760	48,556	50,811
Region Total	436,961,747	N/A	N/A	N/A	
Total Output	932,727,587	750,730,000	NA	NA	
Total Employment	9,442	7,600	9,788	NA	
Region 13	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Monroe	$163,351,044	147,390,000	59,840,175	23,820	21,336
Region Total	$163,351,044	N/A	N/A	N/A	
Total Output	$249,927,097	225,506,700	NA	NA	
Total Employment	3,319	2,995	NA	NA	
Region 14	**$ 2004-2005**	**$ 1999-2000**	**$ 1993-1994**	**# Boats 2005**	**# Boats 2000**
Charlotte	$99,506,352	75,402,478	20,784,323	18,756	17,068
Lee	$266,666,149	240,190,000	97,343,154	44,138	35,465
Region Total	$366,172,501	315,592,478	118,127,477	62,894	52,533
Total Output	$560,243,926	482,856,491	NA	NA	
Total Employment	7,441	6,413	NA	NA	

Glossary of Terms:

Industry Classifications:

Dockage – including services of boatyards, yacht clubs, marinas.

Manufacturing – firms engaged in the production of boats including boats, marine supplies, yachts, sails, other marine-related products.

Wholesale – distribution firms selling boats, marine supplies and other related products at the wholesale level.

Retail – includes sales by firms selling boats, boat parts, fuel/oil suppliers, engines, boat rentals, construction materials, marine electronics, supplies and accessories, ship liquidators, inflatables, etc.

Services – comprised of businesses including such services as boat repair, hauling, delivery, signage, towing, naval architects, yacht brokerage, yacht maintenance, yacht management, marine interior design, marine surveyors, crew placement, etc.

Economic Impact Definitions:

Impact multiplier: a measure of the direct and indirect impacts resulting from purchases of raw materials and labor due to changes in final demand for a sector's products. In general the greater a sector's dependence upon other state industries for raw materials and services, the larger the impact multiplier.

Indirect impacts are created through the sale of materials and services to the industry by other state industries.

Induced impacts arise from the spending by employees in a primary (direct) or support (indirect) industry. The employee spending takes place throughout the state economy through retail purchases, financing, and sales of added goods and services.

Total economic activity for a sector is the sum of total output and the output generated in other sectors of the state economy due to the indirect and induced impacts explained above.

Total employment is the sum of direct, indirect and induced employment. It is expressed in "full-time employment'" (FTE). An FTE could be made up of, for example, 12 people working one month each.

Total income is the sum of direct income earned by employees in each sector and the income generated in other sectors due to indirect and induced effects.

Total output for a sector is the sum of in-state sales and exports. This is measured in terms of dollar value of each sector's sales to final demand.

Value added provides a measure of the wages, interest, rent, and profit earned by employees and owners of firms within each sector.

Literature Cited and Other Literature Reviewed

1. "Economic Impact of Marine Recreational Boating on the Florida Economy 1980." J. Walter Milon and David Mulkey. Florida Sea Grant SGR-54. March, 1983.

2. "The Economic Impact of Florida's Recreational Boating Industry in 1985." J. Walter Milon and Chuck Adams. Florida Sea Grant Technical Paper 50. April, 1987.

3. "Financial Structure and Performance of Florida's Recreational Marinas and Boatyards." J. Walter Milon, et. al. Florida Sea Grant SGR-53. March, 1983.

4. "Economic Impact of the Recreational Marine Industry in Florida." Laventhol & Horwath, Certified Public Accountants, Coral Gables, Florida. March, 1987

5. "Economic Impact of the Recreational Marine Industry: Broward County, Florida June 1995." Ernst & Young LLP. Broward Economic Development Council, Inc. June, 1995.

6. "Florida's Recreational Marine Industry-Economic Impact and Growth 1980-1997" Thomas J. Murray & Associates, Inc.

7. "Economic Impact of the Recreational Marine Industry Broward, Dade and Palm Beach Counties, Florida-2005" Thomas J. Murray & Associates, Inc. 2005. In preparation.

8. "Vessels Registered In Florida." Annual Summaries. 1987-1999. Bureau of Vessel Titles and Registrations. Florida Department of Highway Safety and Motor Vehicles, Division of Motor Vehicles. Tallahassee, Florida.

9. "Florida Sales Tax Return Data" Validated Tax Receipts Data for Fiscal Years 1987-2005 For Kind code 28, Motorboat and Yacht Dealers. Florida Department of Revenue. Tallahassee, Florida.

10. "Annual Summary ES 202 Reports." Florida Department of Labor and Employment Security, Division of Employment Security, Bureau of Research and Analysis. 1980-1995.

11. "2004 Recreational Boating Statistical Abstract" National Marine Manufacturers Association. Chicago, Illinois .

12. "Economic Impacts Of Marine Industries in Palm Beach County". Gulf Engineers & Consultants. Baton Rouge, Louisiana. 2005.