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# LOUISIANA'S BOATING SECTOR

## An Overview of the Industry



Walter R. Keithly  
Andrea Wagner Liebzeit  
Michael Liffmann

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Walter R. Keithly  
Andrea Wagner Liebzeit  
Michael Liffmann

Coastal Fisheries Institute  
and  
Louisiana Sea Grant College Program  
Center for Wetland Resources  
Louisiana State University  
Baton Rouge, LA 70803-7503

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## ABSTRACT

This report examines the Louisiana boating sector through the use of secondary data detailing several facets of the industry. Aspects covered in the document include boat building and repairing, boat dealing and retailing, state registered boats and Coast Guard documented vessels. The Louisiana boating sector is also related to comparable sectors in other Gulf states and at the national level. Finally, while not discussed in great detail, statistics pertaining to the Louisiana ship building and repair industry are presented in Appendix A.

## INTRODUCTION

With Louisiana's abundant water resources, it is little wonder that recreational and commercial boating activities are so prevalent in the state. These activities are highly dependent on the services provided by Louisiana's sizable boating industry. From manufacturing to retailing and repairing, the boating industry of Louisiana provides services to recreational boaters that allow them to enjoy their leisure time and uncommitted income. The boating industry also provides services for commercial interests that enable business operations to be conducted in an efficient and timely manner.

Although the boating industry has historically provided important services to both commercial and recreational interests in the state, little descriptive or analytical research has been conducted to describe or evaluate performance in this industry and the services it provides. Hence, the overall objective of this report is to provide a basic profile of the boating sector based on available secondary data. Where the data permit, this report examines the following aspects of the Louisiana boating sector: (1) boat building and repair, including number of establishments and employment characteristics; (2) boat dealing and retailing, including number of establishments and employment characteristics; and (3) state-registered boats and Coast Guard documented vessels, including their numbers and the distribution and characteristics of state-registered boats. Finally, statistics pertaining to different segments of the Louisiana boating sector are compared to similar statistics from the Gulf region or national level or both.

Under the classification used by the Bureau of the Census, boat building and repairing (b & r) establishments (Standard Industrial Classification [SIC] 3732) are defined as those establishments primarily engaged in building and repairing all types of boats, including:

- boat kits, wooden (not a model)
- boats, fiberglass (b & r)
- boats: motorboats, sailboats, rowboats, and canoes (b & r)
- boats, rigid: plastic
- canoes (b & r)
- dinghies (b & r)
- dories (b & r)
- fishery boats, small: lobster boats, crab boats, oyster boats, etc.
- houseboats (b & r)
- hydrofoil boats
- kayaks (b & r)
- life rafts, except inflatable (rubber & plastic)
- life boats (b & r)
- motorboats, inboard and outboard (b & r)
- pontoons, except aircraft and inflatable (rubber and plastic)
- skiffs (b & r)
- tenders (small motor craft) (b & r)

In addition to the boat building and repair industry (SIC 3732), Louisiana has a very large ship building and repair industry (SIC 3731) that

specializes in vessels used by the oil and marine transportation industries, inland waterway towing, offshore fishing industries, national defense, etc. While discussion pertaining to the ship building and repair industry is very limited in this paper, Appendix A provides some basic information on this important industry.

Boats using Louisiana's inland and coastal waters can be divided into three categories: (1) boats that are neither documented by the U.S. Coast Guard nor state registered, (2) boats that are Coast Guard documented, and (3) boats that are state-registered. Boats not documented by the Coast Guard nor registered with the state are typically small boats without motors, such as canoes, kayaks, etc.<sup>1</sup> Coast Guard documented boats are generally larger (at least five net tons) and used for commercial purposes, although some large pleasure craft are also Coast Guard documented (see Appendix B for requirements and eligibility for Coast Guard documentation). Motorized boats that weigh less than five net tons and are used in Louisiana waters for commercial or recreational purposes are generally required to be registered with the state (see Sea Grant Legal Program [1985] for requirements for state registration).

This paper focuses on state-registered boats rather than Coast Guard documented boats or nonmotorized boats for two reasons. First, most of the commercial fishing activity and recreational fishing from boats (in terms of number of participants) probably involves state-registered boats rather than Coast Guard documented or nonmotorized boats. Second, most information pertaining to boat usage in Louisiana is specific to state-registered boats.

#### THE LOUISIANA BOAT BUILDING AND REPAIR INDUSTRY, 1965-83

This section reviews the Louisiana boat building and repair industry, as defined by SIC 3732.

#### Establishments

The reported number of Louisiana establishments primarily engaged in boat building and repair (SIC 3732) gradually increased during 1965-83 (Table 1). The number of establishments in Louisiana, which averaged just over 70 during 1965-68, increased approximately 20% to an average of 85 during 1980-83 (Table 1). The 1984 data on number of Louisiana establishments and associated employment payroll, which recently became available, does show a sharp reduction in number of Louisiana establishments. This data is included in this report as an addendum.

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<sup>1</sup>Also included in this category would be some larger boats without Coast Guard documentation (see Appendix B) and boats which legally require state registration but have not been registered.



Table 1. Annual number of establishments, yearly employment, and employment per establishment in the boat building and repair industry (SIC 3732) of Louisiana and the United States, 1965-83.<sup>a</sup>

Year	Number of <sup>b</sup> Establishments		Yearly Employment <sup>c</sup>		Employment per Establishment	
	La.	U.S.	La.	U.S.	La.	U.S.
1965	64	1,457	d	31,762	d	21.8
1966	73	1,483	d	35,922	d	24.2
1967	79	1,488	2,010	37,532	25.4	25.2
1968	68	1,434	1,823	36,202	26.8	25.2
1969	63	1,485	1,722	42,502	27.3	28.6
1970	68	1,499	1,988	39,866	29.2	26.6
1971	65	1,464	1,730	34,855	26.6	23.8
1972	64	1,456	2,062	42,216	32.2	29.0
1973	66	1,526	2,453	51,413	37.2	33.7
1974	70	1,544	2,478	41,178	35.4	26.7
1975	75	1,586	2,239	36,342	29.8	22.9
1976	82	1,655	2,282	43,409	27.8	26.2
1977	85	1,834	2,303	49,499	27.1	27.0
1978	87	1,835	2,571	53,270	29.6	29.0
1979	80	1,781	2,619	56,051	32.7	31.5
1980	81	1,648	2,479	45,902	30.6	27.9
1981	82	1,569	2,850	43,733	34.8	27.9
1982	85	1,634	2,956	40,713	34.8	24.9
1983	93	1,815	2,315	38,623	24.9	21.3

<sup>a</sup>See Appendix C for a description of data, reliability of data, and collection techniques.

<sup>b</sup>Prior to 1975 nonmanufacturing establishments were calculated differently than is the current practice. Since boat building and repair (SIC 3732) is considered manufacturing, the change in reporting procedures should not be reflected in the data in this table.

<sup>c</sup>Employment figures are based on the number of employees during the mid-March pay period (excludes self-employed persons).

<sup>d</sup>Figures withheld to avoid disclosure of operations of individual reporting units.

Source: U.S. Department of Commerce, County Business Patterns (various issues).

This increase in the number of Louisiana establishments primarily engaged in boat building and repair is reflected at the national level. The number of U.S. establishments primarily engaged in building and repairing boats increased slightly less than 14% throughout the 1965-68 and 1980-83 periods. The number of U.S. establishments increased from an annual average of 1,465 during 1965-68 to an annual average of 1,666 during the 1980-83 period.

Closer examination of the data presented in Table 1 reveals that only one of about every twenty establishments throughout the United States engaged in boat building and repair during 1980-83 was located in Louisiana. Louisiana's share of the total number of these establishments in the United States during 1980-83 averaged 5.1%, only a marginal increase from the 4.8% observed during 1965-68.

Several factors probably contributed to the observed increase in the number of boat building and repair establishments in Louisiana. Since recreational boaters and small-scale commercial fishing enterprises are expected to be most dependent on the services provided by this industry, demand for these services may be increased by factors leading to increases in recreational boating (e.g., increases in population, real per capita income, uncommitted time, etc.) or commercial fishing (e.g., unemployment in coastal industries other than fishing, increased population, a changing cultural regime). (Factors thought to generate demand for boating and related services are discussed on pp. 15, 17.) For Louisiana to meet at least some of the increased demand for services resulting from these factors within the state, existing facilities must be expanded and new ones added (assuming there is not a large amount of excess capacity). The 20% increase in the number of boat building and repair establishments located in Louisiana throughout the 1965-68 and 1980-83 periods largely reflects an increased demand for boating services by recreational boaters and commercial fishermen.

#### Employment Characteristics

The boat building and repair industry of Louisiana provides the state with an important source of employment. During 1967-69, an average of 1,852 workers were employed in Louisiana's boat building and repair industry annually (Table 1). By the 1980-83 period, annual employment had increased 46% and averaged 2,707 workers. This increased employment reflects two factors: an increase in the number of establishments and an increase in the number of workers per establishment. Employment per establishment averaged 26.5 workers annually during 1967-69 and increased approximately 18% to 31.3 workers during 1980-83.

The small-scale nature of the "typical" Louisiana boat building and repair establishment can be further examined with the data provided in Table 2. Over 70% of Louisiana's boat building and repair establishments generally employ less than 20 employees annually and about 85%-90% of these establishments employ less than 50 workers annually.

Overall, Louisiana's share of total U.S. employment in the boat building and repair industry has consistently averaged from approximately

Table 2. Total number of establishments by employment size class in the boat building and repair industry (SIC 3732) of Louisiana, 1965-83 (selected years).<sup>a</sup>

Year	Employees per Establishment				
	0-19	20-49	50-99	100-249	≥250
1965	47 (73) <sup>b</sup>	12 (19)	3 (5)	2 (3)	0 -
1970	48 (71)	13 (19)	1 (1)	5 (7)	1 (1)
1975	58 (77)	5 (7)	7 (9)	4 (5)	1 (1)
1976	63 (77)	9 (11)	3 (4)	5 (6)	2 (2)
1977	66 (78)	9 (11)	3 (4)	5 (6)	2 (2)
1978	62 (71)	13 (15)	4 (5)	6 (7)	2 (2)
1979	56 (70)	13 (16)	6 (7)	3 (4)	2 (3)
1980	58 (72)	11 (14)	6 (7)	4 (5)	2 (2)
1981	53 (65)	14 (17)	7 (9)	6 (7)	2 (2)
1982	51 (60)	18 (21)	9 (11)	5 (6)	2 (2)
1983	69 (74)	11 (12)	6 (6)	6 (6)	1 (1)

<sup>a</sup>See Appendix C for a description of data, data reliability, and collection techniques.

<sup>b</sup>Numbers in parentheses refer to percentage of the total number of yearly establishments in each employment size classification. Summation of numbers in parentheses may not add to 100 due to rounding.

Source: U.S. Department of Commerce, County Business Patterns (various issues).

4% to 7% annually (Table 1). During the late 1960s and early 1970s, Louisiana's share of the total U.S. employment in the boat building and repair industry averaged 4%-5%, increasing slightly to about 5%-7% during the 1980s.

Annual payroll in Louisiana's boat building and repair industry peaked in 1981 at about \$52 million and fell sharply to about \$39 million in 1983 (Table 3). On a per-worker basis, annual payroll in the boat building and repair industry of Louisiana increased from about \$10,000 in 1974 to \$17,000 in 1983 and peaked at about \$18,400 in 1981.

#### LOUISIANA BOAT DEALING AND RETAILING INDUSTRY

In general, larger boats (i.e., vessels constructed for a specific task) are built by order, and thus ownership passes directly from manufacturer to buyer. Smaller boats, on the other hand, are generally distributed through a dealer before sale to the final user. The dealer therefore essentially acts as a middleman, facilitating the exchange of boating goods and services between the boat manufacturer and the final consumer. In this section of the paper, boat dealer establishments in Louisiana and the United States are examined in terms of change in the number of establishments, employment, and payroll. Also, the value of retail sales of boats in Louisiana is examined and compared to the value of retail sales of boats in the United States as a whole.

#### Establishments, Employment, and Annual Payroll, 1974-83

Establishments primarily engaged in the retail sale of new and used motor boats and watercraft, marine supplies, and outboard motors are reported under SIC 555. In Louisiana, 119 establishments of this type were reported during 1983, which represented slightly less than 3% of the 4,233 establishments of this nature reported in the United States during the same year (Table 4).

Though the 1983 reported numbers of boat dealers in Louisiana (119) and the United States (4,233) represent a record number of dealers at their respective levels (at least since 1974), the 1983 level of employment in this sector for both Louisiana and the United States was considerably less than that observed during the late 1970s. For instance, the 788 workers employed in Louisiana's boat-dealer sector during 1983 represented about a 13% decline from the 907 workers employed in 1979. Similarly, the 22,837 workers employed in the United States boat-dealer sector in 1983 represented only about 81% of the number of workers employed during the peak year of 1979 (Table 4).

The annual payroll in Louisiana's boat-dealer sector equalled just under \$10 million in 1983, or slightly less than twice the \$5.2 million income reported in 1974 (Table 4). Although this increase appears significant, a different picture emerges when we consider the overall increase in the cost of living brought about by inflation. For example, the Consumer Price Index, which provides a general measure of inflation, more than doubled during 1974-83, rising from 147.7 to 298.4 (1967 =

Table 3. Annual payroll in the boat building and repair industry  
(SIC 3732) of Louisiana, 1974-83<sup>a, b</sup> (in thousands of dollars).

Year	Annual Payroll	Annual Payroll/Employee <sup>c</sup>
	- - - - - \$1,000 - - - - -	
1974	24,850	10,028
1975	25,531	11,403
1976	23,984	10,510
1977	25,403	11,030
1978	32,017	12,453
1979	30,309	11,573
1980	37,030	14,937
1981	52,399	18,386
1982	46,433	15,708
1983	39,392	17,016

<sup>a</sup>Annual payroll was not reported prior to 1974.

<sup>b</sup>See Appendix C for a description of data, data reliability, and collection techniques.

<sup>c</sup>Employment figures are based on the number of employees during the mid-March pay period (excludes self-employed persons). To the extent that the mid-March employment figures may not accurately reflect the annual average number of employees, the annual payroll per employee estimates may be inaccurate.

Source: U.S. Department of Commerce, County Business Patterns (various issues).

Table 4. Reported boat dealer establishments (SIC 55) and related employment and annual payroll for Louisiana and the United States, 1974-83.<sup>a</sup>

Year	Louisiana			United States		
	Estab.	Employees <sup>b</sup>	Annual Payroll (\$1,000)	Estab.	Employees <sup>b</sup>	Annual Payroll (\$1,000)
1974	95	741	5,165	3,784	21,271	175,563
1975	98	709	5,503	3,671	20,674	185,759
1976	111	799	6,698	4,045	23,489	221,385
1977	117	821	6,772	4,270	24,719	248,247
1978	113	903	7,965	4,251	26,468	280,547
1979	106	907	8,150	3,999	28,355	303,661
1980	100	755	8,359	3,743	24,625	289,586
1981	103	780	9,421	3,559	22,333	293,017
1982	102	898	9,926	3,827	22,693	310,419
1983	119	788	9,859	4,233	22,837	346,328

<sup>a</sup>See Appendix C for a description of data, data reliability, and collection techniques.

<sup>b</sup>Employment figures are based on the number of employees during the mid-March pay period (excludes self-employed persons).

Source: U.S. Department of Commerce, County Business Patterns (various issues).

100). But the annual payroll in Louisiana's boat-dealer sector did not double during 1974-83, which suggests that there has been little, if any, real increase in the annual payroll associated with Louisiana's boat-dealer sector during this period. A similar situation apparently exists for the boat-dealer sector of the United States, whose associated annual payroll increased about 97% from \$176 million to \$346 million during 1974-83.

Retail Sales in Louisiana  
and the United States, 1980-83

Little is known regarding the value of retail sales of boats and related equipment in Louisiana. In addition, the existing data do not always distinguish commercial from recreational fishermen and therefore may not provide an accurate estimate of the value of retail sales of boats and related equipment in Louisiana. For example, information regarding the value of retail sales of boats and related accessories in Louisiana collected by the National Marine Manufacturers Association purportedly considers only sales to the recreational boating sector. However, because many of the commercial fisheries in Louisiana are small scale, many of the fishermen do not fish full time. Thus, many of the expenditures of commercial fishermen on boats and related accessories may be incurred through the same outlets used by recreational boaters. (To be eligible for tax-exempt status on the purchase of boat and fishing equipment in Louisiana, a fisherman must have a commercial fishing license and show that at least 50% of his income is derived from fishing.) Therefore, these commercial expenditures may also be included in the data collected and reported by the National Marine Manufacturers Association. With this caveat in mind, we may examine the values for retail sales of boats and related accessories in Louisiana and the United States during 1980-83 reported in Table 5.

As indicated in this table, considerable expenditures are made annually on the retail purchase of boats and related accessories in both Louisiana and the United States. The value of retail sales of boats, outboard motors, boat trailers, and marine accessories in Louisiana averaged about \$80 million annually during 1980-83 and accounted for just over 2% of the annual \$3.7 billion U.S. market.

The information in Table 5 also indicates that the pattern of expenditures for the retail purchase of boats, outboard motors, boat trailers, and marine accessories for the nation varies significantly from that reported for Louisiana. For example, whereas about 60% of the total U.S. expenditures of \$3.7 billion is directly related to the purchase of a boat, only about 37% of the \$80 million constituting total expenditures in Louisiana is directly related to the purchase of a boat. Conversely, whereas only about 40% of the total annual U.S. expenditures is related to the purchase of equipment, well over 50% of the total Louisiana expenditures is related to the purchase of equipment other than the boat.

Table 5. Value of retail sales of boats, outboard motors, boat trailers, and marine accessories, 1980-83<sup>a</sup> (in thousands of dollars).

	1980	1981	1982	1983	Average 1980-83
	- - - - - \$1,000 - - - - -				
<u>Louisiana</u>					
Boats <sup>b</sup>	32,896	35,733	22,502	25,216	29,087
Outboard motors	19,071	22,336	24,283	30,841	24,133
Boat trailers	4,099	3,267	3,267	3,279	4,014
Marine accessories	<u>75,866</u>	<u>23,445</u>	<u>22,320</u>	<u>25,862</u>	<u>22,857</u>
TOTAL	75,886	84,781	72,384	85,933	79,742
<u>United States<sup>c</sup></u>					
Boats	1,933,780	2,116,280	2,050,472	2,620,091	2,180,156
Outboard motors	554,400	698,010	758,870	963,820	743,775
Boat trailers	96,448	98,990	99,360	121,624	104,106
Marine accessories	<u>591,900</u>	<u>689,564</u>	<u>606,816</u>	<u>695,804</u>	<u>646,021</u>
TOTAL	3,176,528	3,602,844	3,515,518	4,401,339	3,674,058

<sup>a</sup>Though these estimates reportedly reflect expenditures only for recreational purposes, at least some expenditures for commercial purposes are probably included in them.

<sup>b</sup>Retail values for inboard boats, inboard/outdrive boats, outboard boats, and auxiliary and nonpowered sailboats.

<sup>c</sup>Excludes Alaska and Hawaii.

Source: National Marine Manufacturers Association (1980-83).



## STATE-REGISTERED BOATS AND COAST GUARD-DOCUMENTED VESSELS

Boats used in Louisiana's inland and coastal waters are examined in this section of the report. First, the total number of boats registered in Louisiana and vessels documented by the U.S. Coast Guard (that consider Louisiana their home port) are considered, along with their associated changes. Second, the distribution of state-registered and Coast Guard-documented boats is examined by region of the state. Finally, characteristics pertaining to state-registered boats are reported.

### Numbers of Boats and Vessels

The number of boats registered in Louisiana sharply increased during 1965-84 (Table 6). An annual growth rate of approximately 18% resulted in 312,119 state-registered boats in 1984, a 349% increase over the 69,509 state-registered boats in 1965.

Several factors could account for this sharp increase in the number of boats registered in Louisiana. First, the state population increased nearly 28% during this 20-year period. When the population expands, total boating demands in the state for both recreational and commercial purposes are also expected to increase, given that other factors determining boating demand in the state remain constant. Of course, all other factors that determine the demand for boating in the state have not remained constant. For example, real per capita income in Louisiana increased about 60% during 1965-84. This increase suggests a concomitant increase in disposable income that can be spent on non-necessities such as recreational and leisure activities.

Related to an increase in real per capita income in Louisiana is a concurrent increase in the amount of leisure time that can be enjoyed by the residents of the state. Although the average number of hours worked per week per worker has not been specifically documented for Louisiana, it has declined in the United States during the past two decades. Assuming that trend at the national level is representative of what is occurring in Louisiana, state residents would then have additional time for enjoying their added real income. At least a portion of this increased leisure time could well be directed towards boating and related activities.

Finally, a 1975 change in the boat registration requirements had the effect of increasing the number of state-registered boats. Prior to 1975, only boats equipped with a 10-horsepower or larger motor were required to be registered. Since then, however, all boats propelled by any motor are required to be registered (if they are not Coast Guard documented).

The increase in the number of state-registered boats in Louisiana during 1965-84 not only reflects an increase in the state's population, but also an increase in the number of boats per capita brought about by increased per capita income, etc. (Table 6). The number of residents per registered boat has gradually declined from about 50 per boat in 1965 to

Table 6. State-registered boats, state population, and residents per boat, 1965-84.

Year	Registered Boats <sup>a</sup>	Population (1,000)	Residents per Registered Boat
1965	69,509	3,496	50.3
1966	72,618	3,550	48.9
1967	78,975	3,581	45.3
1968	91,416	3,603	39.4
1969	99,409	3,619	36.4
1970	107,773	3,650	33.9
1971	120,843	3,692	30.6
1972	125,001	3,733	29.9
1973	128,003	3,746	29.3
1974	154,266	3,762	24.4
1975 <sup>a</sup>	187,738	3,887	20.7
1976	246,855	3,952	16.0
1977	272,007	4,014	14.8
1978	281,529	4,069	14.5
1979	274,778	4,138	15.1
1980	283,438	4,206	14.8
1981	300,000 <sup>b</sup>	4,300	14.3
1982	333,765	4,382	13.1
1983	303,044	4,400	14.5
1984	312,119	4,462	14.3

<sup>a</sup>Prior to 1975 boats equipped with less than a 10-horsepower motor did not require state registration. Since 1975, all boats with motors require registration.

<sup>b</sup>Registered boats in Louisiana are estimated for 1981.

Source: Registered boat data is taken from Department of Transportation, Coast Guard, Boating Statistics (various issues).

less than 15 per boat in 1984. Given that the 1984 average household size in Louisiana was 2.91 members, this would be approximately one registered boat for every five households.

Although the number of state-registered boats in Louisiana represented 17.5% of the state-registered boats in the Gulf region in 1984, it represented only 3.3% of the state-registered boats throughout the United States in the same year (Table 7). Comparable statistics suggest that in 1965 Louisiana had 12.7% of the state-registered boats in the Gulf region and 1.7% of the state-registered boats throughout the United States. Thus, Louisiana's share of the state-registered boats as a percentage of those in both the Gulf region and the nation increased during the 1965-84 period. The number of state-registered boats in Louisiana increased 349% during 1965-84; in the Gulf region state-registered boats increased 226%, and in the United States as a whole, 128%.

In addition to the state-registered boats, a large fleet of Coast Guard documented vessels operates in Louisiana's waters. In total, Coast Guard documented craft reporting their home port in Louisiana increased from 6,978 in 1973 to 11,279 in 1980 (about 62%).<sup>2</sup> Though information regarding this segment is very limited, data presented in Table 8 gives us some insight into the increase in use of these vessels. The percentage used for commercial purposes declined from about 96% in 1973 to about 92% in 1980.

Coast Guard documented vessels in Louisiana are used for a variety of activities ranging from oil and gas exploitation to fishing. Although data specific to vessel activity is very limited, it is available for 1977 (Department of Transportation, Coast Guard 1979). The obsolescence of this data set, however, may preclude it from accurately reflecting recent vessel usage. Of the roughly 9,000 documented vessels registered in Louisiana home ports in 1977, about 27% were engaged in freight activities, 22% in oil and gas exploration, 19% in fishing, and 17% in towing. The remaining vessels included dredges, ferries, fireboats, tankers, and other miscellaneous categories in addition to large recreational craft.

#### Distribution of Boats and Vessels

Data pertaining to the distribution of Coast Guard documented vessels reporting a registered Louisiana home port are somewhat outdated and therefore may not accurately reflect current distribution patterns. As of 1977, about 41% of the Coast Guard documented vessels registered in Louisiana specified the New Orleans-Gulf area as home port, 21% specified the Houma area as home port, 14% specified Morgan City as home port, and 14% specified the New Orleans river area as home port (Department of

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<sup>2</sup>It should be kept in mind that many more vessels probably operate in Louisiana's waters than are included in Table 8, for example, Coast Guard documented vessels with home ports in states other than Louisiana and vessels with owners of foreign nationality.

Table 7. State-registered boats in Louisiana, the Gulf region, and the United States, 1965-84.

Year	Number of Registered Boats			Percentage of Registered Boats	
	Louisiana	Gulf Region <sup>a</sup>	United States	Gulf Region	U.S.
1965	69,509	546,945	4,138,140	12.7	1.7
1966	72,618	543,934	4,067,371	13.4	1.8
1967	78,975	602,088	4,458,893	13.1	1.8
1968	91,416	639,817	4,942,871	14.3	1.9
1969	99,409	723,620	4,864,074	13.7	2.0
1970	107,773	736,509	5,128,345	14.6	2.1
1971	120,843	838,163	5,510,092	14.4	2.2
1972	125,001	941,821	5,910,714	13.3	2.1
1973	128,003	1,026,203	6,339,678	12.5	2.0
1974	154,266	1,127,421	6,830,456	13.7	2.3
1975	187,738	1,296,417	7,303,286	14.5	2.6
1976	246,855	1,429,213	7,671,213	17.3	3.2
1977	272,007	1,482,427	7,975,587	18.3	3.4
1978	281,529	1,550,604	8,034,905	17.7	3.5
1979	274,778	1,591,722	8,278,723	17.3	3.3
1980	283,438	1,653,152	8,577,857	17.1	3.3
1981	300,000 <sup>b</sup>	1,724,045	8,905,097	17.4	3.4
1982	333,765	1,744,111	9,073,927	19.1	3.7
1983	303,044	1,775,313	9,165,094	17.1	3.3
1984	312,119	1,781,202	9,420,011	17.5	3.3

<sup>a</sup>The Gulf region as defined in this paper includes the coastal states from Florida through Texas.

<sup>b</sup>Registered boats in Louisiana estimated for 1981.

Source: Department of Transportation, Coast Guard, Boating Statistics (various issues).

Table 8. Vessels documented under the laws of the United States in the state of Louisiana (5 gross tons and over).<sup>a</sup>

Year	Commercial	Yachts	Total
1973	6,718	260	6,978
1974	7,414	288	7,702
1975	8,010	332	8,342
1976	8,184	374	8,558
1977	8,567	466	9,033
1978	9,077	590	9,667
1979	9,694	740	10,434
1980	10,408	871	11,279

<sup>a</sup>Includes both self-propelled and non-self-propelled vessels.

Source: Unpublished data provided by the U.S. Department of Transportation, United States Coast Guard.

Transportation, Coast Guard 1979). Because of the scarcity of up-to-date data on these vessels, this section will focus primarily on the distribution of state-registered boats.

In general, state-registered boats in Louisiana are found most often in heavily populated parishes of the state (the simple correlation between parish population and state-registered boats by parish equalled 0.84 in 1984). In absolute numbers, Jefferson Parish recorded the largest number of state-registered boats in 1984, followed by East Baton Rouge, Caddo, and Calcasieu parishes (Table 9; Figure 1). Conversely, St. Helena Parish recorded the smallest number of registered boats in the state in 1984, followed by West Feliciana, East Feliciana, and Red River parishes. Altogether, the top five parishes (in population) recorded almost a third of all state-registered boats, and the top ten parishes about half of the total number of state-registered boats.

The ratio of state-registered boats to residents per parish tended to be higher in the coastal parishes of the state than in the inland parishes (Table 9; Figure 2). Cameron Parish, a coastal parish in the westernmost section of the state, recorded the highest ratio of registered boats to population in 1984. The other coastal parishes followed Cameron in the order listed: Plaquemines, Terrebonne, and Lafourche. The lowest ratio of state-registered boats per resident was recorded in Orleans Parish, followed by St. Helena, West Feliciana, and East Feliciana parishes, respectively.

#### Characteristics of State-Registered Boats

Generally state-registered boats in Louisiana tend to be relatively small and constructed of either fiberglass or aluminum. For example, boats less than 16 ft long accounted for almost two-thirds of all state-registered boats in Louisiana in 1984, and boats less than 28 ft long accounted for more than 95% of all state-registered boats (Table 10). In terms of materials used in the construction of these crafts, aluminum and fiberglass accounted for 83% of the 1984 total (Table 11). Other materials used include wood, which accounted for 6.6% of the same total, and steel, which accounted for 0.7% (Table 11).

#### SUMMARY

The boating industry is an important component of Louisiana's economy and provides valuable services to both recreational and commercial interests. For recreational boaters, the boating industry provides services that enable them to enjoy leisure time and uncommitted income. For commercial interests, the boating industry provides services that permit business operations to be conducted in an efficient and timely manner.

The purpose of this paper was to examine the boating sector in Louisiana through available secondary data sources. We hope that this paper's overview of the boating sector of Louisiana will provide the

Table 9. Louisiana population and state-registered boats by parish in 1984.

Parish	1984 Parish Population	Registered Boats	Boats per 1,000 Residents
Acadia	59,369	3,487	58.7
Allen	21,739	1,642	75.5
Ascension	54,618	4,552	83.3
Assumption	23,955	2,917	121.7
Avoyelles	42,715	3,427	80.2
Beauregard	31,207	2,383	76.3
Bienville	16,188	1,354	83.6
Bossier	88,370	6,901	78.0
Caddo	261,817	18,371	70.1
Calcasieu	176,760	17,053	96.4
Caldwell	10,947	1,066	97.3
Cameron	10,139	1,972	194.4
Catahoula	12,326	1,421	115.2
Claiborne	18,367	1,691	92.0
Concordia	23,577	2,674	113.4
De Soto	26,970	1,703	63.1
East Baton Rouge	389,503	22,921	58.8
East Carroll	11,671	800	68.5
East Feliciana	19,939	508	25.4
Evangeline	34,367	2,755	80.1
Franklin	24,509	2,228	90.9
Grant	17,621	1,841	104.4
Iberia	69,257	6,089	87.9
Iberville	32,981	2,934	88.9
Jackson	17,309	1,359	78.5
Jefferson	476,915	26,012	54.5
Jefferson Davis	33,017	2,764	83.7
Lafayette	169,694	11,367	66.9
Lafourche	88,349	11,398	129.0
La Salle	17,697	1,669	94.3
Lincoln	41,847	2,173	51.9
Livingston	66,451	6,131	92.2
Madison	15,894	927	58.3
Morehouse	35,183	3,131	88.9
Natchitoches	40,805	2,931	71.8
Orleans	567,062	11,795	20.8
Ouachita	142,300	12,224	85.9
Plaquemines	26,778	3,736	139.5
Pointe Coupee	25,091	1,734	69.1
Rapides	138,346	11,279	81.5
Red River	11,114	736	66.2
Richland	22,785	2,140	93.9
Sabine	27,139	2,822	103.9
St. Bernard	67,949	6,054	89.0
St. Charles	41,103	3,952	96.1

(continued)

Table 9. (Continued.)

Parish	1984 Parish Population	Registered Boats	Boats per 1,000 Residents
St. Helena	10,186	248	24.3
St. James	21,970	1,790	81.4
St. John	37,668	2,253	59.8
St. Landry	87,800	5,484	62.4
St. Martin	44,455	3,728	83.8
St. Mary	66,950	7,611	113.6
St. Tammany	128,130	9,841	76.8
Tangipahoa	87,863	4,801	54.6
Tensas	8,244	750	90.9
Terrebonne	102,038	13,685	134.1
Union	21,734	2,267	104.3
Vermilion	52,445	4,453	84.9
Vernon	61,275	3,019	49.2
Washington	45,765	2,569	56.1
Webster	45,205	4,916	108.7
West Baton Rouge	20,168	1,656	82.1
West Carroll	13,267	1,207	90.9
West Feliciana	13,269	329	24.7
Winn	17,575	1,657	94.2

Source: Parish population from Cooperative Extension Service, Louisiana State University, Louisiana Summary, Agriculture and Natural Resources (1984).

Number of registered boats per parish from unpublished data provided by the Louisiana Department of Wildlife and Fisheries, Motorboat Section, Baton Rouge, La.



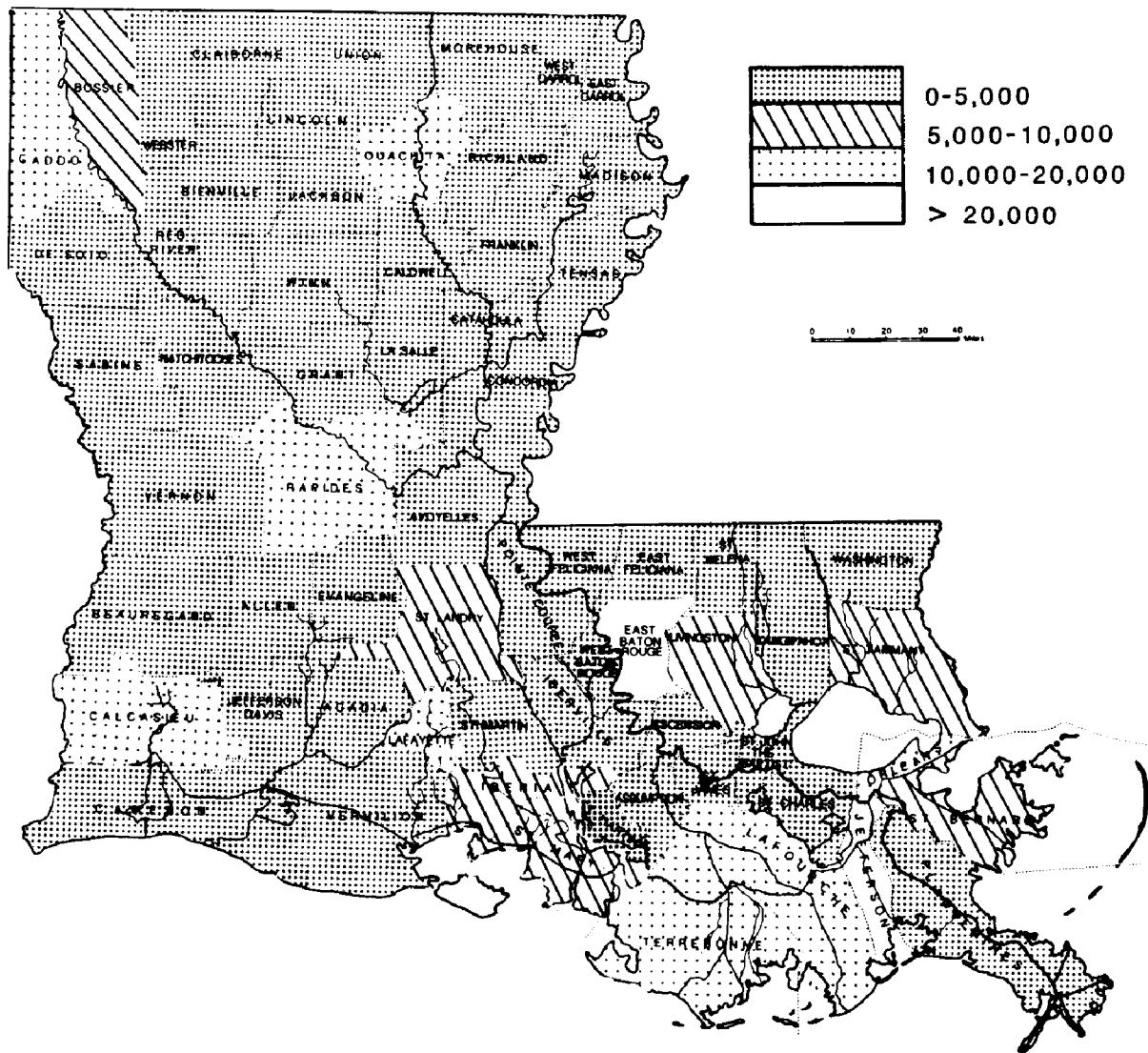


Figure 1. State-registered boats in Louisiana by parish, 1984.

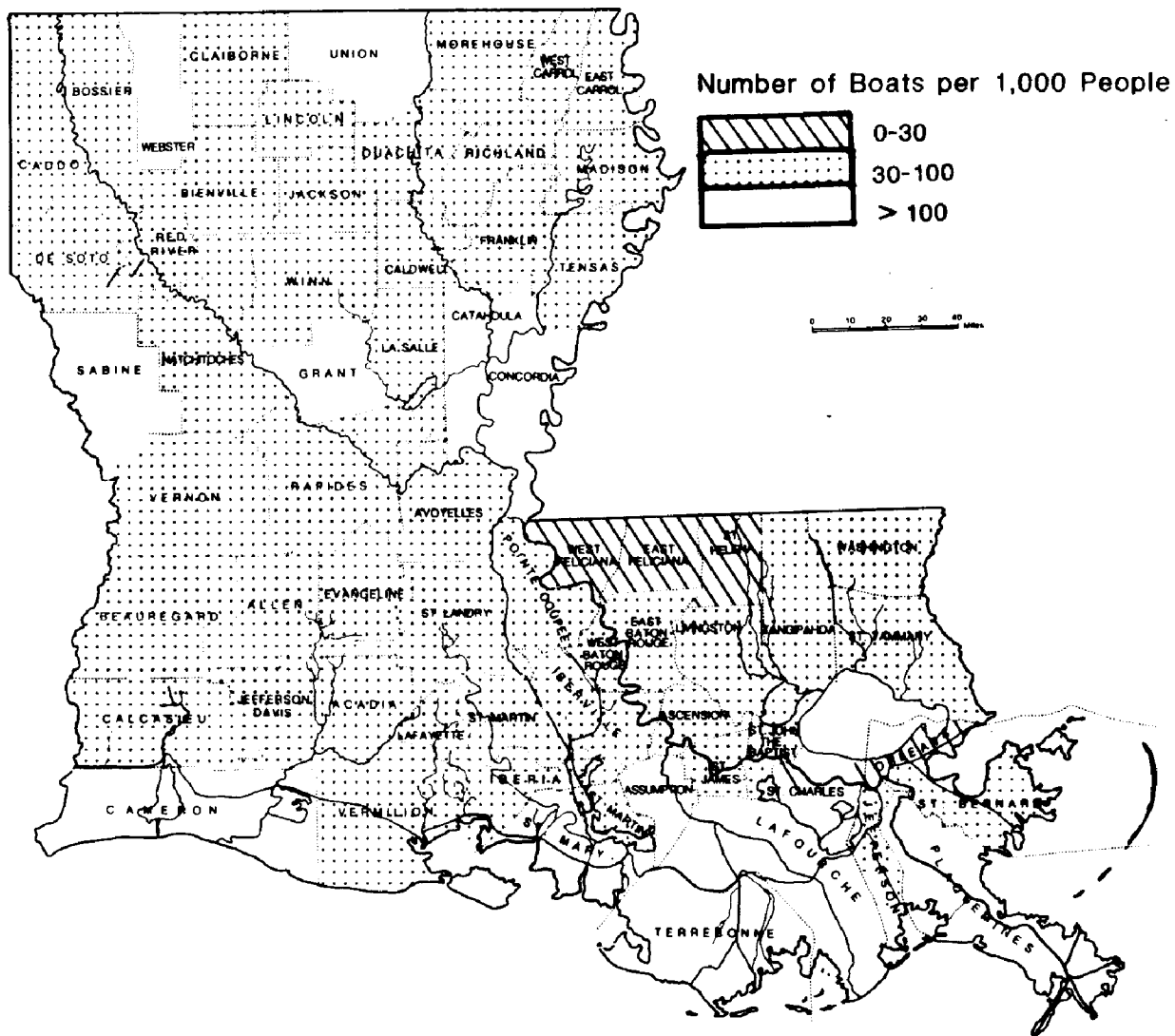


Figure 2. State-registered boats in Louisiana per 1,000 residents, by parish, 1984.

Table 10. Distribution of registered boats in Louisiana by size classes for selected years, 1971-84.

Year	Boat Size					Total
	Less than 16'	16' to < 28'	28' to < 40'	40' to < 65'	over 65'	
1971	69,028 (57.1) <sup>a</sup>	46,103 (38.2)	5,137 (4.3)	549 (0.5)	26 <sup>b</sup> --	120,843 (100) <sup>c</sup>
1976 <sup>d</sup>	166,833 (67.6)	73,464 (29.8)	5,779 (2.3)	714 (0.3)	65 --	246,855 (100)
1981	204,583 (65.1)	101,469 (32.3)	7,287 (2.3)	931 (0.3)	155 --	314,425 (100)
1982	216,115 (64.8)	108,651 (32.6)	7,790 (2.3)	1,011 (0.3)	198 --	333,044 (100)
1983	193,028 (63.7)	101,541 (33.5)	8,375 (2.8)	971 (0.3)	227 --	303,044 (100)
1984	197,098 (63.1)	105,991 (34.0)	7,708 (2.5)	1,057 (0.3)	265 --	312,119 (100)

<sup>a</sup>Numbers in parentheses are percentages within given size classes.

<sup>b</sup>Less than 0.1%.

<sup>c</sup>May not sum to 100% because of rounding.

<sup>d</sup>Data prior to 1976 may not be directly comparable to earlier data because of 1974 changes in registration requirements.

Source: Department of Transportation, U.S. Coast Guard (unpublished data).

Table 11. Hull material of registered boats in Louisiana for selected years, 1971-84.

Year	Hull Material					Total
	Wood	Fiberglass	Aluminum	Steel	Other	
1971	35,558 (29.4) <sup>a</sup>	45,042 (37.3)	26,042 (22.0)	1,910 (1.6)	11,791 (9.8)	120,843 (100) <sup>b</sup>
1976 <sup>c</sup>	31,427 (12.7)	84,998 (34.4)	106,566 (43.2)	1,857 (0.8)	22,007 (8.9)	246,855 (100)
1981	23,601 (7.5)	107,667 (34.2)	148,121 (47.1)	2,123 (0.7)	32,913 (10.5)	314,425 (100)
1982	25,353 (7.6)	113,724 (34.1)	157,165 (47.1)	2,275 (0.7)	35,248 (10.6)	333,765 (100)
1983	20,635 (6.8)	104,220 (34.4)	144,033 (47.5)	2,104 (0.7)	32,052 (10.6)	303,044 (100)
1984	20,627 (6.6)	108,494 (34.8)	150,337 (48.2)	2,136 (0.7)	30,525 (9.8)	312,119 (100)

<sup>a</sup>Numbers in parentheses are percentages of the total for a given year.

<sup>b</sup>May not sum to 100% because of rounding.

<sup>c</sup>Data prior to 1976 may not be directly comparable to later data because of 1974 changes in registration requirements.

Source: Department of Transportation, U.S. Coast Guard (unpublished data).

impetus for additional research regarding these important components of Louisiana's economy.

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APPENDIX A

Annual number of ship building and repair establishments (SIC 3731) in Louisiana and related employment.<sup>a</sup>

Year	Number of Establishments	Total Employment <sup>b</sup>	Employment/Establishment
1965	28	9,493	339
1966	27	10,860	402
1967	27	9,977	369
1968	39	12,015	308
1969	40	12,589	315
1970	35	13,355	382
1971	35	14,008	400
1972	33	14,180	430
1973	38	13,449	354
1974	57	16,978	298
1975	66	16,103	244
1976	60	17,422	290
1977	71	17,306	244
1978	75	17,263	230
1979	85	20,731	244
1980	88	21,427	244
1981	89	22,288	250
1982	87	19,055	219
1983	81	13,018	161

<sup>a</sup>See Appendix C for a description of data, data reliability, and collection techniques.

<sup>b</sup>Employment figures are based on the number of employees during the mid-March pay period (excludes self-employed persons).

Source: U.S. Department of Commerce, County Business Patterns (various issues).

APPENDIX B

Vessels Requiring Coast Guard Documentation

A. 67.01-5 Vessels requiring documentation.

Any vessel of at least 5 net tons which engages in the fisheries, Great Lakes trade, or coastwise trade, unless exempt under 67.01-7, must be documented.

B. 67.01-9 Vessels eligible for documentation.

Any vessel of at least 5 net tons wholly owned by a United States citizen or citizens, is eligible for documentation. This includes, but is not limited to, vessels used exclusively for pleasure and vessels used in foreign trade.

C. 67.01-7 Vessels excluded or exempt from documentation.

(a) A vessel of less than five net tons is excluded from documentation.

(b) A vessel which does not operate on the navigable waters of the United States is excluded from the requirement to be documented. Such vessel may, at the option of the owner, be documented, if at least 5 net tons and wholly owned by citizen(s) of the United States.

(c) A non-self-propelled vessel, qualified to engage in the coastwise trade is exempt from documentation when used in that trade:

(1) within a harbor;

(2) in whole or in part on the rivers or inland lakes of the United States; or

(3) in whole or in part on the internal waters or canals of any state.

## APPENDIX C

### Discussion of Data Used in Industry Analysis

#### Definitions of Basic Data Items

(These definitions are taken from County Business Patterns, U.S. Department of Commerce, 1975).

##### A. An Establishment

The statistics in County Business Patterns are tabulated in terms of "establishments" commencing with the 1974 publication. An establishment is a single physical location where business is conducted or where services or industrial operations are performed. A central administrative office is an establishment primarily engaged in management and general administrative functions performed centrally for other establishments primarily engaged in performing supporting services for other establishments of the same company rather than for the general public or for other business firms.

Each legal entity (corporation, partnership, single proprietorship, etc.) that pays employees is required to file a separate Employer's Quarterly Federal Tax Return, Treasury Form 941, identified by an Employer Identification Number. In the case of single-location legal entities, each fourth-quarter 941 report is counted as an establishment. For those legal entities that have more than one location (multiestablishment), data are obtained on an individual establishment basis from the Bureau of the Census 1975 Annual Company Organization Survey. The data in County Business Patterns for such legal entities are distributed by county and industry, on the basis of the report. The distribution for nonrespondents is based on the last previous census report.

Establishment size designations are measured by paid employment in the mid-March 1975 pay period. The size group "1 to 4" also includes establishments that did not have any paid employees in the mid-March pay period but paid wages to at least one employee at some time during the year.

The count of establishments for single-location firms is based on the presence of fourth-quarter payroll. Each single location firm reporting fourth-quarter payroll is counted as an establishment.

The count of establishments for multilocation firms is based on the data of change as reported in the Annual Company Organization Survey. Each single location firm reporting fourth-quarter payroll is counted as an establishment.

The count of establishments for multilocation firms is based on the data of change as reported in the Annual Company Organization Survey. Each multiestablishment location is counted as one establishment if determined to be of active status as of December 15. An establishment



determined to be not active on December 15 is not counted as an establishment.

## B. Payrolls

Total annual payroll includes all forms of compensation that are subject to income tax withholding, such as salaries, wages, commissions, bonuses, vacation allowances, sick leave pay, and the value of payments in kind (such as free meals and lodging) paid during the year to all employees. Employees' tips and gratuities reported to employers are included.

For corporations, annual payroll includes amounts paid to officers and executives that are subject to income tax withholding; for unincorporated businesses, it does not include profit or other compensation of proprietors or partners. Payroll is reported before deductions for social security, income tax, insurance, union dues, etc. For single-establishment firms, annual payroll is the sum of the four quarters of the 1975 Internal Revenue Service Form 941 data for total compensation subject to withholding. For multiestablishment firms annual payroll data is that reported on the 1975 Annual Company Organization Survey.

First quarter total payroll consists of payroll, as defined above, paid to persons employed at any time during the January to March 1975 quarter.

Estimating techniques were used to obtain payroll for those few employers we determined to be delinquent on the basis of prior quarterly reporting experience.

## C. Mid-March Employment

Mid-March pay period employment is the count of employees during the pay period that includes March 12, 1975, as reported on Treasury Form 941, Schedule "A," or as corrected by estimates in those cases where it was incompletely or improperly reported. Employment of establishments of multiestablishment employers is obtained from two sources: (1) Annual Company Organization Survey and (2) a distribution based on prior year data.

Estimating techniques were used to provide mid-March employment figures for a considerable number of employers (most were small employers) who failed to report mid-March employment on Schedule "A" of their quarterly Form 941, or who confused that figure with the total number of persons employed at any time during the quarter, or who otherwise failed to report correctly. To estimate employment for single-establishment employers, reported employment data were tabulated by state by major Standard Industrial Classification groups. The wage-employment relationship of the reported data was used to develop factors to apply to those employers who failed to report employment. If there were less than five establishments that reported employment for a cell, the employment figure was derived by applying a factor to the number of different

persons employed during the quarter or was determined from Form 941, Schedule "A". For nonrespondent multiestablishment employers, prior year relationship of wages and employment and prior year administrative record data were used to derive the employment figures.

### Reliability of Data

These data have been tabulated from universe files and, therefore, are not subject to sampling errors. However, the data are subject to nonsampling errors. Nonsampling errors can be attributed to many sources, inability to obtain information about all cases in the universe, definitional and classification difficulties, differences in the interpretation of questions, errors in recording or coding the data obtained, and other errors of collection, response, coverage, and estimation for missing data.

The accuracy of these tabulated data is determined by the joint effects of the various nonsampling errors. No direct measurement of these effects has been obtained except for imputation; however, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors.

Single-establishment employers are assigned county classifications on the basis of the administrative record address of the establishment. However, for an unknown number of establishments the administrative record address may be a mailing address rather than the actual physical location of the establishment. No direct measurement of the effect of the misassignment of geographical location codes on published data totals has been made.

Estimating techniques were used for data records that failed computer edits, had incomplete reporting on data items, or were not reported in sufficient time to be included in the tabulations. The imputation of data for multiestablishment employers is described in detail in the section below. Measurements of the effect of the imputed data on published country and industry data totals have been obtained. In brief, the imputation of employment data and annual payroll data had a negligible impact on a published country data totals or on published state-major industry groups. The imputation of quarterly payroll data had more of an impact on the published data totals; nearly 7.4% of total first-quarter payroll data were imputed. The imputation method used to impute missing quarterly payroll entries did result in some distortion in the 1975 data relationships of manufacturing establishments. However, the impact of these establishments on published data totals was not severe.

The data user should keep in mind that because the amount of imputation for a given summary cell is not known and because of changes in the methods of imputation, caution should be exercised in the interpretation of year-to-year changes. This is especially true for the data presented for the smaller counties or smaller state-industry groups.

Details may not add to totals. Some establishment records are not classified to the most detailed kind of business level. Summary records with less than 50 employees are not shown separately but are shown at the next broader kind of business group. Detailed payroll figures may not add to totals because of independent rounding.

#### ADDENDUM

In 1984, the number of Louisiana establishments primarily engaged in the building and repairing of boats (SIC 3732) declined sharply from 1983. The 75 reported establishments in 1984 represents a 20% decline from the previous year. These 75 establishments employed 1,800 workers and had an annual payroll equal to just over \$32 million.

The 1984 reported number of boat dealers' (SIC 553) in Louisiana equalled 115 compared to 119 for the previous year. These establishments employed 863 persons and had an annual payroll equal to \$11.2 million.